ENVIRONMENTAL MANAGEMENT PLAN
FOR GLASS RECOVERY SERVICES
126 ANDREWS ROAD, PENRITH

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Benbow
ENVIRONMENTAL

Engineering a Sustainable Future for Our Environment

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ENVIRONMENTAL POLICY

Glass Recovery Services is Australia's largest waste glass recycling company with state of the art facilities in Melbourne and Sydney. Glass Recovery Services specialise in transforming used glass received from recycling facilities into glass cullet for use in a variety of applications. Our facilities use world's best practice glass recycling technologies that can transform any glass into any colour and any size for almost any glass and ceramic application.

This policy applies to all Glass Recovery Services' facilities, offices, employees and contractors. Glass Recovery Services has adopted a pragmatic approach to environmental management and is committed to continually improving our environmental performance and minimising the impacts of our activities on the environment by:

- Minimising the consumption of energy and water at our facilities;
- Minimising the generation of waste;
- Maximising our plant efficiency by keeping up to date with the latest best practice technologies and implementing those found viable into our facilities;
- Making environmentally sound purchasing decisions;
- Working with suppliers and customers to reduce the environmental impact of transportation;
- Complying with all relevant environmental legislation and other requirements;
- Educating our employees, contractors and customers to minimise environmental impact through staff awareness, participation and feedback;
- Setting realistic environmental objectives and targets and developing programs to achieve these; and
- Incorporating environmental sustainability principles into all business functions.

Glass Recovery Services will endeavour to integrate strategies for the prevention of pollution by minimising the risks of our operations on the environment.

Robert Italiano
Business Manager

July 2013

EXECUTIVE SUMMARY

This Environmental Management Plan (EMP) has been developed following the guidelines of AS/NZS ISO 14001, *Environmental Management Systems – Specifications with guidance for use* and AS/NZS 14004, *General guidelines on principles, systems and supporting techniques*.

Glass Recovery Services operate a glass beneficiation facility located at 126 Andrews Road, Penrith NSW. This Environmental Management Plan provides the framework so that operations are undertaken with environmental aspects and impacts of activities in mind to minimise the potential to cause environmental harm.

The EMP identifies how the management structure at Glass Recovery Services will satisfy the requirements of the environmental protection legislation and other regulatory requirements within their contractual boundaries. The EMP covers all operations relating to the Penrith site undertaken by Glass Recovery Services and contractors on their behalf.

The EMP explains the basis of the AS/NZS ISO 14001 environmental management system approach.

The objectives of the EMP for Glass Recovery Services operations are:

- Apply best environmental practices within the economic constraints that exist within the community.
- Support the precautionary principle of ecologically sustainable development.
- Optimise, where practicable, the use of raw materials and resources.
- Reduce unacceptable risks to the environment.
- Implement awareness programs across all levels of personnel involved with the site activities to ensure the objectives of the EMP are achieved.
- Require site supervisors to practice due diligence in the environmental management of the site.
- Establish measurable and realistic targets in any environmental monitoring program and as a consequence of any internal audits undertaken.
- Be proactive in addressing environmental issues raised as a consequence of any internal or external audits of the site.
- Ensure the team of staff and contractors are proactive in the cycle of achieving continuous improvement of environmental performance.

Implementing an environmental management plan to AS/NZS ISO 14001: 2004 requires each of the core elements to be addressed. At the end of the Executive Summary, a diagrammatic form of these elements is provided for continual reference.

Perhaps the simplest explanation of the basic intention of establishing the environmental management plan at Glass Recovery Services is to achieve a continual cycle of improvement in managing environmental matters. Implementation of this EMP enables this to happen in practice.

The environmental matters that concern the site management can be grouped into 3 headings:

SITE SPECIFIC
- compliance with Glass Recovery Services' corporate environmental policy;
- compliance with legislation at both the State and local levels;
- achieving objectives and targets;
- implementation of environmental management programs;
- actively seeking improvements;
- achieving best practice status;
- minimisation of waste; and
- protecting residential amenity.

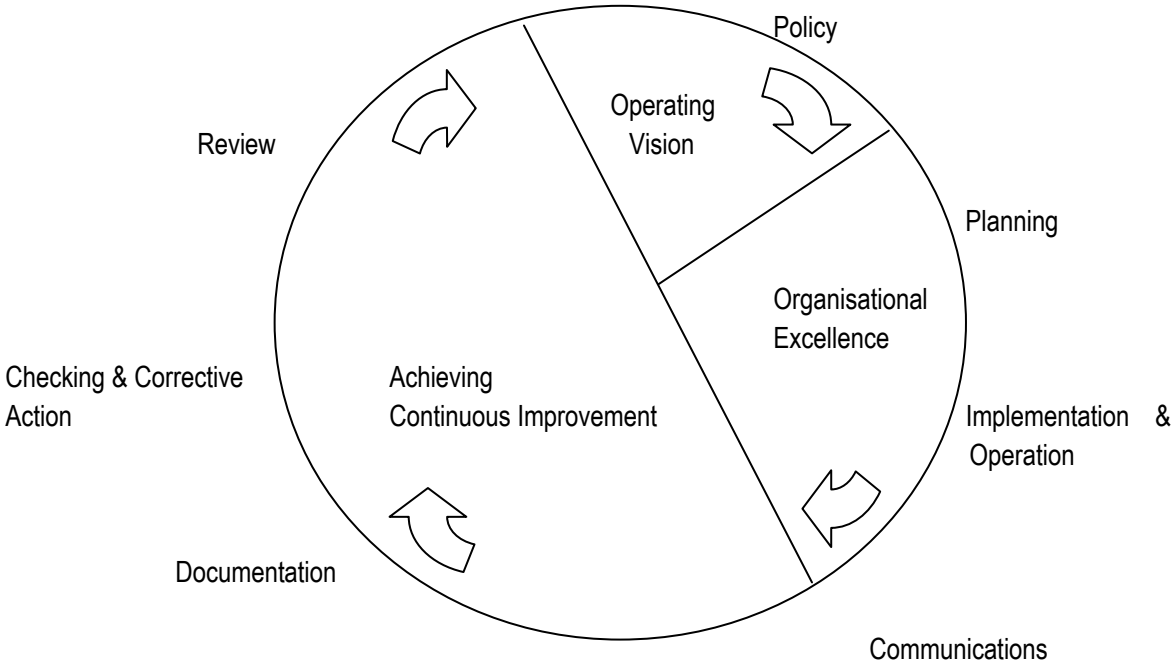
REGIONAL
- supporting pollution reduction initiatives of Local and State Governments;
- supporting the principles of ecological sustainable development;
- minimisation of waste;
- taking up opportunities for cleaner processes; and
- maximising efficiency in production while minimising the resources needed.

GLOBAL
- supporting pollution reduction initiatives of the Federal Government;
- achieving greenhouse gas reduction goals;
- supporting the principles of ecologically sustainable development; and
- supporting cleaner production processes.

Initially, efforts by the site management should be directed at site-specific matters, and the EMP as outlined focuses on this only, although some efforts contribute (coincidentally) to regional and global targets. Future issues of the EMP could address regional and global matters.

Linda Zanotto	Nicolas Israel	R T Benbow
Senior Environmental Engineer	Technical Director	Principal Consultant

Core Elements of AS/NZS ISO 14001 - Circle of Improvement



Reference: Vale, A., 1996, '*Environmental Awareness Training*'.

1. INTRODUCTION

This Environmental Management Plan (EMP) details the necessary procedures and safeguards to effectively manage the on-site and off-site environmental impacts of the activities. The EMP identifies environmental legal requirements and assesses specific impacts based on the site activities. It is the guiding document to facilitate the implementation of environmental management at the site including specific objectives and targets for both the short and long term. A copy of this EMP will be available on site at all times.

Glass Recovery Services undertake processing of used glass collected from glass collection centres in the local area. Simple processes are undertaken at the site including crushing, sorting and screening into "cullet" ready for further processing at Owens Illinois.

A description of the site's operations and the scope and objectives of this EMP are outlined in Sections 1.1, 1.3 and 1.4.

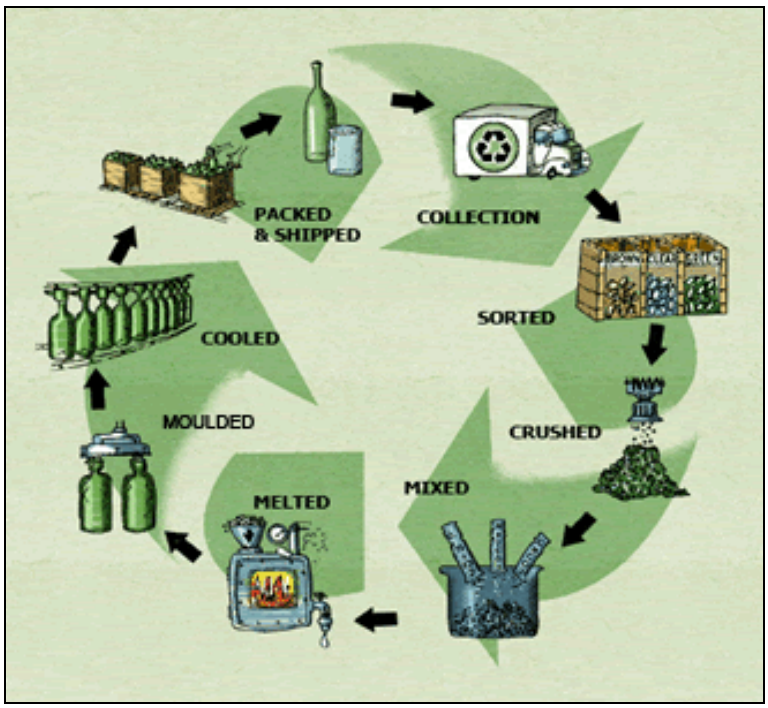
1.1 SITE OPERATIONS

Used glass products are collected by trucks from glass collection centres in the local area and Material Recovery Facilities (MRFs) and brought onto the site. The trucks pass over a weigh bridge and then travel to the rear of the building and enter into the building, unloading the bottles into ground level hoppers. The incoming waste (which is mainly glass and plastics) is stored in bays within the factory building.

The glass recycling process involves crushing used glass products and removing impurities to produce "cullet". The glass is then manually sorted, crushed, sorted and screened to remove impurities. The glass is now "cullet" and is then separated into colours and sizes and stored in external bunkers ready to be dispatched to O-I for further processing.

Figure 1-1 is an example process flow diagram of the glass recycling process. The process includes the "collection", "sorted", "crushed" and "mixed" steps. The resulting cullet from these steps is transported to the O-I facility for the further process steps indicated in the figure.

Figure 1-1: Example of Glass Recycling Process Flow



Source: http://www.theglassrecyclingcompany.com

1.1.1 Manual Sorting

Manual sorting involves hand removal of contaminants such as ceramics, brick and plastics.

1.1.2 Crushing

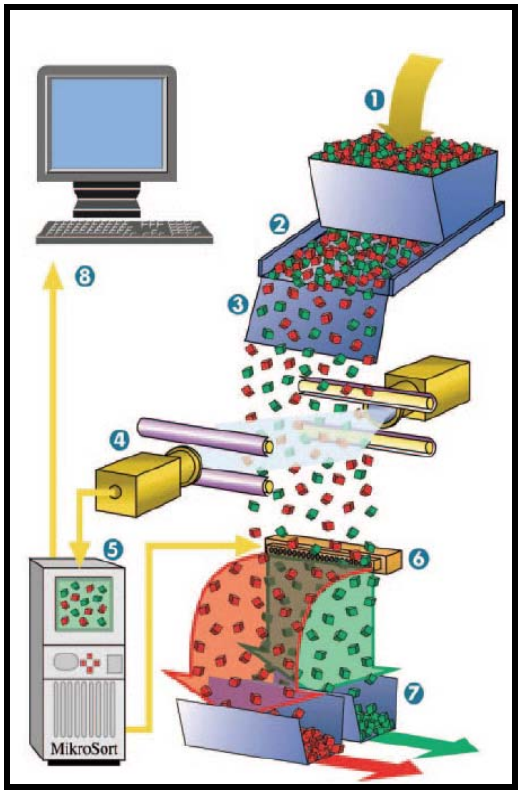
Once the larger contaminants are manually removed from the glass, the next stage in the glass recycling process involves crushing the waste glass into tiny pieces using a hammer mill or similar. This finely crushed glass pieces are referred to as “cullet”.

1.1.3 Sorting and Screening

After crushing, the cullet is transferred to a number of sorting and screening equipment where non-glass and non-putrescible impurities including ceramics, stone, porcelain, pyroceramics, ferrous and non-ferrous metals are removed.

Once these impurities are removed, the cullet is separated into colours and sizes and transferred to the external bunkers. The cullet is now ready to be dispatched to O-I for further processing.

Figure 1-2: The Sorting of Crushed Collected Glass



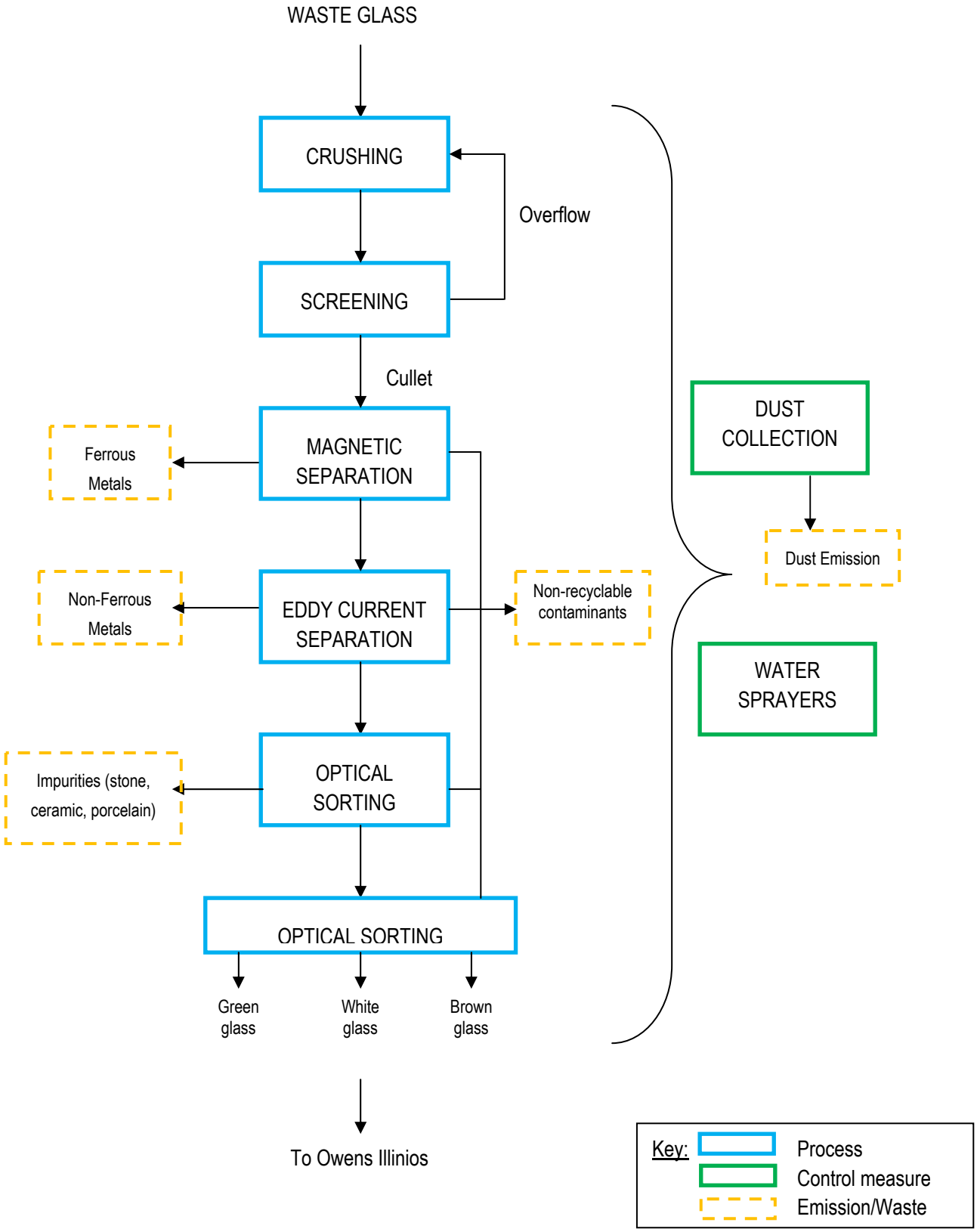
Source: "Glass Recycling with Mogensen Sorting and Screening Systems (2005)

Figure 1-2 is a schematic of the crushed collected glass sorting process.

The crushed collected glass is fed into the machine on an integrated vibrating conveyor (1) and flows onto an inclined glass chute (2). The glass then passes a line camera (3) with colour image processing that classifies the glass by true colour. Signal processor technology (4) allows the processing of 30 million measuring points. An all metal detector (5) enables detection of unwanted ferrous and non-ferrous metals. Particles are separated by means of compressed air impulses and the pass stream (6) and reject stream (7) are discharged separately. (Mogensen Sorting and Screening Systems, 2005)

Figure 1-3 shows a process flow diagram of the processes undertaken at the facility.

Figure 1-3: Process Flow Diagram



1.1.4 Ancillary Activities

Ancillary activities undertaken at the site that are essential for the operations to take place include:

- Collection of process dust generated from all activities conducted inside the buildings using a dust collection system. Sensors need to be installed to ensure any exceedances are promptly rectified;
- Water sprayers are installed in areas of high dust generation such as at transfer points (unloading and loading of materials) to suppress dust as required;
- Existing storage rooms along the eastern side of the building where the 2000L self-bunded diesel storage tank is located;
- A wash bay will be installed adjacent to the weighbridge. This wash bay will be used to clean the front-end loader before using it to load a different type of glass to prevent cross contamination; and
- Waste storage areas including separate designated areas for recyclables and general waste would be established. These areas would be kept clean by ensuring waste is stored within receptacles, bins or a container until it is removed from site.

1.2 SITE FACILITIES

The site consists of a large factory building, designated car parking area, hardstand areas, grassed and landscaped areas. Access is from a double width driveway from Andrews Road on the western side of the site.

The industrial building has been compartmentalised along its north-south direction using a fire rated wall. The building has internal store rooms along the eastern outside wall. Offices and amenities are located on the northern side of the main building. Access doorways are along the two sides and rear.

A weighbridge exists at the north western corner of the site adjacent to the building. At the rear of the site is a relatively large concreted and asphalted yard area, ideally suited for truck manoeuvring. A roadway continues partially around the eastern side of the site stopping at the front of the industrial building.

1.3 OBJECTIVES OF THE EMP

The objectives of the EMP are:

- To ensure management and all staff and contractors are aware of the legal requirements and responsibilities pertaining to environmental management related to all site operations covered by this EMP;

- To ensure that all staff and contractors are aware of the environmental aspects and impacts related to the site operations;

- To ensure staff and contractors are aware of their responsibilities and are competent in implementing the specific environmental safeguards that apply to their activities;

- To ensure that review processes are incorporated into the plan to reaffirm continual improvement;
- To ensure all relevant legislation is complied with; and
- To minimise any environmental harm as a result of the site operations.

In addition to these objectives, it shall be the aim of senior management to change and improve the EMP with the updating of environmental legislation, the development of new practices and technology, and in the case of complaints or incidents. The EMP should be updated to reflect such changes.

1.4 EMP SECTIONS

The following sections are presented in this EMP:

- Section 1 – The scope, objectives and a description of the site activities and facilities.
- Section 2 – Planning requirements to enable staff and contractors to be aware of the impacts of current environmental legislation and the consequences of breaching this legislation. A summary of key environmental aspects and potential impacts of the site operations for use in assessing the success of safeguards and control measures has been included.
- Section 3 – Implementation and operation, detailing the administrative and practical procedures of implementing the plan. These include organisation and training, communication and reporting aspects.
- Section 4 – Monitoring, corrective and preventative actions for establishment of an environmental monitoring and inspection program that would measure the environmental performance of the site. The key environmental issues to be monitored include noise, air emissions, waste, housekeeping and complaints. The other aspect of this section outlines the approach to undertake corrective and preventative actions that will enable continual improvement.
- Section 5 – An Environmental and Administration Procedures Manual detailing specific procedures and tasks for implementing safeguards and control measures. This section can be separated from the whole document of the EMP with the attached forms to be used individually once a thorough understanding of the EMP is obtained.

1.5 ENVIRONMENTAL POLICY

Glass Recovery Services has formalised the company's values and principles of action in the environmental policy provided following the table of contents of this EMP. This policy is considered integral to the way Glass Recovery Services does business and awareness building has been incorporated into induction for all staff and contractors. It is also available throughout the facility in staff areas and on the company website.

2. PLANNING

The planning process is used to establish and implement the elements of the EMP. It is fundamental that the EMP is based on the current context of the operations, which impacts on environmental management. This context is assessed through understanding the legal requirements and other requirements for the company and also how operations interact with the environment by assessing the environmental aspects and impacts of operations.

The actual activities themselves need to be evaluated to identify activities which can interact with the environment and what the potential environmental impacts could be. The planning process also identifies what the EMP is trying to achieve through objectives, targets and programmes and how performance should be measured.

The following areas are summarised in this section:

- environmental legislation and other requirements;
- environmental aspects and potential impacts;
- objectives, targets and environmental programmes; and
- performance indicators.

The same process of review is used when there are changes to the legal environment, operations on site or during the regular review undertaken to maintain and continuously improve the system.

It is important for staff to be familiar with this section of the EMP so that they are better equipped to implement the environmental safeguards detailed in this EMP and manage their individual responsibilities in relation to preventing environmental harm.

2.1 LEGAL REQUIREMENTS

The legal requirements that affect the operation of this site include any legislation which relates to activities or potential environmental impacts of the operations.

The following key NSW legislation and their relevant associated regulations pertain to the environmental management of the site.

- Protection of the Environment Operations Act, 1997 (POEO)
- Environmental Planning and Assessment Act, 1979 (EP&A)
- Waste Avoidance and Resource Recovery Act, 2001 (WARR)
- Water Management Act, 2000 (WMA)
- Work, Health and Safety Act, 2011 (WHS)
- Radiation Control Act, 1990. (to be confirmed when information becomes available)

Changes to legislation or regulations during operations would require a corresponding change to the EMP.

Affected procedures would need to be modified accordingly by management.

It is important for staff and contractors to be aware of the legislative and regulatory requirements involved in the operations of the site and their corresponding responsibilities. This section presents a list of relevant environmental legislation and the objectives of the legislation. Staff and contractors should be familiar with this information, which is summarised in the following tables.

Two initial considerations will be the Environmental Planning and Assessment Act, 1979 (EP&A Act) which governs land use and the Protection of the Environment Operations Act, 1997 (POEO Act) which concerns prevention of environmental harm through operations. The corresponding development consent conditions (DCC) under the EP&A Act and Environmental Protection Licence under the POEO Act are considered below along with other relevant State and Federal Legislation.

2.1.1 Development Consent Conditions under EP&A Act

The development consent conditions (DCC) are issued by Council on acceptance of a proposed development or alteration / addition to existing developments under the EP&A Act, 1979. The DCCs that apply to the site need to be fulfilled in order to comply with current environmental and planning legislation, policies and guidelines.

There are two sets of development consent conditions that relate to the facility. The first was for the extension of the hardstand area and associated land filling, DA No. DA12/0539. The second is in relation to the operation of the site as a glass beneficiation plant. These are yet to be granted and this section would need to be reviewed upon receipt of these development consent conditions.

A number of issues have been highlighted in the DCCs relating to the site from an environmental perspective and are summarised as follows:

DA12/0539 – Extension of hardstand area and associated land filling

Conditions of Consent - Environmental Matters:

Condition No. 11	Erosion and sediment control measures shall be installed prior to the commencement of work on site including the approved clearing of site vegetation. The erosion and sediment control measures are to be maintained in accordance with the approved erosion and sediment control plan(s) for the development and the Department of Housing's "Managing of Urban Stormwater: Soils and Construction" 2004. The approved sediment and erosion control measures are to be installed and maintained prior to and maintained throughout the construction phase of the development, until the land that was subject to the works has been stabilised and grass cover established. These measures shall ensure that mud and soil from vehicular movements to and from the site does not occur during the construction of the development.

Condition No. 12	No fill material is to be imported to the site without prior approval of Penrith City Council in accordance with Sydney REP No. 20 (Hawkesbury-Nepean River) (No. 2 1997). No recycling of material for use as fill material on the site shall be carried out without prior approval of Council.
Condition No. 13	All waste materials stored on-site are to be contained within a designated area such as a waste bay or bin to ensure that no waste materials are allowed to enter the stormwater system or neighbouring properties. The designated waste storage areas shall provide at least two waste bays / bins so as to allow for the separation of wastes, and are to be fully enclosed when the site is unattended.
Condition No. 14	All excavated material and wastes generated as a result of the development are to be reused, recycled or disposed of in accordance with the approved waste management plan. Waste materials not specified in the approved waste management plan are to be disposed of at a lawful waste management facility. Where the disposal location or waste materials have not been identified in the waste management plan, details shall be provided to the Certifying Authority as part of the waste management documentation accompanying the Construction Certificate application. All receipts and supporting documentation must be retained in order to verify lawful disposal of materials and are to be made available to Penrith City Council on request.
Condition No. 15	The operating noise level of plant and equipment shall not exceed 5 dB(A) above the background noise level when measured at the boundaries of the premises. The provisions of the POEO Act apply to the development in terms of regulating offensive noise.

The works need to comply with the above environmental conditions. These conditions need to be read in conjunction with the other conditions of consent attached.

General Terms of Approval

Part of the conditions of consent from Penrith City Council included an approval from the Department of Primary Industries Office of Water under the Water Management Act, 2000. General terms of approval (Ref: ERM2012/0568) were issued and are attached to this EMP as part of the consent DA12/0539.

There are 23 conditions set out in the General terms of approval and it should be noted that GRS are required to obtain a Controlled Activity Approval under the Water Management Act from the NSW Office of Water prior to commencement of works.

A copy of this consent is provided as an attachment.

2.1.2 Protection of the Environment Operations Act, 1997

Based on the scale and nature of the activities undertaken at the site, a licence under the Protection of the Environment Operations Act, 1997 (POEO Act) is required. Site operations must comply with the requirements of the POEO Act, relevant sections are briefly summarised below:

Protection of the Environment Operations Act, 1997	
Definitions and objectives	Relevance to Site Operations
General Requirements	
The principal objective of the legislation is to avoid causing environmental harm. Harm is defined in the Act as being: *"harm", in relation to the environment includes any direct or indirect alteration of the environment that has the effect of degrading the environment and, without limiting the generality of the above includes any act or omission that results in pollution.* *"Pollution" means:* *(a) water pollution, or* *(b) air pollution, or* *(c) noise pollution, or* (d) *land pollution.*	The implementation of the EMP would ensure that the environmental impacts of the activities taking place on site are minimised. Safeguards/procedures are implemented to ensure that site operations avoid causing environmental harm.
The primary objectives of this Act as applied to the site are: *(a) to protect, restore and enhance the quality of the environment in New South Wales, having regard to the need to maintain ecologically sustainable development,* *(b) to provide increased opportunities for public involvement and participation in environment protection,* *(c) to ensure that the community has access to relevant and meaningful information about pollution,* *(d) to reduce risks to human health and prevent the degradation of the environment by the use of mechanisms that promote the following:* • *pollution prevention and cleaner production,* • *the reduction to harmless levels of the discharge of substances likely to cause harm to the environment,*	Monitoring, corrective, and self-auditing activities are also encouraged in this EMP. Establish and maintain a set of environmental safeguards. Maintain an effective housekeeping standard.

Protection of the Environment Operations Act, 1997	
Definitions and objectives	Relevance to Site Operations
• *the elimination of harmful wastes,* • *the reduction in the use of materials and the re-use or recycling of materials,* • *the making of progressive environmental improvements, including the reduction of pollution at source,* • *the monitoring and reporting of environmental quality on a regular basis,* *(e) to rationalise, simplify and strengthen the regulatory framework for environment protection,* *(f) to improve the efficiency of administration of the environment protection legislation,* *(g) to assist in the achievement of the objectives of the Waste Avoidance and Resource Recovery Act 2001.*	
Air Pollution	
"Air pollution," (defined in the Act) means the emission into the air of any air impurity. *While "air impurity" includes smoke, dust (including fly ash), cinders, solid particles of any kind, gases, fumes, mists, odours and radioactive substances.*	The potential for air pollution to occur would be associated with crushing activities and the transfer of materials on site. A dust collection system and other air controls are in place to minimise emissions from these activities.
Clause 124 Operation of plant (other than domestic plant) *The occupier of any premises who operates any plant in or on those premises in such a manner as to cause air pollution from those premises is guilty of an offence if the air pollution so caused, or any part of the air pollution so caused, Is caused by the occupier's failure:* *(a) to maintain the plant in an efficient condition, or* *(b) to operate the plant in a proper and efficient manner*.	Maintenance procedures have been included in the Air Quality Control procedure to address these objectives.

Protection of the Environment Operations Act, 1997	
Definitions and objectives	Relevance to Site Operations
"Offensive odour" means an odour: (a) *that, by reason of its strength, nature, duration, character or quality, or the time at which it is emitted, or any other circumstances:* *(i) is harmful to (or is likely to be harmful) a person who is outside the premises from which it is emitted, or* (ii) *interferes unreasonably with (or is likely to interfere unreasonably with) the comfort or repose of a person who is outside the premises from which it is emitted, or* *(b) that is of a strength, nature, duration, character or quality prescribed by the regulations or that is emitted at a time, or in other circumstances, prescribed by the regulations.*	Offensive odours generated from the activities is expected to be negligible.
Clause 132 details the maximum penalty for air pollution offences. Tier 2 penalties apply. *A person who is guilty of an offence under this Division is liable, on conviction.*	Responsibility extends to all employees. If found guilty of an air pollution offence, both the company and the individual can be held liable.
Water Pollution	
"water pollution" or "pollution of waters" means: *(a) placing in or on, or otherwise introducing into or onto, waters (whether through an act or omission) any matter, whether solid, liquid or gaseous, so that the physical, chemical or biological condition of the waters is changed, or* *(b) placing in or on, or otherwise introducing into or onto, the waters (whether through an act or omission) any refuse, litter, debris or other matter, whether solid or liquid or gaseous, so that the change in the condition of the waters or the refuse, litter, debris or other matter, either alone or together with any other refuse, litter, debris or matter present in the waters makes, or is likely to make, the waters unclean, noxious, poisonous or impure, detrimental to the health, safety, welfare or property of persons, undrinkable for farm animals, poisonous or harmful to aquatic life, animals, birds or fish in or around the waters or unsuitable for use in irrigation, or obstructs or interferes with, or is likely to obstruct or interfere with persons in the exercise or enjoyment of any right in relation to the waters, or*	Water is used for dust suppression in water mists and sprayers as well as in the wash bay area for washing the front-end loader. Water is also used in office areas and amenities. All wastewater from the wash bay would be managed through a collection pit and a sump. The water sprayers would not generate wastewater. No tradewaste would be generated. Most water collected during this process is likely to be recycled through the same system following a light treatment process to remove sediments. It is expected that he site will operate on a nil water discharge policy.

Protection of the Environment Operations Act, 1997	
Definitions and objectives	Relevance to Site Operations
(c) placing in or on, or otherwise introducing into or onto, the waters (whether through an act or omission) any matter, whether solid, liquid or gaseous, that is of a prescribed nature, description or class or that does not comply with any standard prescribed in respect of that matter, *and, without affecting the generality of the foregoing, includes:* *(d) placing any matter (whether solid, liquid or gaseous) in a position where:* *(i) it falls, descends, is washed, is blown or percolates, or* *(ii) it is likely to fall, descend, be washed, be blown or percolate,* *into any waters, onto the dry bed of any waters, or into any drain, channel or gutter used or designed to receive or pass rainwater, floodwater or any water that is not polluted, or* *(e) placing any such matter on the dry bed of any waters, or in any drain, channel or gutter used or designed to receive or pass rainwater, floodwater or any water that is not polluted,* *if the matter would, had it been placed in any waters, have polluted or have been likely to pollute those waters.* *"waters" means the whole or any part of:* *(a) any river, stream, lake, lagoon, swamp, wetlands, unconfined surface water, natural or artificial watercourse, dam or tidal waters (including the sea), or* *(b) any water stored in artificial works, any water in water mains, water pipes or water channels, or any underground or artesian water.* Clause 120 relates to the prohibition of pollution of waters: *A person who pollutes any waters is guilty of an offence.* Clause 123 details the maximum penalty for water pollution offences. Tier 2 penalties apply. *A person who is guilty of an offence under this Part is liable, on conviction.*	Potential for water pollution would be associated with contamination of waterways from accidental release of materials including diesel. Procedures and controls are in place to ensure the risk for pollution of waters is minimised.
Noise Pollution	
"Offensive noise" means noise that by reason of its level, nature, character or quality, or the time at which it is made is harmful to (or likely to be harmful to) a person who is outside the premises or interferes unreasonably with (or is likely to) the comfort or repose of a person outside the premises.	Noise from operations and plant equipment are addressed in the noise management procedure.

Protection of the Environment Operations Act, 1997	
Definitions and objectives	Relevance to Site Operations
Clause 139 relates to the operation of plants: *The occupier of any premises who operates any plant (other than control equipment) at those premises in such a manner as to cause the emission of noise from those premises is guilty of an offence if the noise so caused, or any part of it, is caused by the occupier's failure:* *(a) to maintain the plant in an efficient condition, or* *(b) to operate the plant in a proper and efficient manner.* Clause 141 details the maximum penalty for noise offences. Tier 2 offences apply. *A person who is guilty of an offence under this Part is liable, on conviction.*	The main sources of noise would be from the crushing and screening processes and the transfer of material on site. Noise limits may apply to the site. Glass Recovery Services may be required to undertake noise monitoring to ensure compliance is achieved under an Environment Protection Licence (EPL). This section would need to be updated upon issue of an EPL.
Land Pollution	
"land pollution" or "pollution of land" means placing in or on, or otherwise introducing into or onto, the land (whether through an act or omission) any matter, whether solid, liquid or gaseous: *(a) that causes or is likely to cause degradation of the land, resulting in actual or potential harm to the health or safety of human beings, animals or other terrestrial life or ecosystems, or actual or potential loss or property damage, that is not trivial, or* *(b) that is of a prescribed nature, description or class or that does not comply with any standard prescribed in respect of that matter,* *but does not include placing in or on, or otherwise introducing into or onto, land any substance excluded from this definition by the regulations.* *"land" does not include waters.* Clause 142A relates to the pollution of land. Tier 2 penalties apply. *A person who pollutes land is guilty of an offence.*	Staff of Glass Recovery Services need to ensure that waste is not discarded to land within or outside the boundaries of the site. Safeguards are in place to prevent contamination of land. The environmental procedures address this issue.
Waste Generation and Disposal	
"waste" (unless specially defined) includes: *(a) any substance (whether solid, liquid or gaseous) that is discharged, emitted or deposited in the environment in such volume, constituency or manner as to cause an alteration in the environment, or*	The generation of waste requires appropriate management. Any disposal required must be undertaken in accordance with the NSW EPA's *Waste Classification Guidelines*.

Protection of the Environment Operations Act, 1997	
Definitions and objectives	Relevance to Site Operations
(b) any discarded, rejected, unwanted, surplus or abandoned substance, or *(c) any otherwise discarded, rejected, unwanted, surplus or abandoned substance intended for sale or for recycling, processing, recovery or purification by a separate operation from that which produced the substance, or* *(d) any processed, recycled, re-used or recovered substance produced wholly or partly from waste that is applied to land, or used as fuel, but only in the circumstances prescribed by the regulations, or* *(e) any substance prescribed by the regulations to be waste* *A substance is not precluded from being waste for the purposes of this Act merely because it is or may be processed, recycled, re-used or recovered.*	Management of waste and classification of all waste generated are addressed in the waste management procedure. All waste should be stored in an environmentally safe manner and away from any incompatible wastes. Staff are responsible for being aware of the nature and quantity of waste generated at the site.
Waste needs to be disposed of in a manner which does not create or is likely to create environmental harm. Clause 143 relates to the unlawful transporting or depositing of waste: *If a person transports waste to a place that cannot lawfully be used as a waste facility for that waste, or causes or permits waste to be so transported:* *(a) the person, and* *(b) if the person is not the owner of the waste, the owner,* *are each guilty of an offence.* Clause 144 deals with the use of land as waste facility without lawful authority: *(1) A person who is the owner or occupier of any land and who uses the land, or causes or permits the land to be used, as a waste facility without lawful authority is guilty of an offence.* *(2) In any proceedings for an offence under this section the defendant bears the onus of proving that there is lawful authority to use the land concerned as a waste facility.* All waste must be classified in accordance with the EPA Environmental Guidelines: Assessment, Classification & Management of Liquid and Non-liquid Wastes.	Transportation and disposal of waste generated at the site is the responsibility of Glass Recovery Services, regardless of use of a licensed waste contractor. False or misleading information regarding waste is an offence under the Act.

Protection of the Environment Operations Act, 1997	
Definitions and objectives	Relevance to Site Operations
Reporting Responsibility	
Clause 148 *Pollution incidents causing or threatening material harm to be notified.* • *Kinds of incidents to be notified* *This Part applies where a pollution incident occurs in the course of an activity so that material harm to the environment is caused or threatened.* • *Duty of person carrying on activity to notify* *A person carrying on the activity must, immediately after the person becomes aware of the incident, notify each relevant authority of the incident and all relevant information about it.* • *Duty of employee engaged in carrying on activity to notify* *A person engaged as an employee in carrying on an activity must, immediately after the person becomes aware of the incident, notify the employer of the incident and all relevant information about it. If the employer cannot be contacted, the person is required to notify each relevant authority.* • *Duty of employer to notify* *An employer who is notified of an incident or who otherwise becomes aware of a pollution incident which is related to an activity of the employer, must, immediately after being notified or otherwise becoming aware of the incident notify each relevant authority of the incident and all relevant information about it.* • *Duty of occupier of premises to notify* *The occupier of the premises on which the incident occurs must, immediately after the occupier becomes aware of the incident, notify each relevant authority of the incident and all relevant information about it.* • *Duty on employer and occupier to ensure notification* *An employer or an occupier of premises must take all reasonable steps to ensure that, if a pollution incident occurs in carrying on the activity of the employer or occurs on the premises, as the case may be, the persons engaged by the employer or occupier will, immediately, notify the employer or occupier of the incident and all relevant information about it.*	In the event of an incident, the duty to notify extends to all staff and contractors of the site. Staff and/or contractors are required to notify the employer. When management is not contactable, they are required to notify the relevant authorities. Staff are required to notify in the event of an incident that causes or threatens material harm to the environment. Relevant authorities are identified in the site's PIRMP and include: (a) the appropriate regulatory authority, (b) if the EPA is not the appropriate regulatory authority-the EPA, (c) if the EPA is the appropriate regulatory authority-the local authority for the area in which the pollution incident occurs, (d) the Ministry of Health, (e) the WorkCover Authority, (f) Fire and Rescue NSW.

Protection of the Environment Operations Act, 1997	
Definitions and objectives	Relevance to Site Operations
• *Extension of duty to agents and principals* *This section extends to a person engaged in carrying on an activity as an agent for another. In that case, a reference in this section to an employee extends to such an agent and a reference to an employer extends to the principal.* Clause 152: A person who contravenes this Part is guilty of a Tier 2 offence.	
Pollution Incident Response Management Plans	
Clause 153A *Duty of licence holder to prepare Pollution Incident Response Management Plan.* *The holder of an environment protection licence must prepare a pollution incident response management plan that complies with this Part in relation to the activity to which the licence relates.* Non-compliance with this clause is an offence under the Act.	All licence holders are required to prepare a Pollution Incident Response Management Plan. This can be prepared as part of their Emergency Response Plan or as a separate document.
Offences and Penalties	
The Act establishes the penalty provisions of causing environmental harm and committing the following breaches (wilfully or negligently) presented under the tier system stipulated in the legislation. These breaches are considered offences under the Act. <u>Tier 1.</u> *If a person wilfully or negligently disposes of waste in a manner that harms or is likely to harm the environment:* *(a) the person, and* *(b) if the person is not the owner of the waste, the owner,* *are each guilty of an offence.* • <u>Penalty for Corporation</u>: *$5,000,000 for an offence that is committed wilfully or $2,000,000 for an offence that is committed negligently* • for <u>Individual</u>: $1,000,000 or 7 years imprisonment or both for an offence that is committed wilfully, or $500,000 or 4 years imprisonment, or both, for an offence that is committed negligently; • disposal of waste without lawful authority;	All staff and contractors should be aware and understand their individual and corporate responsibilities under the Act. This is addressed in the Environmental training procedure.

Protection of the Environment Operations Act, 1997	
Definitions and objectives	Relevance to Site Operations
• cause a substance to leak, spill or escape that causes environmental harm or is likely to harm the environment; • emission of an ozone depleting substance.	
Tier 2. • Penalty for Corporation: $1,000,000 and for a continuing offence $120,000 for each day the offence continues, • for Individual: $250,000 and $60,000 per day for a continuing offence; • cause air pollution; • pollution of waters; • cause noise pollution; • unlawful transport or disposal of waste; • failure to report incidents that threaten material harm to the environment; • permitting land to be used as an unlawful waste facility. Tier 3. *Clause 114 - Tier 3 offences are tier 2 offences that may be dealt with under Part 8.2 by way of penalty notice.*	

2.1.2.1 Environmental Protection Licence

The site is required to be licensed under the Protection of the Environment Operations Act, 1997 for crushing, grinding or separating works.

Once the licence has been issued, this section would need to be updated to include relevant conditions.

2.1.3 Waste Avoidance and Resource Recovery Act, 2001

This Act relates to the efficient use of resources, resource recovery, including reuse and recycling and continual reduction of the disposal of waste. The Act stipulates the requirements and objectives of Resource NSW, a corporation created under the Act.

Waste Avoidance and Recovery Act, 2001	
Definitions and objectives	Relevance to Site Operations
General Requirements	
The primary objectives of the act in relation to Glass Recovery Services' activities are: • to encourage the most efficient use of resources and to reduce environmental harm in accordance with the principles of ecologically sustainable development; • to provide for the continual reduction in waste generation; • to minimise the consumption of natural resources and the final disposal of waste by encouraging the avoidance of waste and the reuse and recycling of waste; and • To establish a hierarchy of resource management options: 1. *"avoidance of unnecessary resource consumptions,* 2. *resource recovery (including reuse, reprocessing, recycling and energy recovery),* 3. *disposal".*	This act is of relevance to the site in relation to segregation of waste streams and maximising the reuse and recycling of waste materials.

2.1.4 The Work Health and Safety Act 2011

The Work Health and Safety Act 2011 and associated regulation provide requirements for the storage and handling of dangerous goods. There would be minor quantities of dangerous goods at the site that would not warrant the need for notification to WorkCover.

Should larger quantities of dangerous goods be required to be stored or handled at the site, this legislation would need to be consulted to determine requirements.

2.1.5 Water Management Act, 2000

Based on advice from the Department of Primary industries-Office of Water (DPI-OW), the proposed development and any subsequent modifications/additions/alterations to the development require a controlled activity approval under the Water management act 2000 (WMAct). DPI has considered the proposed development to be Integrated Development under the provisions of the EP&A Act 1979 and issued its GTAs for the development on 4 March 2013.

The proponent (GRS) must apply to DPI-OW for a controlled activity approval before the commencement of any work or activity on waterfront land.

2.1.6 Radiation Control Act, 1990

Any x-ray machines used at the plant may require licensing by the NSW EPA under the provisions of the Radiation Control Act 1990. It will likely be a Radiation User Licence rather than Radiation Management Licence. . This requirement will be confirmed soon following consultation with the NSW EPA and the machine manufacturers.

2.2 SIGNIFICANT ENVIRONMENTAL ASPECTS AND IMPACTS

The following section highlights the significant environmental aspects and impacts of the site operations. The issues described below will be dealt with as a priority in the continued environmental management of the site. Information concerning the impact of the following matters on nearby residences or the environment shall be collected, documented and analysed, and used in future decision-making processes as part of the reviewing auditing and reporting processes of the EMP.

An environmental aspect is defined in ISO14001, 3.6 as:

'An element of the organisation's activities, products or services which can interact with the environment.'
NOTE: A significant environmental aspect has or can have a significant environmental impact.

An environmental impact is defined as:

'Any change to the environment whether adverse or beneficial, wholly or partially resulting from an organisation's activities, products or services'.

The EMP enables assessment of the effectiveness of the management of the aspects and impacts listed in this section, and allows existing control methods to be reviewed. For example, upon complaints made by a resident or statutory authority or as the consequence of an audit of the facility, the EMP would enable a review of existing management practices.

2.2.1 Description of Environmental Aspects and Impacts

A description of the environmental aspects and potential environmental impacts is provided in tabular form as Table 2-1 (Environmental Aspects Register). The significant environmental impacts have been identified and are presented in the following sections.

The Environmental Aspects Register identifies potential environmental impacts and the risk of impact or harm. It also identifies the risk associated with each aspect.

Procedures to prevent or control each impact are also identified and an overview of relevant issues is provided to direct staff to more information within the EMP.

Table 2-1: Environmental Aspects Register for Glass Recovery Services

Activity or process	Environmental Aspect	Potential Impacts on the Environment	Land	Water	Noise	Air Quality	Waste	Resource Use	Regulatory Requirements	Raw Risk	Control Measures (Physical, Procedural, Behavioural, Automatic)	Evidence/ Monitoring	Contingency Plans	Residual Risk
INCOMING RAW MATERIALS	Truck deliveries Loading & Unloading Activities Transfer of materials	Nuisance noise, air pollution, use of fossil fuel resources, potential contamination of waterways from spillages onto roadways on site		X	X	X		X	POEO Act, NSW INP, Vehicle & driver licensing and registration regulations	M	Procedural: Noise management, Air quality control, Stormwater management, Workplace Inspection, Delivery Inspection Behavioural: Licensed drivers, Trained personnel	Training records, Delivery Inspection records, Workplace Inspection	Emergency Plan PIRMP Spill kits	L
	Internal Storage	Generation of dust and escape of material into environment causing pollution of land and water, generation of waste	X	X		X	X		POEO Act	L	Physical: Undercover, internal storage bays Procedural: Air quality control, Stormwater management, Workplace Inspection, Waste management Behavioural: Trained personnel	Training records, Workplace Inspection	Emergency Plan PIRMP	L

Table 2-1: Environmental Aspects Register for Glass Recovery Services

Activity or process	Environmental Aspect	Potential Impacts on the Environment	Land	Water	Noise	Air Quality	Waste	Resource Use	Regulatory Requirements	Raw Risk	Control Measures (Physical, Procedural, Behavioural, Automatic)	Evidence/ Monitoring	Contingency Plans	Residual Risk
	Wash Bay	Use of water, generation of wastewater, potential contamination of land and water	X	X			X	X	POEO Act	M	Physical: Collection pit & treatment sump Procedural: Stormwater management, Workplace Inspection, Waste management Behavioural: Trained personnel	Maintenance records Workplace inspections	Emergency Plan PIRMP Spill Kits Waste Contractor	L
MANUAL SORTING	Hand removal of contaminants	Generation of waste, incorrect management of waste					X		POEO Act WARR Act		Physical: Designated waste and recycling receptacles Procedural: Workplace Inspection, Waste management Behavioural: Trained personnel	Training records, Workplace Inspections, Waste records	Emergency Plan PIRMP	L

Table 2-1: Environmental Aspects Register for Glass Recovery Services

Activity or process	Environmental Aspect	Potential Impacts on the Environment	Land	Water	Noise	Air Quality	Waste	Resource Use	Regulatory Requirements	Raw Risk	Control Measures (Physical, Procedural, Behavioural, Automatic)	Evidence/ Monitoring	Contingency Plans	Residual Risk
CRUSHING	Crushing & grinding of glass	Noise, generation of dust and air pollutants, use of energy			X	X		X	POEO Act NSW INP	H	Physical: Noise controls, dust collection system Procedural: Noise Management, Air quality control, Workplace Inspection, Maintenance of pollution control equipment Behavioural: Trained personnel	Noise monitoring records Air monitoring records Workplace inspection Maintenance records Training records	Emergency Plan PIRMP	L
SORTING & SCREENING	Screening Magnetic separation ECS Optical Sorting	Noise, generation of dust and air pollutants, use of energy, generation of waste, incorrect management of waste, pollution of waterways from process emissions (dust/waste)		X	X	X	X	X	POEO Act NSW INP WARR Act	H	Physical: Noise controls, dust collection system, water sprayers, designated waste receptacles Procedural: Noise Management, Air quality control, Waste Management, Stormwater Management, Workplace Inspection, Maintenance of pollution control equipment Behavioural: Trained personnel	Noise monitoring records Air monitoring records Workplace inspection Maintenance records Training records Waste records	Emergency Plan PIRMP	L

Table 2-1: Environmental Aspects Register for Glass Recovery Services

Activity or process	Environmental Aspect	Potential Impacts on the Environment	Land	Water	Noise	Air Quality	Waste	Resource Use	Regulatory Requirements	Raw Risk	Control Measures (Physical, Procedural, Behavioural, Automatic)	Evidence/ Monitoring	Contingency Plans	Residual Risk
DUST COLLECTION & SUPPRESSION	Use of dust collection system	Generation of dust fines (waste), Noise Air emissions			X	X	X		POEO Act NSW INP	M	Physical: Noise controls, designated enclosed waste receptacles Procedural: Noise Management, Waste Management, Workplace Inspection, Maintenance of pollution control equipment Behavioural: Trained personnel Audible and/or visual alarms Computerised remote monitoring system	Noise monitoring records Air monitoring records Workplace inspection Maintenance records Training records Waste records	Emergency Plan PIRMP	L

Table 2-1: Environmental Aspects Register for Glass Recovery Services

Activity or process	Environmental Aspect	Potential Impacts on the Environment	Land	Water	Noise	Air Quality	Waste	Resource Use	Regulatory Requirements	Raw Risk	Control Measures (Physical, Procedural, Behavioural, Automatic)	Evidence/ Monitoring	Contingency Plans	Residual Risk
	Use of water sprayers	Use of water, potential to create wastewater		X			X	X	POEO Act WARR Act	M	Physical: PCDs Procedural: Workplace Inspection, Maintenance of pollution control equipment Behavioural: Trained personnel Audible and/or visual alarms Computerised remote monitoring system	Air monitoring records Water usage records Operating hours Workplace inspection Maintenance records Training records	Emergency Plan PIRMP	L
FINISHED GOODS	Transfer & External Storage	Nuisance noise, dust & air pollution, potential contamination of waterways from spillages onto roadways on site, unwanted waste from spillages Cross-contamination of clean and non-clean products		X	X	X			POEO Act NSW INP	M	Physical: Noise controls, water sprayers, PCDs Procedural: Noise Management, Air Quality Control, Stormwater Management, Waste Management, Workplace Inspection, Maintenance of pollution control equipment Segregation of different products from each other Behavioural: Trained personnel	Noise monitoring records Air monitoring records Workplace inspection Maintenance records Training records Waste records	Emergency Plan PIRMP	L

Table 2-1: Environmental Aspects Register for Glass Recovery Services

Activity or process	Environmental Aspect	Potential Impacts on the Environment	Land	Water	Noise	Air Quality	Waste	Resource Use	Regulatory Requirements	Raw Risk	Control Measures (Physical, Procedural, Behavioural, Automatic)	Evidence/ Monitoring	Contingency Plans	Residual Risk
WASTE MANAGEMENT	Storage of waste, Recycling & Disposal of waste	Potential for litter to escape onto land or into waterways, generation of dust,	X				X		POEO Act, WARR Act	M	Physical: Designated waste & recycling receptacles, PCDs Procedural: Air Quality Control, Stormwater Management, Waste Management, Workplace Inspection, Maintenance of pollution control equipment Behavioural: Trained personnel	Air monitoring records Workplace inspection Maintenance records Training records Waste records	Emergency Plan PIRMP Waste contractor	L
USE & STORAGE OF DIESEL	Transport, storage and handling of diesel	Potential spillages, potential for odour release, leakages and soil or water contamination, fire risk	X	X		X			POEO Act, Australian Dangerous Goods Code, WHS Act, Vehicle & driver licensing and registration regulations	L	Physical: Designated bunded and roofed storage area Procedural: Storage & handling of chemicals and dangerous goods, Spill Procedure, Stormwater management, Workplace inspection Behavioural: Trained personnel	Workplace inspection Training records Diesel usage records	Emergency Plan PIRMP Spill kits Waste contractor	L

Table 2-1: Environmental Aspects Register for Glass Recovery Services

Activity or process	Environmental Aspect	Potential Impacts on the Environment	Land	Water	Noise	Air Quality	Waste	Resource Use	Regulatory Requirements	Raw Risk	Control Measures (Physical, Procedural, Behavioural, Automatic)	Evidence/ Monitoring	Contingency Plans	Residual Risk
FORKLIFT OPERATION	Driving Forklift	Use of fossil fuel resources, air pollution, nuisance noise, minor fire & explosion risk			X	X		X	POEO Act, WHS Act & AS	M	Procedural: Driver training, Noise management Behavioural: Trained personnel	Training records Noise Monitoring records Maintenance and service records	Emergency Plan PIRMP Spill kits	L
OFFICE ACTIVITIES	Paper Use & Waste	Incorrect management of waste					X		POEO Act, WARR Act	L	Physical: Designated waste & recycling receptacles, PCDs Procedural: Waste Management, Workplace Inspection Behavioural: Trained personnel	Waste records Workplace Inspection records	None	L
	Photocopier / Printer Toner Use and Disposal	Incorrect management of waste					X		POEO Act WARR Act	L	Procedural: Waste management, Workplace inspections Behavioural: Trained personnel	Waste records Workplace inspection	Contractors used	L

Notes:

L = Low M = Medium H = High

AS = Australian Standards

POEO Act = Protection of the Environment Operations Act 1997

WARR Act = Waste Avoidance and Resource Recovery Act 2003

WHS Act = Work Health and Safety Act 2011

DG = Dangerous Goods

NSW INP = NSW Industrial Noise Policy

PCD = Pollution Control Devices

PIRMP = Pollution Incident Response Management Plan

Land includes soil, groundwater and all issues related to habitat/biodiversity

Water includes surface water, mains water, stormwater runoff etc.

Waste includes solid, hazardous, inert waste, wastewater and tradewaste generated by the facility.

Air quality includes air emissions, odour etc.

Raw risk is the risk of the identified potential impacts without controls in place

Residual risk is the risk assessed once controls and procedures are in place.

Risk assessment – (Reference: Standards Australia, HB-203 2006 Environmental Risk Management – Principles and process)

2.2.2 Determining Significance

Aspects and impacts have been identified by examining the Penrith site through the activities that are undertaken and the designated use of different areas of the site. Site activities were considered individually so as to identify the associated aspects and impacts which were then noted. To ensure that all aspects and impacts are identified, all facilities, their associated surrounding areas, and any additional areas utilised by Glass Recovery Services were examined for what infrastructure or equipment is present that could also impact on the environment.

The next step is to allocate aspects and impacts significance, in order of highest to lowest. This could be done using an existing risk assessment matrix. A procedure for determining the significance of environmental impacts is available as part of the Administration Procedures in Section 5. Significant environmental impacts are also discussed in the following sections.

2.2.3 Description of Potential Environmental Impacts

The following sections describe the potential environmental impacts for the site that were identified in the EAR presented in the previous section. These relate to:

- Noise pollution;
- Generation of excessive dust;
- Sedimentation or contamination of stormwater;
- Generation and management of waste;
- Storage and handling of diesel; and
- Fire risk

2.2.3.1 Noise

Noise would be generated from the crushing, screening and sorting processes, the dust collection system, transfer of materials and trucks and other on-site vehicles. Noise control measures required to achieve acceptable noise levels include treating the building and enforcing actions that will reduce noise emissions from the activities at the site.

The treatment of the building involves installing steel cladding on the roof and eastern façade as well as the perspex roof skylights that achieve minimum R_w value (Weighted Reduction Index). These R_w values are specified in the EIS for the facility and it is essential these are applied for the operation to comply with noise criteria.

The building treatment and actions required for the facility to be in compliance with noise criteria and specified in the Noise Procedure in Section 5 of this EMP.

An Environment Protection Licence (EPL) issued by the NSW EPA is likely to enforce noise limits on the facility and may require noise monitoring to be undertaken. Upon receipt of the EPL, this section of the EMP and the noise procedure would need to be updated to include conditions within the licence.

2.2.3.2 Dust & Air

The sources of dust and other air pollutants would be from the crushing, screening and sorting processes, transfer and storage of materials, trucks and onsite vehicles and waste. A number of air pollution control devices are required to minimise the air emissions from the operation. These include:

- A dust collection system that would capture dust and particulate emissions from the crushing, screening and sorting processes. The dust collection system would need to be fitted with sensors that would trigger an alarm if the emissions of dust exceed certain limits; and

- Water sprayers to suppress the dust and particulates generated during the transfer and external storage of material. Water sprayers increase the moisture content in the material to prevent dust becoming airborne or adding moisture to the air to capture the dust that is already airborne. Spray nozzles are used to apply a mist of water to dust particles. Water sprayers use low quantities of water under high pressure to generate very fine droplets of water. Millions of tiny particles of water surround the dust particles and bind them together creating a heavy mass which falls to the ground. This removes the airborne dust without wetting the area. No wastewater would be generated from the use of water sprayers. Water sprayers should be in operation at all times during normal plant operations.

It is recommended that the dust collection system be either installed inside the building or be enclosed in an appropriately insulated enclosure to ensure that dust and noise emissions to the environment are minimised (or prevented).

It is also recommended that the dust collection system has an audible and/or a visual alarm installed (or a similar device) to alert the shift controller of any excessive dust emissions issues associated with the dust collection system.

A procedure should be developed and implemented by the plant management and staff to address the residues of the mixture of dust and water as they accumulate on the plant floor in the areas where water sprayers are used to suppress dust. This procedure would serve two purposes; the first is associated with the prevention of workers injuries by eliminating the risk of slipping due to the possible formation of slippery materials on the plant floor, and the second is to prevent re-generation of dust of the plant floor under dry and windy weather conditions.

Procedures to minimise dust from other activities have been provided in Section 5. These procedures include the Air Quality Control procedure, Pollution Control Equipment Maintenance and Workplace Inspection. Manufacturer's manuals should be consulted for the correct use and maintenance of the above systems.

2.2.3.3 Stormwater

Potential sources of sedimentation and contamination to stormwater include material spillages, litter, waste and discharges from external storage areas and roadways. The risk of pollution to waters is high if no controls are installed due to the proximity of the wetland area to the boundary of the site. However, it should also be noted that the raw materials and finished goods do not contain hazardous materials or dangerous goods. They are in fact inert materials and the finished goods that would be stored in the external storage bays consist only of uncontaminated cullet. This significantly reduces the risk environmental harm.

To manage these sources of pollution, an erosion and sediment control plan and a landscape management plan was prepared as part of the EIS. Environmental controls specified as part of these plans include:

- A water quality treatment wetland that extends along the eastern boundary. This channel maintains flood storage of the site with an area of 730m^2 and would be planted with viro tube of various indigenous species. This would allow for any stormwater generated on site to be treated within this area. Water quality swales are to be installed in this area at strategic locations and a sediment fence at the outlet of the proposed water treatment wetland would remain until vegetation is established in earth mound areas.
- A retaining wall along the southern side of the external bunkers. Filling of the land along this area to establish the ground level for the storage bunkers. The filling of this area is balanced by the removal of fill to create the water quality treatment wetland.
- A 24 month program of maintenance of landscaped areas would be undertaken and any plants that are unsuccessful during this period are to be replaced.
- The external storage area is essentially bunded by the storage bins with all the runoff being directed to 2 sag points on either side of the bin on the eastern side of the site. Before the water is discharged from the paved areas there is a gross pollutant trap (GPT) located at each of the low points. All water from this paved area has to pass through the GPTs. Once the water has passed through the GPT it will then be treated by the wetland proposed on the site along the eastern boundary.
- The bunkers are designed to drain to the wetlands but not before draining to the proposed GPT's.
- The GPT's are CDS type units or equivalent and can also capture any glass cullet carried by runoff before overflowing into the proposed wetland.
- Swales are established in the low-lying areas of the site which are predominantly at the southern end of the site.

A stormwater procedure, spill procedure, workplace inspection and pollution control equipment maintenance procedure have been included to assist in minimising the risk of pollution to stormwater.

2.2.3.4 Waste

There are two main waste streams at the site:

1. Office & domestic waste - General solid waste (putrescible), and
2. Process waste - From the sorting process which would generate mostly recyclable material contained in the incoming glass - General solid waste (non-putrescible).

Waste would be separated into non-recyclable and recyclable waste into designated waste bins. No hazardous waste material is likely to be generated at the site.

A Waste Management procedure has been provided in Section 5.

2.2.3.5 Storage & Handling of Diesel

Diesel is stored in minor quantities of 2,000 L in a self bunded tank with a dedicated store room in a bunded area. No placarding or notification to WorkCover is required. Spill kits are provided in this area. It is also suggested that similar spill kits be placed in at least one more area further away from the diesel storage area just in case the spill prevents staff from reaching the area where the first spill kit is located.

A procedure for the receipt of diesel fuel and re-fuelling practices is provided as part of the Storage and Handling of Chemicals and Dangerous Goods procedure in Section 5. Spill and emergency procedures are also provided.

2.2.3.6 Fire Risk

The potential fire risk from the processes is limited to failure of an electric motor or a conveyor belt resulting in a fire. The cullet is inert and non-combustible and risk of a fire is very low.

The dust generated is not combustible and therefore there is no presence of a hazardous zone for dust.

The following safeguards and recommendations would be adhered to at the site to control potential fire risks:

- Fire hydrant systems are provided in accordance with AS 2419-2005.
- Hose reel systems are provided in accordance with AS 2441-2005.
- Fire services at the site are to be maintained in accordance with AS 1851-2012.
- Emergency lighting and exit signage are to be provided in accordance with the BCA and AS 2293-2005.
- Specific on site personnel are to be trained in specific site procedures, emergency procedures and the use of hose reels.
- Strict control of ignition sources to be enforced on site.
- Maintenance and housekeeping practices provided in accordance with AS/NZS 4745-2012.

- Dedicated smoker's areas should be provided and be segregated from other areas to ensure that fire and/or explosion ignition sources are eliminated in these areas that are likely to have a fire or an explosion.

A fire fighting procedure is provided in Section 5.

A bushfire assessment was undertaken as part of the EIS process and the following safeguards are required to be put in place:

- Landscaping around the subject building needs to comply with "Landscaping and Property Maintenance" of *Planning for Bush Fire Protection 2006*

- The office component of the existing building needs to include:
  - Installation of aluminium, steel or bronze metal mesh screens having an aperture size of 2 mm over all openable windows (internal or external) in such a way that the entire opening remains screened when the window is in the open position;
  - The installation of aluminium, steel or bronze metal mesh screens having an aperture size of 2 mm over all vents and weepholes;
  - The installation of draft excluders on all external side hung doors; and
  - The installation of draft excluders on all internal side hung doors that separate the office and industrial components of the building.

- An emergency / evacuation plan needs to be prepared consistent with the NSW Rural Fire Service document Guidelines for the Preparation of Emergency/Evacuation Plans.

2.3 ENVIRONMENTAL OBJECTIVES, TARGETS & PROGRAMMES

This section details the site environmental objectives, targets and programs. The purpose of setting environmental objectives and targets and implementing programs is threefold:

- To implement the goals of the environmental policy;
- To minimise the environmental impacts identified during environmental reviews and environmental audits of the site's operations and the environmental aspects and impacts register; and
- To achieve the internal performance criteria set by Glass Recovery Services.

The recommended environmental objectives, targets and programs for the sites is presented in Table 2-2.

Table 2-2: Environmental Objectives & Targets

Objective	Method of Achievement	KPI[1]	Responsibility[2]	Timeframe
1. Introduce an environmental awareness training program.	Include environmental training in the Site Induction for all staff. Follow the Environmental Training Procedure in the Procedures Manual. Include an environmental section as an agenda item of site meetings; Specify environmental issues to be raised in meetings	Competency testing (Target: 100% score) Meeting Minutes & Actions	Manager	January 2014 On-going
2. Introduce use of a set of environmental procedures.	Implementation of this EMP.	Internal Auditing – No non-conformances	Manager or delegate	January 2014
3. Comply with Part 5.7A of the POEO Act	Engage a qualified environmental consultant to prepare a Pollution Incident Response Management Plan (PIRMP). Include aspects of the PIRMP in environmental training program.	Implementation of the plan (audit records) Training records (100% score)	Manager	October 2013 January 2014
4. Implement a regular Workplace Inspection	Undertake the workplace inspection procedure.	Workplace Inspection Checklist Outcomes	Manager or delegate	October 2013
5. Minimise Energy use.	Keep records of energy use and identify opportunities to minimise usage. Undertake an energy audit after one year of operation.	Energy usage. (Target: 5% use reduction per year)	Manager or delegate	October 2013 Annually
6. Minimise waste going to landfill that can be recycled.	Implement a waste minimisation program. Undertake waste audits.	% waste to landfill; % recyclable waste. (Target: 10% waste reduction per year)	Manager or delegate	October 2013 Annually

Table 2-2: Environmental Objectives & Targets

Objective	Method of Achievement	KPI[1]	Responsibility[2]	Timeframe
7. Implement an internal environmental audit program to ensure effectiveness of site environmental management.	Undertake annual internal audits to ensure this EMP has been implemented. Follow the internal audit procedure provided in the Environmental Procedures Manual.	Audit outcomes (Target: No non-conformances)	Manager or delegate	Annually
8. Ensure effectiveness of environmental management.	Undertake annual Internal Management Review of the EMP.	Review outcomes. (Target: No non-conformances)	Manager or delegate	Annually
9. External Audit Program	Benbow Environmental	Audit outcomes & report	Manager or delegate	Bi-annually

1. KPI – Key Performance Indicator, the means in which performance will be measured in relation to this objective. There may be more than one KPI for an objective.
2. The responsibility should be related to the responsibility levels in Table 3-1

Glass Recovery Services will customise the above objectives and targets within the first three months of the EMP being in place to ensure relevance. Every 12 months during the management review phase of the EMP, this set of objectives and targets should be reviewed and evaluated. A new set of objectives and targets should then be generated to ensure continuous improvement in the environmental management of site operations.

It is recommended that environmental programs be established, implemented and maintained in order to achieve objectives and targets. A detailed description of the main programs identified is provided in the following sub-sections.

2.3.1 Environmental Awareness Training

It is recommended that environmental awareness training be undertaken by all staff and contractors involved in production, maintenance and materials handling activities at the site. Introductory environmental training could be included in the site induction to ensure all employees are aware of their environmental responsibilities and the company's environmental legal requirements.

Environmental training of all employees needs to updated and reviewed regularly. Competency testing should also be undertaken to ensure training has been successful. Further information on training is provided in Section 3.3 and as a procedure in Section 5.

2.3.2 Workplace Inspection

A workplace inspection is generally in the form of a checklist that allows investigation of areas of the facility for environmental or safety aspects. The inspection allows for recording of any issues and enables action to be implemented to rectify any problem areas once the source of the problem is identified.

Workplace inspections are to be carried out on a regular basis (usually weekly or monthly). An inspection form (Environmental Checklist) is provided as part of the Workplace Inspections Procedure in Section 5. Completed Environmental Checklists and records of actions taken need to be maintained.

2.3.3 Pollution Incident Response Management Plan

Under Part 5.7A of the *Protection of the Environment Operations Act, 1997* (POEO Act), all NSW EPA licence holders are required to prepare a Pollution Incident Response Management Plan (PIRMP). Glass Recovery Services, Penrith is required to hold an environmental protection licence (EPL) for crushing, grinding or separating works and as a waste management facility.

The PIRMP needs to be prepared following the *POEO (general) Amendment (Pollution Incident Response Management Plans) Regulation 2012* and the *Environmental Guidelines: Preparation of Pollution Incident Response Plans.*

Information in the plan that must be made publicly available includes:

- Procedures for contacting relevant regulatory authorities including the EPA, local council, NSW Ministry of Health, WorkCover NSW, and Fire and Rescue NSW; and
- Procedures for communicating with the community.

2.3.4 Energy Saving Program

To minimise energy usage, an energy saving action plan is recommended. The plan would be based on:

- Collection of energy data over a given period of time;
- Simple energy audits undertaken to identify areas of high usage and opportunities for improvement; and
- Cost-benefit analysis of energy saving options.

The savings would most likely focus on:

- Production processes and areas/items of high energy usage;
- Type and use of factory and office lighting;
- Other uses of energy; and
- How to minimise energy use and greenhouse gas emissions.

The possibility of using green energy could be explored and options to reduce energy use would also be determined.

A simple energy audit needs to be undertaken initially to determine the existing energy usage. From this, opportunities to minimise usage can be identified and a plan of implementation developed.

The Energy Saving Action Plan is detailed further in Section 4.

2.3.5 Waste Minimisation

A waste minimisation program should be implemented. Waste minimisation can be achieved through more efficient usage of resources, improved process control and implementing recycling.

Waste minimisation is an important tool in the management of waste. To be effective, it would require:

- Strong co-ordination, leadership commitment on the part of all participants; and
- Measuring tools and yard sticks to gauge if the efforts are adding value to operations and the community.

This would ensure that the principles of ecological sustainable development are being applied.

A simple waste audit will be undertaken annually. Initially, the waste audit would determine the existing waste generation including waste types and quantities. From this, opportunities for waste saving can be identified, recycling initiatives can be implemented and waste goals can be set.

The waste minimisation and recycling program is further detailed in Section 4.

2.3.6 Internal Auditing Program

Internal audits need to be undertaken at regular intervals (at least annually) to determine whether the EMP conforms to the requirements of the ISO14001 International standard and that it has been properly implemented and maintained. Results of the internal audit need to be provided to top management.

An Internal Auditing Procedure is provided in Section 5.

2.3.7 Internal Management Review

Senior management would conduct an annual internal review of the EMP to ensure its continuing suitability and adequacy to business operations and assess its effectiveness.

The management review would include:

- Evaluation of compliance with legal and other requirements;
- Communications from external parties (including complaints);
- Overall environmental performance;
- Whether objectives and targets have been met;
- Status of corrective and preventative actions;
- Follow-up actions from previous reviews;
- Changes to the operations or development consents; and
- Recommendations for improvement.

Any decisions and actions related to the management review including changes to any elements of the EMP need to be documented.

2.3.8 External Auditing Program

It is recommended that an external auditing program using a suitable environmental consultant be implemented to assess compliance with legal requirements and implementation of the EMP. External auditing should be undertaken no less than every 2 years.

3. IMPLEMENTATION AND OPERATION

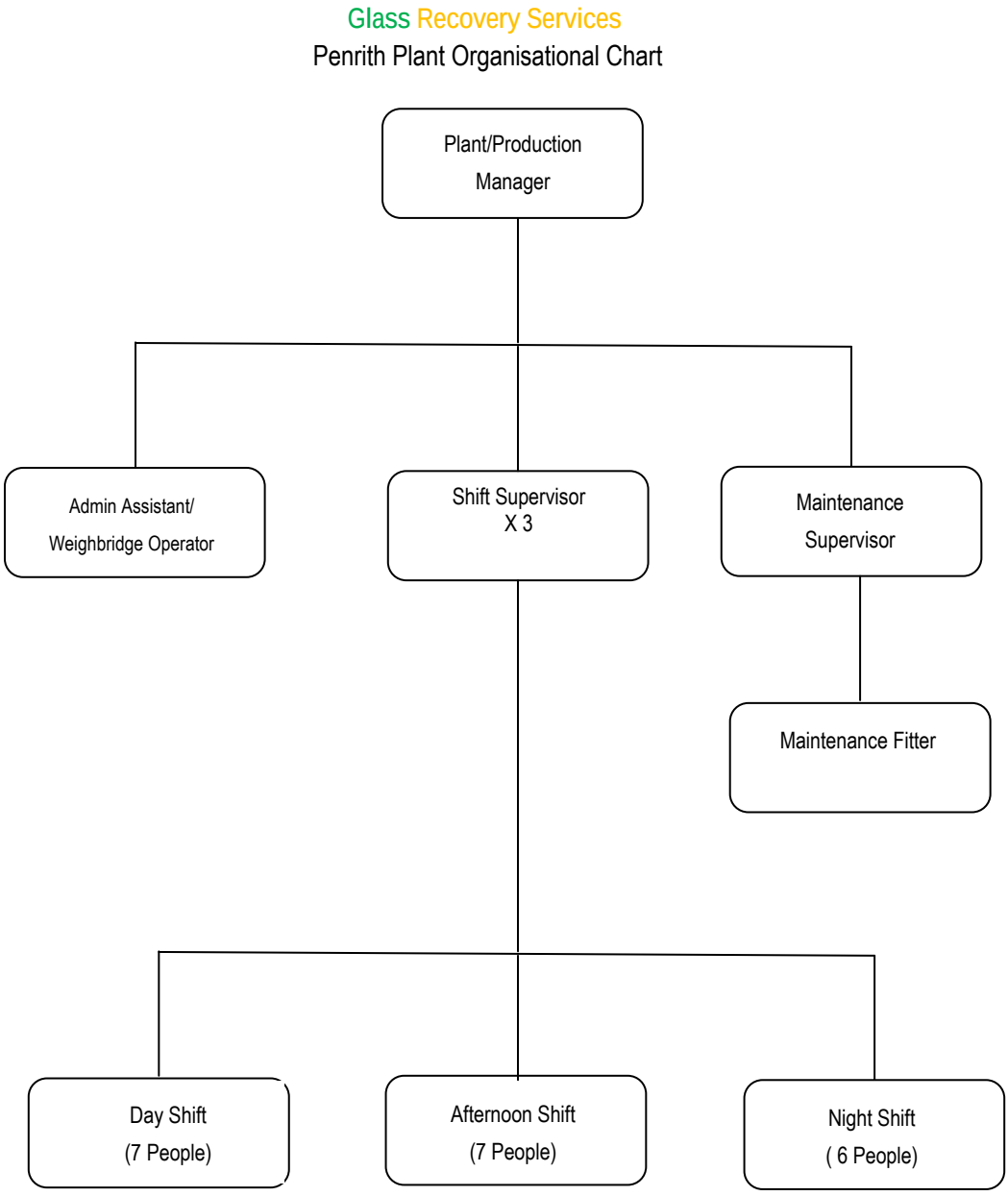
Successful implementation of this EMP requires knowledge, skills and training, the allocation of resources, and the clear delegation of responsibilities. It is also important that stakeholders and regulatory authorities are kept informed of any significant modifications to normal operations that may take place on the site and that the residential community are given the opportunity to voice their concerns or complaints.

This section details the necessary safeguards and mitigation measures required to ensure impacts on the environment and amenity of neighbouring properties are minimised.

3.1 ORGANISATIONAL STRUCTURE

This section of the EMP provides an outline of an environmental management structure and responsibilities at various levels of personnel at Glass Recovery Services. An organisational chart is provided in Figure 3-1.

Figure 3-1: Organisational Structure



3.2 ROLES AND RESPONSIBILITIES

The following table outlines typical roles and responsibility levels. It is not all encompassing, rather a guide to assist management in assigning the correct responsibilities and accountabilities to their staff. Also to assist staff in applying the EMP to their daily work activities.

All staff have the responsibility of actively participating in the implementation of the EMP and for ensuring that improvements or problems with implementing the EMP are brought to the immediate attention of their supervisor or manager.

In order for the EMP to be effectively implemented, an Environmental Manager needs to be appointed to take responsibility for this task. This role will be reviewed annually.

Table 3-1: Typical Responsibility Levels

Role/Position	Responsibility	Training Level
General Manager / CEO	• Ensure the company environmental policy is implemented in the EMP for the site. • Allow adequate resources to ensure satisfactory implementation and maintenance of the EMP. • Monitor overall EMP performance.	3
Production Manager	• Responsible for implementation across all functions and maintenance of EMP. • Responsible for managing changes to EMP from changes across site operations and/or legislation. • Ensure responsibilities of others are delegated and understood. • Responsible for implementing corrective and preventative actions.	3
Environmental Manager	• Responsible for implementation of the EMP across all business functions. • Responsible for maintaining the EMP documentation including updating changes to business activities, legislation, procedures, objectives, targets and programmes and training. • Responsible for delegating tasks to other staff members in order to achieve objectives and implement EMP programs. • Responsible for the annual EMP review. • Responsible for training relating to environmental management in the plant, and assessing staff's competence.	3
Supervisors	• Responsible for undertaking any EMP tasks delegated to them to enable effective implementation of the EMP. • Responsible for carrying out work activities in accordance with the EMP and procedures. • Responsible for ensuring that operators & staff are aware of their environmental responsibilities and legal requirements.	2

Table 3-1: Typical Responsibility Levels		
Role/Position	Responsibility	Training Level
	• Responsible for informing the Environmental manager of any issues with implementing the EMP or if amendments are needed as soon as practicable.	
All staff and Contractors	• Responsible for carrying out work activities in accordance with the EMP and procedures. • Responsible for informing supervisor / manager of any issues with implementing the EMP, corrective and/or preventative actions required or amendments needed as soon as practicable.	1

3.3 TRAINING

In accordance with the site's Environmental Policy Statement, all staff will be trained in environmental awareness, communication and environmental procedures. Table 3-2 details the typical training that will be provided.

Table 3-2: Typical Training Levels				
Type	Level	Issues	Attendees	Objective
General Environmental Awareness Emergency Response (including fire)	1	• Basic definitions, objectives, policy • Aspects, Impacts • EMP • Management and prevention	All staff	• Commitment • Individual accountability • Knowledge • Raise awareness of procedure
Knowledge & Skill Enhancement, Specific Procedures, Competency	2	• Specific • Procedural • EMP • Assessment	Supervisors, Operators with specific responsibilities	• Increase competency in specific areas – individual responsibility • Ensure competency • Meet Compliance • Objectives
Awareness of Environmental Management	3	• Strategic • Legislative • Offences/Penalties • EMP	Managers	• Raise awareness • Gain commitment • Align with overall business policy/plan

A procedure that addresses the identification of training requirements, the training programs, competency assessment and management of related records has been provided.

Records of staff and contractor's training such as "competency certificates" for each of the procedures shall be completed, signed and filed with the environmental procedures manual. Staff and contractors shall effectively be signing off on their understanding and agreement to abide by the procedures.

Activities shall be monitored and staff and contractors assessed regularly on their competency. Any issues or non-compliances with the EMP should be addressed with management and the individual. Shortfalls shall be addressed by specific on-site training. Updates and reviews shall also be conducted in the case of complaints or after any changes in the EMP, in particular, a change in procedures or legislation.

3.4 COMMUNICATION

Voluntary and open communications should be undertaken with all groups with which the company interfaces; this includes community groups, regulatory authorities, non-regulatory agencies, and certain industries. A procedure that sets out processes that are to be followed for the following matters has been provided.

3.4.1 Internal Communication

Effective communication channels for the environmental management system have been established. Typical methods of communication include phone calls, emails, meetings and notice boards.

Document control and written communication would also be required when new contractors are trained or changes are made to the EMP or any other matters that affect the interdependent environmental management of the Site. It is important that internal communications such as meetings, verbal, and written communications are documented.

3.4.2 External Communication

Effective communication channels with interested external parties have been established and are outlined in the procedure section. Typical methods of communication include complaint logs and letters.

3.4.2.1 Community Relations

A procedure that addresses the receipt, documentation and responses to information and requests from concerned parties is provided in Section 5. It covers a wide range of environmental and community concerns.

3.4.2.2 Regulatory Authorities

Liaison with relevant regulatory authorities shall be undertaken, as required and report on the environmental performance of the EMP including the effectiveness of the safeguards detailed in this EMP.

The NSW Environment Protection Authority is the appropriate regulatory authority (ARA) for the company and any environmental matter of relevance will be discussed and resolved with their involvement.

In specific circumstances, the Production Manager and/or Environmental Manager needs to also be involved in site discussions with officers of regulatory authorities such as NSW Fire and Rescue.

All communications with regulatory authorities shall pass through the Production Manager and/or Environmental Manager and records shall be maintained.

3.4.2.3 Reporting Requirements

A pollution incident that occurs in the course of an activity so that material harm to the environment is caused or threatened must be notified immediately to relevant authorities.

Under Part 5.7A of the POEO Act holders of environmental protection licences must prepare and implement a pollution incident response management plan (PIRMP) for each licensed activity. The PIRMP would provide a notification procedure detailing what to do in the event of a pollution incident.

3.4.3 Operational Control

Operational controls are established through a set of environmental procedures and records of environmental aspects of the operations at the site. Environmental procedures are documented in Section 5 of the EMP and the following are considered necessary for the site.

ENVIRONMENTAL

- Air Quality Control
- Emergency Response
- Noise Management
- Pollution Control Equipment Maintenance
- Spill Procedure
- Storage and Handling of Chemicals and Dangerous Goods
- Stormwater Management and Sediment Control
- Use of Fire Fighting Equipment
- Waste Management
- Workplace Inspection

ADMINISTRATIVE

- Communications Procedure
- Complaints Response Procedure
- Control of Documents and Records
- Corrective and/or Preventative Action
- Environmental Training
- Identifying Environmental Aspects and Impacts and Determining Significance
- Identifying Legal and Other Requirements
- Internal Environmental Audits

Environmental Records are kept for the following:

- Receipts of dangerous goods;
- Waste records;
- Workplace inspections;
- Training records;
- Competency certificates and testing;
- Communications;
- Environmental monitoring requirements;
- Licence requirements;
- Approval requirements; and
- Plant/equipment maintenance and service.

3.4.4 Documentation

Document control within the EMP is of critical importance. It is important that all documentation relating to the environmental management of the site is kept on record. This is detailed in the procedure "Control of documents and records".

3.4.5 Complaints

Complaint records are required to be kept for at least four years after the complaint was made and are dealt with as part of the environmental register / incidents procedure. Information that should be recorded in relation to the complaint include:

- The date and time of the complaint;
- The method by which the complaint was made;
- Any personal details of the complainant, which were provided by the complainant or, if no such details were provided, a note to that effect;
- The nature of the complaint;
- The action taken in relation to the complainant, including any follow up contact with the complainant; and
- If no action was taken, the reasons why no action was taken.

Complaints and any actions taken are to be recorded in the environmental register.

3.5 EMERGENCY PREPAREDNESS & RESPONSE

Emergency situations shall be dealt with in accordance with an Emergency and Pollution Incident Response Management Plan that identifies potential emergency situations and pollution incidents that may have an impact on the environment and details how to respond to them. This is a separate comprehensive plan that needs to be prepared for the site.

An Emergency procedure is provided in Section 5 provides the Emergency Response Structure and basic directions in the event of an environmental emergency or incident.

It deals with:

- Fire/Explosion;
- Severe Storms;
- Flooding;
- Gas Release;
- Dangerous Goods Emergency;
- Bomb Threat/Suspect Package;
- Medical Emergency;
- Earthquake; and
- Evacuation.

Training in emergency procedures shall be provided to all staff in the induction process.

4. MONITORING, CORRECTIVE AND PREVENTATIVE ACTIONS

This section details the monitoring and inspection plan to facilitate proper implementation, maintenance and due diligence of the EMP. Corrective and preventative actions are also detailed to facilitate continuous improvement of environmental management across operations.

Monitoring and inspection will be carried out for all pollution control equipment and key environmental aspects that may include noise, air emissions, stormwater quality, waste generation and general housekeeping. In addition, recording of complaints and responses to complaints will be undertaken as part of the monitoring program. The results of monitoring will be recorded and filed on site.

Corrective and preventative actions should be carried out and documented where environmental management procedures are not being followed or where inspection and maintenance issues are identified.

4.1 MONITORING & INSPECTION

An environmental monitoring and inspection plan is presented as Table 4-1. The results from such plans are aimed at safeguarding the environment from long term degradation. The plan is aimed at assessing the compliance of the site in relation to noise emissions, the release of contaminants into the air and waters, and the generation of waste. It also aims to improve the general environmental management of the site.

The plan is one way of enabling management to measure the performance of the environmental management programme. The main environmental aspects have been included in the monitoring and inspection plan. The aspects that have been selected are those with most potential to impact on the environment.

The plan has been based on recommended monitoring and inspection programmes and what is expected to be conditions of the EPL. This section needs to be updated once the EPL has been issued.

Table 4-1: Monitoring and Inspection Plan

Aspect	Frequency	Process	Documentation	Relevant References	Responsibility
Workplace Inspections*	Once per month	Visual inspection of all work areas, particularly pollution control equipment, stormwater drains and storage areas. (Workplace Inspection Procedure)	Workplace Inspection Checklist.	• Protection of Environment Operations Act 1997.	Manager or delegate
Energy Consumption*	As required. Within first 12 months.	Keep records of energy use and identify opportunities to minimise usage. Undertake an energy audit and prepare an energy action plan.	Levels of use, Statements Energy Audit report Energy Saving Action Plan	• N/A.	Manager or delegate
Waste Minimisation*	As required. Within first 12 months.	Keep records of waste generation and identify opportunities to minimise waste. Undertake a waste audit and prepare a waste minimisation & recycling plan.	Waste Records Waste Audit Report Waste Minimisation Plan	• N/A.	Manager or delegate
Environmental Emissions*	Preventative maintenance of equipment according to specifications.	Ensure air pollution control equipment is operated and maintained in a proper and efficient condition to manufacturer's specifications. (Pollution Control Equipment Maintenance Procedure)	Internal Maintenance Records.	• Protection of Environment Operations Act 1997. • EPL. • Development Consent.	Manager or delegate
Stack Monitoring**	TBA (expected to be 3 months & 12 months post commissioning, possibly annually thereafter)	Sampling and analysis of stack emissions from the site in accordance with conditions of EPL.	Stack Emissions report	• DEC's Approved Methods for analysis of Air Sampling. • Conditions of Consent. • EPL.	Manager or delegate

Table 4-1: Monitoring and Inspection Plan

Aspect	Frequency	Process	Documentation	Relevant References	Responsibility
Noise Compliance Monitoring**	TBA (Expected to be 12 months after occupation and every 5 years thereafter)	Environmental noise monitoring and assessment in accordance with conditions of EPL.	Noise Compliance Report	• Protection of Environment Operations Act 1997. • NSW Industrial Noise Policy. • Conditions of Consent. • EPL.	National Operations Manager or delegate
Stormwater Monitoring**	TBA	Monitoring of stormwater runoff and water quality monitoring of the adjacent unnamed watercourse in accordance with the EPL.	Laboratory results	• Protection of Environment Operations Act 1997. • NSW Industrial Noise Policy. • Conditions of Consent. • EPL.	Manager or delegate
Evaluating Compliance*	Annual	Undertake an internal audit to ensure operations are undertaken in accordance with the EMP. (Internal Auditing Procedure)	Internal Audit Report	• Internal Audit Procedure.	Manager or delegate
Confirming Compliance**	TBA	Engage a qualified environmental consultant to undertake an Environmental audit to ensure site operations are in compliance with legal requirements.	Environmental Audit Report	• Expected to be a condition of the EPL or DCCs.	Manager or delegate

*A recommended monitoring or inspection programme

**Expected to be a condition of the EPL or DCCs.

4.1.1 Workplace Inspections

Workplace inspections should be undertaken in all operational, storage and external areas. Good housekeeping practices are beneficial for providing both preventative maintenance and prompt corrective actions should an environmental incident occur. A sample checklist is provided with the Workplace Inspection Procedure.

4.1.2 Energy Consumption

Monitoring consumption of energy identifies the baseline energy use and any seasonal trends of the operations. When reported in a timely manner it enables investigation into anomalies to occur close to the actual event which is more likely to result in a positive understanding of the cause. Electricity use can also be divided further to identify usage during peak, shoulder and off-peak times.

Once substantial baseline data has been collected, an energy audit would identify further opportunities to minimise energy usage and an Energy Saving Action Plan could be prepared.

4.1.3 Waste Minimisation

Similar to Section 4.1.2, waste data can be collected and together with a waste audit, used to identify opportunities for waste minimisation, resource recovery and recycling.

4.1.4 Preventative Maintenance Program

Preventative maintenance refers to the regular maintenance of equipment associated with site activities to ensure breakdowns are prevented or minimised and to ensure the efficient operation of all equipment. A program should be put in place to ensure preventative maintenance is undertaken according to manufacturer's specifications. The maintenance of this equipment is an integral part of the process of minimising the impact on the environment.

A Pollution Control Equipment Maintenance procedure has been provided to focus on pollution control equipment and is provided in Section 5.

4.1.5 Stack Monitoring

Stack testing or similar air monitoring is expected to be a condition of the EPL. Details of this monitoring need to be provided here and also in the Air Quality Control procedure in Section 5.

4.1.6 Noise Monitoring

Noise compliance monitoring is expected to be a condition of the EPL. Details of this monitoring need to be provided here and also in the Noise Management procedure in Section 5.

4.1.7 Stormwater Monitoring

Stormwater monitoring and water quality monitoring of the unnamed watercourse is expected to be a condition of the EPL. Details of this monitoring need to be provided here and also in the Stormwater Management procedure in Section 5.

4.1.8 Evaluating & Confirming Compliance

Compliance to the EMP shall be evaluated through internal and external audits. A procedure to undertake an internal audit is provided in Section 5. A qualified environmental consultant should be engaged to undertake a compliance audit. Any EPL condition or DCCs relating to audits need to be included here.

4.2 ACTION REPORT FORMS

The workplace inspections should be used to identify areas of non-conformance to the environmental procedures or possible improvement and be the means of making and documenting minor corrective actions.

Requests for corrective action should be recorded and documented in the workplace inspection checklist. Records are to be maintained and overseen by the Production Manager and/or Environmental Manager who would also be responsible for defining, implementing and maintaining Corrective Action procedures.

The issuing of corrective actions shall be initiated by any of the following events, if considered justified:

(i) NSW EPA, Council, Sydney Water or other regulatory agency direction or request;
(ii) In-house detection of non-conformances, eg chemicals found to be stored outside designated areas;
(iii) Housekeeping inspection verified non-conformance; or
(iv) Public complaint.

4.3 ENVIRONMENTAL MANAGEMENT REVIEW

An annual internal management review of the EMP will be conducted to ensure the suitability, adequacy and effectiveness of the environmental management techniques implemented at the site. Opportunities for improvement shall be identified.

It is recommended that management reviews include the following:

- Internal audit results and evaluation of compliance with legal and other requirements;
- All communications relating to environmental issues of the site;
- Whether objectives and targets have been achieved;
- Status of corrective and preventative actions;
- Previous management reviews;
- Changes to legal or other requirements relating to environmental aspects; and
- Opportunities for improvement to the environmental management of the site.

Records of the annual reviews shall be maintained.

5. ENVIRONMENTAL MANAGEMENT PROCEDURES

This section details the procedures and plans to be used in order to avoid environmental harm. It can be referred to as part of the EMP (along with the accompanying forms and documentation provided in the Attachments) or as an individual document to enable more efficient use by staff and contractors.

The environmental management procedures form a vital component of the environmental management plan for the site. Therefore these procedures need to be used by all levels of site management.

The procedures are designed to assist management in the following ways:

- Identify events that have the potential to increase the risk of legislative breaches arising from pollution incidents, or to cause significant business interruption.
- Provide guidelines for minimising the impact or outcome of such events.
- Establish, equip and train a core organisation with the capability of dealing with anticipated events.
- Identify practices involved in the storage and handling of materials and substances at the site that may present an unacceptable risk to the lives and safety of employees.
- Inform and educate all personnel of the nature of exposure to emergencies, protection systems available and procedures to be followed when emergencies arise.

The following procedures are provided. These procedures are provided as attachments to this EMP.

ENVIRONMENTAL PROCEDURES

- Air Quality Control
- Noise Management
- Emergency Response
- Pollution Control Equipment Maintenance
- Spill Procedure
- Storage and Handling of Chemicals and Dangerous Goods
- Stormwater Management
- Use of Fire Fighting Equipment
- Waste Management
- Workplace Inspection

ADMINISTRATIVE PROCEDURES

- Identifying environmental aspects and impacts and determining significance
- Identifying legal and other requirements
- Competence, Training and Awareness
- Communications Procedure
- Complaints Response Procedure
- Control of Documents and Records
- Corrective and/or preventative action
- Internal Environmental Audits

6. LIMITATIONS

Our services for this project are carried out in accordance with our current professional standards for site assessment investigations. No guarantees are either expressed or implied.

This report has been prepared solely for the use of Glass Recovery Services as per our agreement for providing environmental services. Only Glass Recovery Services is entitled to rely upon the findings in the report within the scope of work described in this report. Otherwise, no responsibility is accepted for the use of any part of the report by another in any other context or for any other purpose.

Although all due care has been taken in the preparation of this study, no warranty is given, nor liability accepted (except that otherwise required by law) in relation to any of the information contained within this document. We accept no responsibility for the accuracy of any data or information provided to us by Glass Recovery Services for the purposes of preparing this report.

Any opinions and judgements expressed herein, which are based on our understanding and interpretation of current regulatory standards, should not be construed as legal advice.

ATTACHMENTS

ENVIRONMENTAL MANAGEMENT PLAN

ENVIRONMENTAL PROCEDURES MANUAL

GLASS RECOVERY SERVICES

126 ANDREWS ROAD, PENRITH

Issued and Approved by:	Date:

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SUBJECT: 7.1 AIR QUALITY CONTROL

1. PURPOSE

The purpose of this procedure is to set out the process relating to internal and external management and monitoring of air and odour emissions.

2. RESPONSIBILITIES

- All staff and contractors of Glass Recovery Services
- Production Manager
- Environmental Manager

3. REFERENCES

- Protection of the Environment Operations Act 1997;
- Protection of the Environment (Clean Air) Regulations, 2002;
- Development Consent Conditions D.A. No _____;
- Environmental Impact Statement for the site prepared by Benbow Environmental (Ref no. 111144); and
- Site Environment Protection Licence No. _____.

4. DEFINITIONS

Air Emissions
Any particles or odour discharged to the local air amenity.

Air impurity
Includes smoke, dust (including fly ash), cinders, solid particles of any kind, gases, fumes, mists, odours and radioactive substances.

Air pollution
Means the emission into the air of any air impurity.

5. PROCEDURE

General Site Activities

- All processing operations shall be carried out within the enclosed buildings.

- Water sprayers shall be applied to external storage areas and loading / unloading / transfer activities and shall be in operation at all times during normal plant operations.

- Water sprayers applied to crushing, screening and conveying processes within the building shall be applied at all times during normal plant operations.

- The dust collector installed within the building to collect dust from crushing and screening equipment & machinery shall operate at all times this equipment is in operation. The dust collection system would need to be fitted with sensors that would trigger an alarm if the emissions of dust exceed certain limits.

- All loads of incoming and outgoing materials shall be adequately covered to ensure no dust is emitted during transport.

- Regularly inspect and include on the preventative maintenance schedules all air pollution control equipment, including extraction or exhaust systems.

- Where extraction or exhaust systems are installed, they shall operate at all times while the associated activities are being undertaken.

- Ensure condition of roadways and hardstand areas is maintained to ensure deterioration of internal access road surface does not lead to increased dust emissions.

- Ensure reasonable operating practices are followed regarding the loading and unloading of trucks and movement along internal access roads. (i.e. trucks are not to be overloaded or driven too fast).

- All equipment designated as being air pollution control equipment shall be maintained in accordance with the Pollution Control Equipment Maintenance Procedure. Air control equipment includes dust collection systems connected to point sources of emission and water or mist sprayers applied to dust generating activities.

Air Emission Requirements – Concentration Limits

Air emission requirements are set out in the EPL for the site. As the EPL has not yet been issued, we have provided an example of what might be required. Point 1 is likely to be the baghouse outlet point. This section needs to be updated upon issue of the licence.

For each monitoring/discharge point specified in the table below, the concentration of a pollutant discharged at that point must not exceed the concentration limits specified for that pollutant in the table.

POINT 1 (Example Only)

Pollutant	Units of measure	100 percentile limit	Reference conditions
Solid particles (total)	mg/m^3	11	Dry, 273 K, 101.3 kPa, 3% O_2
Nitrogen dioxide (NO_2) or nitric oxide (NO) or both, as NO_2 equivalent	mg/m^3	80	Dry, 273 K, 101.3 kPa, 3% O_2
Odour	OU	520	Dry, 273 K, 101.3 kPa

Air Monitoring Requirements – Example only

- EPL conditions stipulate the frequency of monitoring as annually.

  Completion of air compliance studies is required as part of the Development Consent Conditions D.A. No.: _____ and General Terms of Approval. The following is required (example only):

- An air compliance assessment being undertaken three months and twelve months following commissioning of the plant by a suitably qualified person to ensure that air emissions comply with the predictions of the Environmental Impact Statement.

- The methodology used for air compliance monitoring shall be undertaken in accordance with the Environment Protection Licence conditions.

- Each monitoring and discharge point shall be clearly marked by a permanent sign that indicates the EPA point identification number.

- A copy of the compliance assessment shall be submitted to Council, and if required by Council, the person in charge of the premises shall implement any or all of the recommendations of the consultant and any additional requirements of Council to Council's satisfaction.

Odour Management

- All incoming loads shall be inspected for the presence of putrescible material. Any load brought onto site that contains putrescible material or presents a noticeable odour shall not be accepted onto site. Non-conforming loads shall be immediately sent back to the supplier.

- A work instruction identifying personnel responsible and steps required to undertake inspection of incoming loads shall be prepared and implemented by site management.

- All reasonable measures shall be employed at the site to prevent emission of offensive odour beyond the boundary of the premises.

- Awareness training to educate employees and contractors about the sources and impacts of odour from the operations, as well as identifying work practices that minimise odour. Information relating to odour shall be incorporated in the environmental training and induction for all staff and contractors.

- Ensure all air pollution control equipment is part of the preventative maintenance program and maintained according to manufacturer's specifications.

6. COMPLAINTS HANDLING

- Any complaints received regarding air pollution should be handled in accordance with the *Complaints Response Procedure*.

7. COMPLIANCE MONITORING

- Records of any air compliance monitoring undertaken at the site should be maintained in accordance with the *Control of Documents and Records Procedure*.

- All records associated with the requirements of the Environment Protection Licence (EPL) must be kept for the duration specified in the EPL. Similarly, any records associated with the Development Consent must be kept for the duration specified in the DC.

NO:	EP7.2	DATE:	August 13
PREPARED BY:	Benbow Environmental	ISSUE NO.:	1
SUBJECT:	7.2 ENVIRONMENTAL NOISE MANAGEMENT		

1. PURPOSE

To effectively manage noise emissions from the site to minimise the occurrence of offensive and nuisance noise in the community.

The broad environmental noise objectives are two-fold:

(i) that noise from any single source does not intrude greatly above the prevailing background noise level.
(ii) that the background noise level does not exceed the level appropriate for a particular locality or land use.

2. RESPONSIBILITIES

- All staff and contractors of Glass Recovery Services
- Production Manager
- Environmental Manager

3. REFERENCES

- Protection of the Environment Operations Act, 1997;
- Development Consent Conditions D.A. No.:_____;
- Environmental Impact Statement for the site prepared by Benbow Environmental (Ref no. 111144) and related documentation;
- Site Environmental Protection Licence No_____; and,
- NSW Industrial Noise Policy.

4. DEFINITIONS

Offensive Noise

Noise that by reason of its level, nature, character or quality, or the time at which it is made is harmful to (or likely to be harmful to) a person who is outside the premises or interferes unreasonably with (or is likely to) the comfort or repose of a person who is outside the premises which it is emitted.

5. PROCEDURE

General Site Activities

Noise generated at the premises must not exceed the noise limits presented in the following table:

Project Specific Noise Limits (PSNL) for On-Site Operational Noise		
Location	Period	PSNL
Surrounding residential receptors	Day	46
	Evening	42
	Night	32
	Shoulder Period	46
Sporting fields to the east of the site	When in use	55

Note: Day is defined as the period from 7am to 6pm Monday to Saturday and 8am to 6pm Sundays and Public Holidays; Evening is defined as the period from 6pm to 10pm; and Night is defined as the period from 10pm to 7am Monday to Saturday and 10pm to 8am Sundays and Public Holidays.

Note: This table will need to be reviewed and updated if required once the EPL has been issued.

- Throughout the night time hours (10pm – 7am) all roller shutter doors must remain in the closed position.
- Throughout the night time hours (10pm – 7am) all vehicles frequenting the site, namely trucks, must not utilise the engine brakes.
- Throughout the early morning shoulder period hours (5am – 7am) all trucks frequenting the site must not travel any further than the middle of the southern façade of the warehouse.
- The following includes noise control treatment required for the building. This must be installed prior to commencement of operations:
  - The steel cladding components of the existing roof must achieve a minimum Rw (Weighted Reduction Index) of 34 dB.
  - The sky light components of the existing roof must achieve a minimum Rw (Weighted Reduction Index) of 27 dB.
  - The steel cladding components of the eastern façade must achieve a minimum Rw (Weighted Reduction Index) of 34 dB.
  - The roller doors must be fitted with sensors to enable automatic shutting.
- All processing operations shall be carried out within the building with roller doors closed whenever possible.
- Scheduling of activities (where possible) shall be undertaken to minimise noise at any one time.

- Preventative maintenance of all noise generating equipment such as dust collector, crushing, separating and sorting equipment shall be undertaken. All potential noise generating equipment shall be included in the preventative maintenance schedule for routine inspections and services.

- Minimise night-time activity. If possible avoid noisy activities during all night time periods (between 10:00pm and 7:00am).

- Openings (eg. doors, roller shutters) should be closed, where possible, during noise generating operations to minimise breakout of noise. Roller shutter doors shall remain closed during night time operations. The opening of doors shall be limited to access purposes only.

- Regular "walk-around" inspections shall be conducted in accordance with the Workplace Inspection Procedure to identify areas of potential noise generation. Indicators may include:
  - Evidence of oil leaks or damage to equipment;
  - Un-secured or damaged noise guards or equipment;
  - Noticeable excessive or unusual sources of noise; and
  - General wear and tear of equipment.

- If problem areas of additional noise generation are identified, action should be taken to alleviate any additional noise as soon as practicable by the Environmental Officer or delegate.

- Noise shall be included in the awareness training and induction of staff and contractors.

Noise Compliance Monitoring

Completion of noise compliance studies may be required as part of the Development Consent Conditions, General Terms of Approval and EPL. Any studies or monitoring required would be detailed here once these conditions are issued. Possible studies required include:

- Post commissioning noise compliance study undertaken by a suitably qualified acoustic expert, both 12 months, thereafter five years following commencement of operations.

- A noise compliance assessment undertaken within 3 months of the commencement of operations at the premises. The assessment must be prepared by a suitably qualified acoustical consultant to confirm performance and to demonstrate compliance.

- A copy of the noise compliance studies would be required to be submitted to Council, and if required by Council, the person in charge of the premises shall implement any or all of the recommendations of the study and any additional requirements of Council to Council's satisfaction.

Selection of New Plant and Equipment

- Noise levels from all new items of plant and equipment is recommended to be 10 dB(A) less than the nearest existing equipment sound power level.

- To minimise noise levels, site management shall endeavour to position new equipment behind structures that act as barriers, or at the greatest distance from residential areas and orientating equipment such that noise emissions are directed away from residential areas.

- When selecting new equipment, management should consider efficient muffler/silencer design and equipment with efficient enclosures for noise sources.

Forklift Operations

- Minimise night-time activity.

- Minimise over-revving of engine and observe on-site speed limit of 10 km/h.

- Forklifts to be maintained in accordance with a preventative maintenance program to ensure optimum performance and early detection of wearing or noisy components.

Heavy Vehicle Deliveries

- Maximise daytime delivery.

- Ensure no over-revving of engines whilst on route or on site.

- Deliveries and pickup shall be in accordance with current best management practices taking into account such factors as speed, use of pneumatics and compression brakes, radio/stereo and air conditioning units, over-revving/idling of engines and scheduling (reduce number of trucks on site at any one time).

- All loading and unloading activities shall be undertaken within the designated loading bays.

- Vehicles waiting on loading, unloading or servicing shall be parked on site with their engines turned off.

- Heavy vehicles shall use only sealed roadways on site and remain on designated heavy vehicle routes whist on site. No heavy vehicle movements shall take place on unsealed surfaces.

- Ensure condition of roadway surface is maintained (by responsible party) to ensure deterioration of internal access road surface does not lead to increased noise sources.

- Minimise on-site speed limit to 10 km/hr for all heavy vehicles. Supervisors need to ensure speed limits are adhered to.

6. COMPLAINTS HANDLING

- Any complaints received regarding noise pollution should be handled in accordance with the *Complaints Response Procedure*.

7. COMPLIANCE MONITORING

- Records of any noise compliance monitoring undertaken at the site should be maintained in accordance with the *Control of Documents and Records Procedure*.
- All records associated with the requirements of the Environment Protection Licence (EPL) must be kept for the duration specified in the EPL. Similarly, any records associated with the Development Consent must be kept for the duration specified in the DC.

NO:	EP7.3	DATE:	August 13
PREPARED BY:	Benbow Environmental	ISSUE NO.:	1
SUBJECT:	7.3 EMERGENCY RESPONSE		

1 PURPOSE

The purpose of this procedure is to provide the Emergency Response Structure and directions in the event of an environmental emergency or pollution incident. The procedure aims to protect human life and minimise damage to equipment, plant and installations.

This procedure applies to equipment, plant, installations, personnel, contractors and visitors under the control of, or managed by, Ingal and neighbouring people/premises in the following emergencies:

- Fire/Explosion;
- Severe Storms;
- Flooding;
- Gas Release;
- Dangerous Goods Emergency;
- Bomb Threat/Suspect Package;
- Medical Emergency;
- Earthquake; and
- Evacuation.

This procedure is to be read in conjunction with the site's Emergency Response Plan. This plan should take precedence over this procedure.

2 RESPONSIBILITIES

The Emergency Control Organisation (ECO) consists of a group of Site personnel that have the responsibility of providing first response action to an incident in terms of organising the necessary resources, communications, evacuation of personnel and implementing any corrective actions that may be necessary to return the situation back to normal.

The Chief Warden is in charge of overseeing and controlling all emergency and incident response actions at the Site. In the case that the Chief Warden is unavailable at the time of the emergency, control will be the responsibility of the Assistant Chief Warden.

The Incident Response team consists of the following members[1]:

Incident Response Team Member	Personnel Name	Identification in an Emergency	Internal Contact No
Chief Warden			
Deputy Chief Warden			
Area Wardens			
Occupational First Aiders			
Traffic Controller			

Media Enquiries

Under no circumstances are employees to make any unauthorised verbal or written statements to the media concerning an emergency situation. All enquiries should be directed to the Manager after the situation returns to normal.

3 REFERENCES

- Add existing Emergency documentation here
- Add existing Emergency documentation here

4 DEFINITIONS

The Environment

For the purpose of this procedure, the environment is defined to include air, soil, natural waterways, groundwater, and surface water (including stormwater drainage system).

Environmental Incident/Release

An environmental incident/release is defined as any spillage, release, upset, out of limits operation, procedural violation, which potentially:

- *Harms human health;*
- *May cause environmental harm;*
- *May result in non-compliance with regulations, permits and/or intervention of environmental authorities or results in penalties or fines*.

Emergency

A sudden unforseen event involving danger that requires immediate action such as the occurrence of fire, substance spill, gas leak, collapse of plant equipment.

[1] This table shall be updated by Glass Recovery Services.

The following are standard for all emergencies:

Emergency Alarm	The evacuation alarm consists of a digital siren
Evacuation Signal	Is a continuous signal which means move to the Emergency Assembly Area
Communication	Without communication there can not be any interaction between the person discovering a potential emergency and the people designated to handle the situation. The communication systems available at Ingal include two-way radios, telephones and mobile telephones.
Emergency Contacts	Police, Ambulance or Fire Brigade on 000.
Checklists	Warden's checklist of site.
Emergency Assembly Area	This is a safe location to which all people area required to assemble in the case of an emergency.

Note: This table will need to be updated according to the emergency standards at the Penrith site.

5 PROCEDURES

5.1 FIRE/EXPLOSION

A fire or explosion at the Site can have severe repercussions in terms of loss of life and property damage. Manual intervention or control may be necessary to limit the extent of the fire so that human life is protected and the damage to property is minimised as much as possible. All employees will possess a minimum level of fire response training that includes basic fire-fighting skills using fire extinguishers and hose reels (See also EP7.8 Use of Fire Fighting Equipment).

First-Response Action on Discovery of Fire or Smoke (General)

1. Assist and remove any person from the danger area, only if safe to do so.
2. Immediately notify the Area Warden.
3. If safe to do so, use the nearest fire extinguisher to smother the fire.
4. Move to the designated Emergency Assembly Area, if instructed to do so by the Area Warden responsible for the affected area.

Chief Warden/Deputy Chief Warden

When informed of the incident:

1. Mobilise and co-ordinate ECO personnel to take incident response action.
2. If required, telephone the Fire Brigade and/or Police or Ambulance Services confirming the state of the emergency at the Site and requesting for additional assistance.
3. Notify the Production Manager and Site Manager of status of emergency.
4. Brief the Emergency Services upon their arrival.
5. Ensure that no vehicles other than emergency services vehicles enter the Site.
6. If necessary, activate a Partial or Total Evacuation.

Area Wardens

When informed of the incident:

1. Proceed to the incident location (if safe to do so) and establish its nature and location.
2. Report to Chief Warden the status and extent of incident and/or emergency.
3. Ensure that the correct Personal Protection Equipment is available to fire-fighting personnel.
4. Determine and carry out the most appropriate initial fire-fighting response action.
5. Ensure that personnel are safe.
6. Ensure that First Aiders are notified.
7. Ensure that the correct Emergency Services have been notified (with Chief Warden).

5.2 SEVERE STORMS

Severe storms produce extreme wind speeds, rainfall and atmospheric pressures. Although torrential rains produce flooding of river systems, the most severe threats of storms arise from destructive winds. During violent winds, loose items and other debris may become lethal flying objects.

Action On Warning Of Severe Storms

1. Restrain loose material that could cause injury and damage during extreme winds.
2. Move chemicals stored in drums to a safe, flood free place inside the building.
3. Avoid using the telephone during a storm.
4. Listen to local radio for further information.
5. Await instructions from Area Warden.
6. If driving during a storm after an evacuation from site, stay clear of trees, power lines or streams.

5.3 FLOODING

In the case of flooding at the Penrith Plant follow evacuation procedures.

5.4 GAS RELEASE

This section applies to a major release of gaseous substances into the ambient environment. The gases that can potentially be released at the Site are the following:

- Toxic gases, may be formed if two incompatible substances come into contact with each other, causing a chemical reaction.
- Class 2.1 Flammable gases.
- Class 2.2 Non-flammable, non-toxic gases.

First-Response Action on Discovery of Gas Release (General)

1. Assist and remove any person from the danger area, only if safe to do so.
2. Immediately notify the Area Warden and specify details of gas release such as odour, and location or source of release.
3. Check that all potential sources of ignition have been shut down (if safe to do so).
4. Move to the designated Emergency Assembly Area, if instructed to do so by the Chief Warden or Area Warden responsible for the affected area.

Chief Warden/Deputy Chief Warden

When informed of the incident:

1. Mobilise and co-ordinate ECO personnel to take incident response action.
2. Initiate a Partial or Full Evacuation, depending upon the location and severity of the gas release. Manually activate the Evacuation alarm if required.
3. If required, telephone the Fire Brigade and/or Police or Ambulance Services confirming the state of the emergency at the Site and requesting for additional assistance.
4. Notify the Production Manager and Site Manager of status of the incident;
5. Brief the Emergency Services upon their arrival.
6. Ensure that no vehicles other than emergency services vehicles enter the Site.
7. Consideration must be given to the notification of neighbouring buildings, particularly those down-wind of the incident.

Area Warden

When informed of the gas release:

1. Proceed to the incident area (if safe to do so) and establish/confirm its nature and location.
2. Determine to appropriate action to take.
3. Take into account the Material Safety Data Sheet information.
4. Ensure that all personnel are safe.
5. Notify the Chief Warden.
6. Maintain contact with Chief Warden and First Aiders.
7. Brief the Emergency Services personnel upon their arrival.
8. If necessary, activate a Partial or Total Evacuation.

5.5 DANGEROUS GOODS EMERGENCY

This section applies to a *major* release or spill of a dangerous good substance in an uncontrolled or unconfined space i.e. outside the confines of a tank compound or bund area. For smaller or well confined spills, refer to the *Spill Procedure* for details.

Dangerous goods that can potentially be spilt at the Site, include the following:

- Diesel Fuel;

This procedure assumes that all personnel that work in areas of the Site where dangerous goods are stored and handled have received the minimum level of dangerous goods training.

Action on Dangerous Goods Emergency (General)

1. Assist and remove any person from the danger area, only if safe to do so.
2. Immediately notify the Area Warden.
3. If safe to do so, use the nearest spill control equipment or isolation valve depending on the size of the spill to protect the nearest stormwater drains.
4. Move to the designated Emergency Assembly Area, if instructed to do so by the Area Warden.

Chief Warden/Deputy Chief Warden

When informed of the incident:

1. Mobilise and co-ordinate ECO personnel to take appropriate incident response action.
2. If necessary, activate a Partial or Total Evacuation. Manually activate the Evacuation alarm if required.
3. If required, telephone the Fire Brigade and/or Police or Ambulance Services confirming the state of the emergency at the Site and requesting for additional assistance.
4. Notify the Production Manager and Site Manager of status of emergency.
5. Brief the Emergency Services upon their arrival.
6. Ensure that no vehicles other than emergency services vehicles enter the Site.
7. Consideration must be given to the notification of neighbouring buildings, particularly those down-wind of the incident.

Area Warden

When informed of incident:

1. Proceed to the incident (if safe to do so) and establish its nature and location.
2. Secure the area and barricade the area in the most suitable way.
3. Determine to appropriate action to take.
4. Take into account Material Safety Data Sheets.
5. Ensure that personnel are safe and clear of vapours, gases and fumes.
6. Maintain contact with the Chief Warden, other Wardens and First Aiders personnel.
7. Brief the Emergency Services personnel upon their arrival, if they are required.
8. If necessary, activate a Partial or Total Evacuation in consultation with the Chief Warden.
9. When assessing the situation the following must be considered:
    - Is there a fire?
    - Is there a spill or leak, how large is it?
    - Is containment of the Dangerous Good necessary?

- What are the weather conditions?
- What is the area like?
- What is the risk to people, property or environment?
- How significant is the risk, based on the situation?
- The hazards of the product, Class and Sub Risk?
- The degree of danger, based on the Package Group?
- Is public protection necessary: stay in place or evacuate?
- What resources: human and equipment are required and how readily available are they?

5.6 BOMB THREAT/SUSPECT PACKAGE

Action on receiving a Bomb Threat or discovery of a Suspect Package Such as an unidentifiable box, bag, tin or container.

When a threat has been received:

1. Use the Bomb Threat Checklist and record all details.

2. Notify the Chief Warden by telephone:

   DO NOT USE TWO-WAY RADIO AS THIS MAY TRIGGER THE BOMB.

3. Notify the Area Warden by telephone,

   DO NOT USE TWO-WAY RADIO AS THIS MAY TRIGGER THE BOMB.

4. In consultation with the Area Warden initiate a Total Evacuation to the relevant Emergency Assembly Area or the safest Assembly Area depending where the bomb or package may be located.

5. Open as many doors and windows as possible.

When a Bomb Threat/Suspect Package has been found:

DO NOT TOUCH IT!

1. Clear the area and do not re-enter until instructed.

2. Notify the Chief Warden and/or National Operations Manager by telephone.

   DO NOT USE TWO-WAY RADIO AS THIS MAY TRIGGER
   THE BOMB/SUSPECT PACKAGE

3. Notify the Area Warden by telephone.

   DO NOT USE TWO-WAY RADIO AS THIS MAY TRIGGER

THE BOMB/SUSPECT PACKAGE

4. In consultation with the Area Warden initiate a Total Evacuation to the relevant Emergency Assembly Area or the safest Assembly Area depending where the bomb or package may be located.

5. Open as many doors and windows as possible.

Chief Warden/Deputy Chief Warden

When informed of a Bomb Threat/Suspect Package:

DO NOT USE TWO-WAY RADIO AS THIS MAY TRIGGER
THE BOMB/SUSPECT PACKAGE.

1. Telephone the Police on 000.
2. Brief the Police upon their arrival.
3. Ensure that no vehicles other than emergency services vehicles enter the site of delegate this job to other personnel.
4. Initiate Evacuation Procedure. Manually activate Evacuation alarm if required.
5. Contact the Operations Manager and Group General Manager.

Area Warden

When informed of a Bomb Threat/Suspect Package:

1. In consultation with Chief Warden initiate Evacuation Procedure to the Emergency Assembly Area, or allocating new safe Assembly Area, if needed, after taking into consideration the location of the bomb.

5.7 MEDICAL EMERGENCY

Medical emergencies are events such as when a person suffers a heart attack, respiratory failure or broken limbs due to a fall or accident.

There will be a number of First-Aid Officers working at the Site at any one time. These personnel have the training to be able to provide first-aid response and care to such emergencies until the Ambulance Service arrives at the location to take over the care of the patient.

Action on discovery of a Medical Emergency (General)

1. Check for any threatening situation and control it if safe to do so.
2. Remain with the casualty (unless there is no other option) and provide appropriate support.
3. Do not remove or move any casualties unless in a life threatening situation.
4. Notify the Shift First-Aid Officer and Area Warden.
5. Provide support to the First-Aid Officer or Ambulance if required.

6. Should the medical emergency consist of a car accident you are involved in whilst driving a company vehicle either on or off-site then notify your immediate Supervisor and the appropriate motor vehicle insurance company.

Area Warden

When informed of the Medical Emergency:

1. Proceed to the incident (if safe to do so) and establish the nature and location of the emergency.
2. Determine the appropriate action to take.
3. Ensure that personnel are safe.
4. Maintain contact with the Site First Aiders.
5. Determine if the Ambulance Service should be notified and if necessary designate someone to meet them.
6. Brief the Ambulance Service personnel upon their arrival.
7. If necessary, activate a Partial or Total Evacuation.
8. Provide support to First-Aid Officer or Ambulance if required.

Safety Officer

In some cases, the appropriate statutory authorities will need to be informed in accordance with the Work Health & Safety Act, 2011.

5.8 EARTHQUAKE

Chief Warden/Deputy Chief Warden

1. Telephone the Fire Brigade and/or Ambulance if required, confirming the emergency at the site.
2. Notify the Production Manager and Site Manager.
3. Brief the Emergency Service personnel upon their arrival.
4. Ensure that no vehicles other than emergency services vehicles enter the site.
5. If necessary, activate a Partial or Total Evacuation.

Area Warden

When informed of the incident:

1. Proceed to the affected area (if safe to do so) and establish the nature and location of the incident.
2. Determine the appropriate action to take.
3. Ensure that personnel are safe.
4. Ensure that the correct Emergency Services have been notified.
5. In consultation with the Chief Warden, activate a Partial or Total Evacuation.
6. Brief the Emergency Services personnel upon their arrival.

5.9 EVACUATION

This procedure should be read in conjunction with the existing Emergency plan.

The Emergency Assembly Areas listed in the Evacuation Procedures will change in the following situations:

1. During a bomb threat/suspect package if the danger area is located close to the Emergency Assembly Area or at the discretion of the Chief Warden or Area Warden.
2. During a severe storm if the current Emergency Assembly Area endangers the lives of personnel.

6 CLEARANCE & RETURN TO WORK

Once clearance is given by the attending Authority or the incident has been mitigated:

1. The Chief Warden, Production Manager and Site Manager must undertake a full investigation and assessment of the area prior to allowing workers to return.
2. The Chief Warden and Production Manager must ensure any clean up required is done so to ensure a safe work environment for all staff. In addition, ensure the safe handling, transport and storage of any waste materials is undertaken. The Environment Officer should be contacted if unsure of correct methods.
3. All clean up material and contaminated items must be disposed of appropriately, according to the waste management procedure. Contact the Environment Officer if unsure.
4. When the area is considered safe, workers can return to work.

7 INCIDENT INVESTIGATION REPORTING

In the event of an emergency or incident, Management shall conduct an investigation to assess all hazards and risks, review all documentation associated with the incident and formulate a report. A sample incident report form is included with this procedure.

8 COMPLIANCE MONITORING

Records of any incident investigation reports and corrective actions (if required) should be maintained in accordance with the *Control of Documents and Records Procedure*.

EMERGENCY RESPONSE
SUBJECT: Fire Warden and First Aid List

DESCRIPTION	POSITION	NAME

Note: This list will be completed once job roles are confirmed on site.

EMERGENCY RESPONSE
SUBJECT: Chief Warden Checklist

TIME: _____ DATE: _____

MISSING PERSONS

Check with the Chief Warden checklist for employees, contractors and visitors.

List Names of missing persons:

If anybody is missing check:

A. What job were they doing and where:

B. When they were last seen and where:

C. Is it safe to enter the building:
   (i) check area where last seen;
   (ii) check area where job was; and
   (iii) check all toilets, wash and locker rooms.

D. Check with Chief Warden in case he knows or has information about missing person.

If the person is not found and the evacuation crisis is over, then an investigation would be conducted to find out where the person was and why they were not accounted for.

EMERGENCY RESPONSE
SUBJECT: Bomb Threat Checklist

TIME: _____ DATE: _____

QUESTIONS TO BE ASKED BOMB THREAT	QUESTIONS TO BE ASKED GENERAL THREAT
Where did you put the bomb?	What are you threatening to do?
When did you put it there?	Why are you making this threat?
What does the bomb look like?	When do you intend to carry it out?
What kind of bomb is it?	Do you attend to telephone again?
Did you place the bomb?	What is your name?
Why did you place the bomb?	Where are you?
Where are you?	What is your address?
What is your address?	Did you recognise the caller's voice?
EXACT WORDING OF THREAT	EXACT WORDING OF THREAT

EMERGENCY RESPONSE
SUBJECT: Bomb Threat Checklist – Identifying the Caller

IDENTIFYING THE CALLER	
CALLERS VOICE (please tick where applicable)	BACKGROUND NOISES (please tick where applicable)
MALE	STREET NOISES
FEMALE	HOUSE NOISES
OLD	OFFICE MACHINERY
YOUNG	FACTORY MACHINERY
CALM	MUSIC
EXCITED	BACKGROUND VOICES
NORMAL	MOTORS
ANGRY	STATIC
SLOW	CLEAR
RAPID	LOCAL
LOUD	LONG DISTANCE
SOFT	OTHER:
DEEP	
STUTTER	
LISP	
ACCENT	
TYPE OF ACCENT (please describe)	
CRYING	
LAUGHING	
SLURRING	
RAGGED	
DISTINCT	
RASP	
IRRATIONAL	
WELL SPOKEN	
INCOHERENT	
FOUL	
FAMILIAR	
NASAL	
DEEP BREATHING	
CLEARING THROAT	
DISGUISED	
CRACKING VOICE	
OTHER	

EMERGENCY RESPONSE
SUBJECT: Incident Reporting Form (Page 1)

INCIDENT REPORTING	FORM
Date: _____ Site details: _____ Reported by: _____	
Cause, time and duration of the event/incident:	
The type, volume and concentration of every pollutant discharged or spilt as a result of the incident:	
Major hazards and impacts as a result of the incident:	
The name, address and business hours telephone number of employees or contractors or a specified class of them, who witnessed the event:	
The name, address and business hours telephone number of every other person who witnessed the event, unless unable to obtain that information after making reasonable effort:	

EMERGENCY RESPONSE
SUBJECT: Incident Reporting Form (Page 2)

INCIDENT REPORTING	FORM
Action taken by GRS in relation to the event, including any follow-up contact with any complainants:	
Details of any actions to be taken or proposed to be taken to prevent or mitigate against a recurrence of such an event, who is responsible, and by when:	
Any other relevant matters:	
Verification of corrective or preventative actions: I verify that all the nominated corrective and preventative actions have been implemented effectively. Signed: _____ Name: _____ Date: _____	
Additional comments:	

Any eyewitness accounts or additional reports resulting from the investigation into the incident should be documented and recorded with this incident investigation report.

NO:	EP7.4	DATE:	August 13
PREPARED BY:	Benbow Environmental	ISSUE NO.:	2

SUBJECT: 7.4 POLLUTION CONTROL EQUIPMENT MAINTENANCE

1. PURPOSE

To ensure correct and regular maintenance of the pollution control equipment installed at the site so as to minimise non-compliance for all environmental emissions from the site.

2. RESPONSIBILITIES

- All staff and contractors of Glass Recovery Services
- Production Manager
- Environmental Manager

3. DEFINITIONS

Pollution Control Equipment

Devices used to prevent or minimise the discharge of contaminants, including noise, air emissions, and contaminants to surface water, groundwater, natural waterways that causes pollution.

Devices considered should include those that a failure of would result in a pollution incident, eg. Baghouse, stacks, water and mists/sprayers, pumps, valves and pipework.

Stormwater

Surface runoff from roof, and outdoor yard areas.

Air Pollution

The emission into the air of any air impurity including smoke, dust (including fly ash), cinders, solid particles of any kind, gases, fumes, mists, odours and radioactive substances (Ref: POEO Act).

Preventative Maintenance

A series of routine procedures and activities, including adjustments, replacements and basic cleanliness, which forestall machine breakdowns. The purpose is to try to identify and resolve potential problems before they occur.

4. REFERENCES

- Protection of the Environment Operations Act 1997.
- Development Consent Conditions D.A. No.:_____.
- Environmental Impact Statement for the site prepared by Benbow Environmental (Ref no. 111144).
- Environment Protection Licence No. _____.

5. PROCEDURE

- This procedure applies to the following pollution control equipment at the Penrith site:
  - Dust collection system & outlet;
  - Water and mist sprayers ;
  - Bunding of the diesel tank;
  - Spill kits; and
  - Erosion & sediment pollution control devices such as gross sediment trap, swales and particulate filters on stormwater drains.

All pumps, piping and valves associated with the above equipment are also considered to be pollution control equipment that need to be maintained according to this procedure.

- All pollution control equipment is to be regularly tested and maintained to ensure compliance with regulations and to minimise likelihood of contribution to a pollution incident. Maintenance intervals are to be as specified by the supplier's operations and maintenance manual for each item of equipment. Procedures detailing these intervals and the levels of maintenance required should be incorporated by the Maintenance Manager or delegate into the existing preventative maintenance procedure.

- A schedule/register of maintenance for pollution control equipment is to be implemented and maintained to ensure correct operation of equipment. This register will be updated with any changes in pollution control equipment or alterations in operation.

- Prompt repair or replacement of defective equipment found during routine maintenance inspections shall be undertaken. A supply of spare parts for equipment that requires frequent repair shall be maintained to ensure prompt attention. Any corrective actions required that cannot be undertaken immediately shall be undertaken in accordance with the *Corrective and/or Preventative Actions Procedure*. A sample schedule/register is provided following this procedure.

- Suitably trained personnel shall carry out all maintenance and inspection operations. Site management shall regulate the competency of such personnel.

5.1 Water and Mist Sprayers

- Conduct regular visual inspections of all components to identify any abnormalities, potential malfunctions or leaks.
- Conduct periodic testing of all components for structural soundness according to manufacturer's specifications.
- Regularly inspect the dust emissions generated and ensure water and mist sprayers are adequately suppressing the dust.
- Inspect all items for potential safety or environmental hazards.

5.2 Diesel Tank Bunding & Dangerous Goods Cabinets & Storage Areas

- Conduct regular visual inspections of all components to identify cracks or leaks. This includes all piping, bunding, dangerous goods areas, waste storage areas and sections of the building.
- Ensure doors of any dangerous goods cabinets are self closing.
- All bunding shall be kept free of clutter, litter and other items.
- Inspect all items for potential safety or environmental hazards.

5.3 Spill kits

Conduct regular visual inspections to ensure:

- Spill kits are in the correct locations as specified on the site emergency plan;
- Spill kits are not obstructed and are easily accessible;
- All items are available (spill kits are fully replenished); and
- Spill kits are clearly labelled.

5.4 Dust Collection System and Outlet

- Conduct regular visual inspections of all components to identify any abnormalities, potential malfunctions or leaks. This would include visual inspection of stack outlets and baghouse dust outlet to ensure excessive air emissions are not being generated.
- Conduct periodic testing of all components for structural soundness according to manufacturer's specifications.
- Ensure that baghouse fabric filters or similar are adequately maintained and replaced according to manufacturer's specifications.
- Inspect all items for potential safety or environmental hazards.

5.5 Erosion and Sediment Controls

- Conduct regular visual inspections of all components to identify any potential malfunctions or leaks. This would include visual inspection of pipes, pumps, storage tanks and bins, pressure vessels, pressure release valves, process and material handling equipment and stormwater management devices including swales, gross pollutant traps and particulate filters.
- Undertake visual inspections of all stormwater pollution control devices including gross pollutant traps in drains, surface drains and swales for sediment, debris and litter. Ensure that these devices are free of these items.
- Visually check the adjacent wetland and surrounding areas adjacent to the rear of the site for sediment, debris and litter. This area should be free of these items.
- Seals and valve seals should be included on pollution control equipment maintenance schedules.

6. COMPLAINTS/INCIDENTS

Any complaints received or incident occurrences in relation to pollution control equipment shall be handled in accordance with the *Complaints / Incident Response Procedure*.

7. RECORDS

All records are to be documented and maintained in accordance with the *Control of Records and Documents Procedure* in the administration procedures manual.

POLLUTION CONTROL EQUIPMENT MAINTENANCE
SUBJECT: Maintenance Schedule / Register

MAINTENANCE SCHEDULE			
EQUIPMENT NAME	RECOMMENDED FREQUENCY	DUE DATE	CHECK COMPLETE (SIGN & DATE)
Dust Collection System & Outlet			
Water and Mist Sprayers			
Diesel tank Bunding			
Dangerous Goods Cabinets & Storage Areas			
Spill Kits			
Piping, valves and associated equipment			
Erosion & Sediment controls – swales, gross pollutant traps, particulate filters			

FAULTY ITEMS REQUIRING ATTENTION: _____
_____
_____
_____

EXPECTED ACTION REQUIRED:

.....

.....

.....

CPAR No.(s): _____

Name : Signature : Date:

NO:	EP7.5	DATE:	August 13
PREPARED BY:	Benbow Environmental	ISSUE NO.:	1
SUBJECT:	7.5 SPILL PROCEDURE		

1. PURPOSE

The purpose of this procedure is to ensure the containment of all spills on the site to prevent the entry of spilled materials/debris into stormwater systems and public waterways, reducing the risk of environmental pollution and exposure to breaches and penalties under environmental pollution legislation.

2. RESPONSIBILITIES

- All staff and contractors of Glass Recovery Services
- Production Manager
- Environmental Manager

3. DEFINITIONS

The Environment

For the purpose of this procedure, the environment is defined to include air, soil, natural waterways, groundwater and surface water (including stormwater drainage system).

Environmental Incident/Release

An environmental incident/release is defined as any spillage, release, upset, out of limits operation, procedural violation, which potentially:

- Harms human health;
- May cause environmental harm; and
- May result in non-compliance with regulations, permits and/or intervention of environmental authorities or results in penalties or fines.

Minor Spillage

A minor spillage is one that can be contained quickly and efficiently using the provisions of the Spill Kits located at various points around the site. It is typically less than 50L. A minor spill would not be expected to reach the stormwater system. If the minor spill does reach the stormwater system the same action as outlined for a major spill will need to be taken.

Major Spillage

A major spillage has the potential to leave the site and is characterised by the spillage of a quantity greater than 50 L. A spill of this size must be prevented from reaching the stormwater system, and requires the sealing of stormwater drainage pits and the stormwater outlets, which is necessary to isolate the site from surrounding waterways.

4. SPILL CONTROL INFORMATION

Where a spillage occurs, access to the MSDS will be needed if control is to be effective. MSDS's are available in designated folders near the point of use for the chemicals. The following information is critical:

- Name of material - shipping and/or common name.

- Type of material (solid, liquid, granulated).

- Dangerous Goods Class of material (if applicable). This information can usually be obtained from the packaging label. eg. Class 3 (Flammable), Class 6 (Poisonous and Toxic), Class 8 (Corrosive), Class 9 (Environmentally Hazardous).

The MSDS will provide information on:

- Ingredients of the spilt substance;
- Harmful properties of the substance and its ingredients eg. evolution of toxic fumes, miscibility with water, effects on the skin and internal bodily systems etc;
- Requirements of personal protective equipment for the safe handling of the spill eg. impervious gloves, respiratory protection etc;
- Recommended method for containing the spill and preventing environmental damage. NB Emphasis is required on the necessity of containment of the spill rather than dispersal of it; and
- The safest means of disposing of the spilled materials, eg. use of approved/authorised waste disposal authorities.

- Ensure spill kits are located at areas of high risk such as chemical handling and storage areas, loading/unloading areas, areas of use. Signage should indicate the designated locations of spill kits.

- Locations of the spill hardware (shovels, brooms, Hazspill Containers etc) and absorbent materials around the site should be identified and communicated to all personnel.

- In the case of a major spillage, locating storm water drain pits to be sealed is essential. Spills in excess of 50 L are to be considered a major spill.

5. SPILL CONTROL PROCEDURE

If a spill occurs on the site the following procedure is to be followed:

Minor Spillage

- Place absorbent materials (available in Spill Kits) or leak proof matting around/over any nearby stormwater drains;
- Take action to stop or reduce the source of the spill, or divert the flow to safe containment, to the extent that personal safety will permit;
- Place drain bags in floor drainage to minimise spill effecting integrated drainage;
- Contain the spillage to minimise spread of material;
- Consult MSDS for recommended clean-up procedure and follow these instructions;
- Dispose of material and all contaminated absorbents etc. according to the Disposal Procedure outlined in the MSDS or contact a licensed waste contractor for assistance;
- Telephone the Production Manager on _____ and inform him/her of the details of the spill; and
- It will remain the discretion of the Production Manager whether or not to report details of the spill incident, location, time of occurrence, type of spill, chemical involved and quantity on a corrective/preventative action form.

Major Spillage

- For a pollution incident that has a risk of harm to the environment, refer to the Pollution Incident Response Management Plan (PIRMP). An incident of this nature must be reported to certain authorities immediately.
- Place absorbent materials (available in Spill Kits) or leak proof matting around/over any nearby stormwater drains;
- Take action to stop or reduce the source of the spill, or divert the flow to safe containment, to the extent that personal safety will permit;
- Place drainbags in floor drainage to minimise spill effecting integrated drainage;
- Contain the spillage to minimise spread of material;
- Telephone the Production Manager on _____ and inform him/her of the details of the spill;

- Consult MSDS for recommended clean-up procedure;

- Under the direction of the Production Manager, and with the assistance of the emergency response crews (if required), clean up the spill;

- Dispose of material and all contaminated absorbents etc. according to the Disposal Procedure outlined in the MSDS or contact a licensed waste contractor for assistance;

- Under section 148 of the Protection of the Environment Operations Act, 1997, there is a duty to report pollution incidents. The Production Manager is responsible for deciding whether to notify the relevant authorities of the spill. Refer to the PIRMP for incidents of this nature. The following provides guidance on notifying pollution incidents:

  - Any pollution incident that causes or threatens material harm to the environment must be notified immediately.
  - A 'pollution incident' includes a leak, spill or escape of a substance, or circumstances in which this is likely to occur.
  - Material harm includes on-site harm, as well as harm to the environment beyond the premises where the pollution incident occurred.
  - Notification must be given immediately after the person becomes aware of the incident.

- A written report may be required. Refer to the PIRMP for details on what is required in a report of this nature.

NO:	EP7.6	DATE:	August 13
PREPARED BY:	Benbow Environmental	ISSUE NO.:	1

SUBJECT: 7.6 STORAGE & HANDLING OF CHEMICALS OR DANGEROUS GOODS

1. PURPOSE

This procedure aims to outline aspects of the management of chemicals and dangerous goods, or other materials stored or used at the site in accordance with the relevant legislation covering work health & safety, dangerous goods and the environment.

2. SCOPE

This procedure outlines the steps to be taken to manage chemicals including gases at the workplace. This procedure shall apply to all personnel and contractors.

3. RESPONSIBILITIES

- All staff and contractors of Glass Recovery Services
- Production Manager
- Environmental Manager

4. REFERENCES

- Work Health and Safety Act 2011 and its associated regulation;
- Australian Code for the Transport of Dangerous Goods by road and rail (ADG Code 6th Edition);
- AS 1940 - 2004, The Storage and Handling of Flammable and Combustible Liquids;
- AS 3780 - 1994, The Storage and Handling of Corrosive Substances;
- National Code of Practice for the Preparation of Material Safety Data Sheets 2nd Edition [NOHSC: 2011 (2003)]; and
- AS 1596, Storage and handling of LP Gas.

5. DEFINITIONS

Bund - An embankment of earth, or a wall of brick, stone, concrete or other approved material which may form part or all of the perimeter of a compound.

Dangerous Goods - Substances that are listed in The Australian Dangerous Goods (ADG) Code or that meet the classification criteria specified in that Code.

Flammable Substances - Substances that are listed as Class 3 flammable substances in The Australian Dangerous Goods (ADG) Code or that meet the classification criteria specified in that Code for flammable substances. Flammable substances ignite on contact with ignition sources.

Toxic Substance - Substances that are listed as Class 6.1 toxic substances in The Australian Dangerous Goods (ADG) code. Toxic substances are harmful to human health.

Corrosive Substances - Substances that are listed as Class 8 corrosive substances in The Australian Dangerous Goods (ADG) Code or that meet the classification criteria specified in that Code for corrosive substances. Corrosive substances may harm living tissue or damage equipment.

Hazardous substance - A substance which is toxic, harmful, corrosive, irritating, sensitising, carcinogenic, mutagenic, teratogenic or radioactive.

Material Safety Data Sheet (MSDS) - A document that provides information on the identification, health hazards, precautions for use and the safe handling of specific chemical product, which complies with ASCC:2011 (1994).

Packaging Group (PG) - One of three hazard groups into which dangerous goods (of Classes other than 1, 2, 6.2 & 7) are designated in the ADG Code, in decreasing order of hazard by the Roman numerals "I" (great danger), "II" (medium) and "III" (minor danger).

Incompatible - In relation to substances or the containers in which such substances are kept, having the ability to react or combine with one another in a manner that increases the hazard of an individual substance, that could cause deterioration of any of those substances and increase the hazards presented by them, or that could increase the hazards in the event of fire.

NOHSC - National Occupational Health & Safety Commission (NOHSC) now known as Safe Work Australia – website: http://www.safeworkaustralia.gov.au

PPE - Personal Protective Equipment.

Waste - Any matter whether solid, liquid, gaseous or radio-active which is discharged, emitted or deposited in the environment in such volume, consistency or manner as to cause an alteration in the environment. Containers and bags containing hazardous residues are a prescribed waste.

Not waste - Drums, free of residue, that have been triple rinsed, pressure rinsed or have been cleaned thoroughly by a method which achieves equivalent results, are not regarded as waste. Empty drums for direct return to the supplier are also not regarded as waste.

6. MATERIAL SAFETY DATA SHEETS

These data sheets are obtained from the supplier and provide essential information needed to allow safe handling of hazardous substances at work. Employers must ensure that all employees have access to MSDS's and should encourage employees to read the MSDS's for all hazardous substances, which they may encounter in their work.

All MSDS's include the following information:

- Product name and classification by UN No., Dangerous Goods Class, Packaging Group and Hazchem classification code;
- Product identification including physical and chemical properties;
- Health hazard information detailing acute effects and first aid advice;
- Precautions for use;
- Safe handling information including storage and transport, spills and disposal and fire explosion hazards;
- Recommend on the use of PPE; and
- Miscellaneous information.

The information in a MSDS is very important and all members of staff should be familiar with the location of the MSDS's and their contents. For new chemicals on site, an MSDS should be provided from manufacturers and read by the staff.

7. PROCEDURE

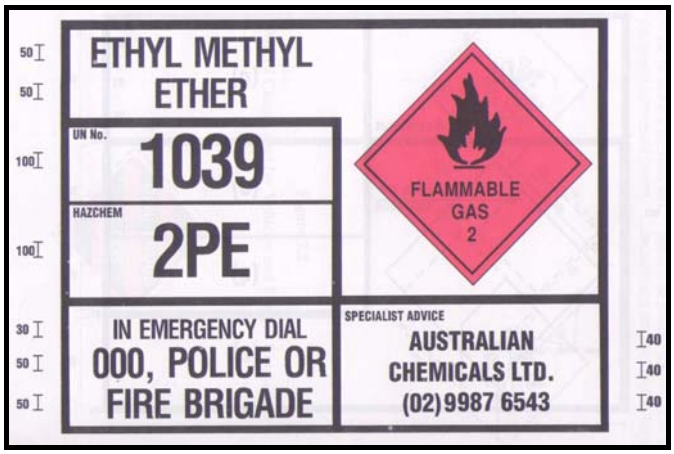
The management of Dangerous Goods is regulated under the Work Health and Safety Act, 2011 and the Work Health and Safety Regulation, 2011.

As the quantities of dangerous goods at the site do not exceed the Manifest quantity, notification to WorkCover is not required.

Exceedance of the placarding quantity requires a HAZCHEM sign at site entrances and a placard at the storage area (if the storage area exceeds the placarding quantity). The placard must comply with Schedule 6 of the regulation. An example of a placard is presented in Figure 1.

Dangerous goods stored at the site include diesel fuel and minor quantities of gases and cleaning products.

Figure 1: Sample placarding



7.1 Dangerous Goods Storage and Handling

- Do not store greater quantities of dangerous goods in any area than:
  - can be handled in case of spillage. (It is required that bunding be sufficient to contain 110% of the volume of the largest package or tank held or 25% of the total contents); and
  - exceed the manifest level and require WorkCover Notification.

- If spillage occurs, act *immediately* in accordance with the Spill Procedure. Ensure that all spilled materials and materials used for clean up are disposed of safely.

- Keep a suitable fire extinguisher where it should be easily accessed.

- A supply of water should be available at a nearby location. Training to identify if water is applicable to a particular hazard incident should be undertaken.

- All personnel engaged in the handling of dangerous goods shall be aware of the hazards involved and be trained in the use of personal protective equipment, its care and maintenance, actions to be taken in various emergencies, the properties of hazards associated with, the substances handled.

- Adequate ventilation shall be provided in all stores and at places where packages are opened. Packages and containers must be kept closed when not in use.

- Deliveries of dangerous goods shall be received in good condition. Where goods have been damaged the supplier must be notified immediately and the appropriate supervisor informed.

- The transfer of dangerous goods from packages to other containers shall be conducted in a dedicated area away from racking or shelving associated with the storage area. The area must be properly signposted for identification according to the Australian Dangerous Goods (ADG) Code, e.g. 'Flammable', 'Corrosive', 'Harmful', and must have sealed floors that are drained to a suitable compound.

- Certain classes of dangerous goods must be segregated as advised in the Australian Standards for the relevant Classes of Dangerous Goods.

- The Production Manager is to keep a manifest of material safety data sheets on all chemicals used or stored on site.

- All Dangerous Goods storage areas, and particularly Class 3 stores, must be clearly marked 'DANGER, NO SMOKING, KEEP FIRE AWAY'.

- Access aisles to all dangerous goods and storage areas must be kept clear.

- Package markings must remain legible.

- Remove finished packages regularly; do not allow them to build up.

- Set aside storage areas for empty packages.

- Do not stack packages or containers where they would block exit from a building during an emergency.

- Labelling of dangerous goods areas should include the following, in addition to the specific information listed in the following table. Label must be kept exhibited in such a position as to be clearly legible by any person approaching or at the dangerous goods area. All access points to the dangerous goods area require clear signage. All labels should be a minimum of 250mm square with lettering at least 50mm high:
  - A label setting out the class to which the goods belong;
  - If the quantity of dangerous goods exceeds the following quantities, a "Danger No Smoking" label, and a label setting out the class in which the goods belong and the subsidiary risk, if any are assigned:
    - If the goods kept are of Class 2.2 (not being cryogenic liquid) 300 cubic metres measured at MSC, or
    - If the goods kept are of any other class (or combination of any other classes) 1,000 kilograms in the case of solids or 1,000 litres in the case of liquids; and
  - At a licensed dangerous goods area which dangerous goods with a subsidiary risk of 3, 4.1, 4.2, 4.3 or 5.1 are kept, there must at all times be kept exhibited a notice containing the words "Keep Fire Away".

- Labelling of dangerous goods should be undertaken for minor storage not requiring placarding as follows:

Dangerous Goods Description	DG ◊ Class Signage	Notice to be exhibited
Class 2.1, if liquefied, not being unodorized LP gas	3	Danger No Smoking; Keep Fire Away
Class 2.1, if not liquefied	3	Danger No Smoking; Keep Fire Away
Class 2.3	3	Danger No Smoking; Keep Fire Away
Class 3	3	Danger No Smoking; Keep Fire Away; Proper Shipping Name of the goods
Class 8, Packing Group II or III	3	Danger No Smoking

COMBUSTIBLE LIQUIDS

- Combustible liquids shall be stored and handled in accordance with AS 1940.
- Combustible materials must be separated from stores of LP Gas and ignition sources by at least 5 m.
- Smoking should be prohibited on site apart from designated areas which present no risk to storage of flammable and combustible liquids.

FLAMMABLE & OXIDISING GASES - Class 2

- All installations in which class 2.1 and 2.3 are stored shall be designed and constructed in accordance with the following Australian Standards:
  - AS 1596, Storage and handling of LP Gas;
  - AS 2030.1, The verification, filling, inspection, testing and maintenance of cylinders for storage and transport of compressed gases - Cylinders for compressed gases other than acetylene;
  - AS 2430.3.4, Classification of hazardous areas – Examples of area classifications – Flammable gases; and
  - AS 4332, The storage and handling of gases in cylinders.
- LP Gas tanks must be separated from stores of flammable and combustible materials and ignition sources by at least 5 m.
- Packages of flammable gases shall not be kept near incompatible substances. Examples of substances that shall not be stored near flammable gases are; explosives (Class 1), flammable and combustible liquids (Class 3), poisonous gases (Class 2.3), spontaneously combustible substances (Class 4.2), oxidising agents (Class 5.1), organic peroxides (Class 5.2), radioactive substances (Class 7).
- A minimum distance of 3m must be maintained between cylinder groups (a cylinder group being up to 2500L capacity).

- Mixed cylinder storage must be separated from any oxidising gases by at least 3m.
- Packages shall be kept away from ignition sources, and all sources of heat.
- Appropriate spillage retention measures shall be provided at locations where combustible liquids are being used eg: refuelling areas.
- Bunding of combustible liquid storage areas needs to be maintained and kept free of loose items, clutter, litter and debris.

FLAMMABLE GOODS - Class 3 (Minor Storage)

- All installations in which flammable substances are stored shall be designed and constructed in accordance with AS 1940 - 2004, The Storage and Handling of Flammable and Combustible Liquids.
- Vapours from flammable liquids could be ignited by a spark, therefore it is important that packages of these liquids be stored 3 m from all possible ignition sources, including light switches, welders, stores and heating appliances.
- Smoking should be prohibited on site apart from designated areas which present no risk to storage of flammable and combustible liquids.
- Some materials can become extremely dangerous in the presence of other materials. Examples of substances that shall not be stored near flammable liquids are; explosives (Class 1), flammable gases in bulk quantities (Class 2.1), poisonous gases (Class 2.3), spontaneously combustible substances (Class 4.2), oxidising agents (Class 5.1), organic peroxides (Class 5.2), toxic radioactive substances (Class 7).
- Storage cabinets and shelves shall be used whenever possible, however, Australian Standards specify that no more than 250 L of flammable liquids be stored in any cabinet. Storage cabinets for flammable liquids shall be 3 m from all ignition sources.
- Extreme caution shall be taken when pouring or transferring liquids as sparks caused by static may cause liquid to ignite. Earthing of the containers is essential.
- Unless a container has been designed for such a purpose, do not use pressurisation as a means of transferring the contents.

CORROSIVE SUBSTANCES - Class 8 (Minor Storage)

- All installations in which corrosive substances are stored shall be designed and constructed in accordance with AS 3780 - 1994 The Storage and Handling of Corrosive Substances.

- Eye wash basins where large quantities of Class 8 substances are used, and safety showers should be located.

- Packages shall not be kept near incompatible substances. Keep strong acids away from bases (alkali). If the corrosive is an acid, it will have a pH higher than 10, whereas if it is a base it will have a pH of lower than 4. The pH can be found on the MSDS for the substance.

- Packages shall be kept away from sources of heat.

- Packages shall be kept securely closed when not in use.

- Packages shall be kept in a manner as to avoid spillage.

- Packages shall be kept on surfaces which, in the event of spillage, are resistant to damage by the contents of the packages.

- Appropriate spillage retention measures shall be provided at locations where packages are likely to be opened or their contents transferred eg: drip trays and bunds.

- The transfer of corrosive substances from packages to other containers shall be conducted in a dedicated area away from racking or shelving associated with the storage area. The storage container shall be suitable for the storage of the corrosive substance.

7.2 Disposal of Chemicals or Dangerous Goods

- All dangerous goods waste is classified as hazardous and must be disposed of accordingly.

- Appropriate staff shall be designated with the responsibility for ensuring the safe disposal or recycling of empty containers.

- When ordering chemicals or dangerous goods the supply management team will determine the method of disposal with the supplier.

- A designated area for waste chemical containers is to be maintained for adequate storage and handling.

- In some circumstances, the supplier of the dangerous goods will collect and dispose of the empty containers. If the supplier can not collect the empty containers, the supervisor responsible for waste disposal will arrange for the empty containers to be collected by a company who specialise in the disposal of chemical containers.

- Staff shall ensure all safety precautions detailed on the substance MSDS are implemented when handling dangerous goods.

- Hazardous wastes shall be temporarily stored in appropriately labelled containers inside a suitably bunded and covered area until they are collected by a licensed waste contractor.

- Authorisation shall be obtained from the NSW EPA prior to the transport and disposal of hazardous wastes.

- Supervisors shall ensure that hazardous wastes are not stored with incompatible substances at any time.

7.3 Auditing of Storage Areas

An internal audit of handling and storage of dangerous goods should be carried out at least annually to check storage is in accordance with this procedure.

8. COMPLAINTS/ INCIDENTS

Any complaints received or incident occurrences in relation to dangerous goods shall be handled in accordance with the *Complaints Response Procedure*.

9. RECORDS

All records will be maintained according to the *Control of Documents and Records Procedure* in the administration procedures manual.

PLACARDING AND MANIFEST QUANTITIES IN THE 2005 REGULATIONS

Dangerous Goods Description	PG	Placarding Quality	Manifest Quantity
Class 2			
Class 2.1	N/A	500L	5,000L
Class 2.2 (5.1)	N/A	2,000L	10,000L
Class 2.2	N/A	5,000L	10,000L
Class 2.3	N/A	50L	500L
Aerosols	N/A	5,000L	10,000L
Cryogenic Fluid	N/A	1,000L	10,000L
Class 3 4.1 4.2 4.3 5.1 5.2 6.1 8	I	50 kg or L	500 kg or L
	II	250 kg or L	2,500 kg or L
	III	1,000 kg or L	10,000 kg or L
	Mixed PG in a single class with the quantity of each PG below the specified quantity for PG	1,000 kg or L	10,000 kg or L
Class 9	II	1,000 kg or L	10,000 kg or L
	III	5,000 kg or L	10,000 kg or L
	Mixed PG in Class 9 with the quantity of each PG below the specified quantity for the PG	5,000 kg or L	10,000 kg or L
Mixed classes of DG where none of the classes, types or PG present exceed the quintets specified for the relevant quantity in above categories.	N/A	5,000 kg or L The quantity applies only if the placarding quantity for an individual Class that is present is 5,000 kg or L 2,000kg or L The quantity applies only if the placarding quantity for all of the Classes present is 2,000 kg or L	10,000 kg or L
C1 combustible liquids stored and handled with fire risk dangerous goods where none of the Classes, types or PG's (if any) present exceeds the relevant quantities listed above.	N/A	1,000 kg or L	10,000 kg or L
Goods too dangerous to be transported that are not kept in a laboratory.	N/A	Any quantity	Any quantity
C1 combustible liquids in bulk stored and handled separately from other dangerous goods.	N/A	10,000 kg or L	100,000L
C1 combustible liquids stored and handled in packages separately from the other DG's.	N/A	50,000L	100,000L
C1 Combustible liquids in bulk and in packages stored and handled separately from other DG's provided the quantity in bulk is 10,000L or less.			

NO:	EP7.7	DATE:	August 13
PREPARED BY:	Benbow Environmental	ISSUE NO.:	1
SUBJECT:	7.7 STORMWATER MANAGEMENT		

1. PURPOSE

This procedure serves to ensure the cleanliness of stormwater releases during normal operation. There are several reasons staining of external areas exposed to rain need to be kept clean:

- Leaching of contaminants (on stained surfaces) during rainfall as these will add to the pollution load on natural waterways.
- Spillage's are a waste of a valuable resource that if avoided reduce the need for the use of the material in the first place or if collected may enable greater recycling to take place.
- Spillage's detract from the standard of environmental housekeeping at the site.
- Long term contamination of soil and groundwater.
- Environmental liabilities may result from such spillages.

2. RESPONSIBILITIES

- All staff and contractors of Glass Recovery Services
- Production Manager
- Environmental Manager

3. DEFINITIONS

The Environment

For the purpose of this procedure, the environment is defined to include air, soil, natural waterways, groundwater and surface water (including stormwater drainage system).

Stormwater

Rainwater runoff over hardstand or impermeable surfaces.

Stormwater Isolation Valve

A valve located on the discharge from the site's stormwater system enabling the site to be isolated from local infrastructure and waterways. Provides a means of capturing spills on site.

Sediment

Dust and particulate matter deposited in hardstand areas that during wind or rain may cause the release of these contaminants.

Riparian Zone

Occurs at the interface between terrestrial and aquatic ecosystems and may therefore regulate the transfer of energy and material between these systems, as well as regulating the transmission of solar energy into the aquatic ecosystem. (Source: CSIRO)

4. REFERENCES

- Australian water quality guidelines for fresh and marine waters, ANZECC 1992;
- The Blue Book – Managing Urban Stormwater (MUS): Soils and Construction, Landcom;
- Protection of the Environment Operations Act, 1997;
- Development Consent Conditions D.A. No.: _____
- Environmental Impact Statement for the site prepared by Benbow Environmental (Ref no. 111144);
- Site Environment Protection Licence No. _____; and
- General Terms of Approval issued by the NSW Office of Water No. _____.

5. PROCEDURE

- A riparian zone shall be maintained along the entirety of the southern boundary of the site adjacent to the wetland.

- A Weed control and planting program shall be implemented to improve existing water quality in wetland areas.

- Extended vegetated earth batters shall be maintained in accordance with the Landscape plan.

- Stormwater inlets and outlets shall be inspected routinely for evidence of debris, with debris being removed when it collects.

- Stormwater pollution control equipment must be maintained in optimum working condition in accordance with the *Pollution Control Equipment Maintenance Procedure*. This means broken piping or drain lines are repaired, drain pit covers are unblocked and sediment build up in drain pits is periodically removed.

- Waste and stormwater areas of the site must remain segregated at all times. A site map identifying these areas needs to be prepared.

- No waste or items of any description shall be tipped down stormwater drains.

- All bunded areas of the site shall be inspected and maintained to ensure integrity, with any cracks to be repaired immediately. All bunded areas shall be kept free of loose debris and other articles to maintain full capacity in the event of a spill or overflow.

- Upon observation of debris or contaminants entering the stormwater system the first priority shall be to isolate the site stormwater system from surrounding waterways.

- Particulate filters such as filter rolls or screens may be required to limit potential sediment release.

- If contaminated stormwater (or suspected to be contaminated but not able to be sampled) is released from the site at any stage the Production Manager shall be notified immediately.

- Stormwater runoff control features (swales, particulate filters and gross sediment traps) should be regularly inspected for operational integrity. Special attention should be paid to blockages caused by debris or sediment.

- If contaminated stormwater has exited the site, or is strongly suspected to be contaminated but cannot be sampled, the incident must be reported and the Production Manager shall notify all relevant authorities in accordance with the PIRMP.

6. STORMWATER MONITORING

A water monitoring program needs to be implemented at the site. The following water quality tests are recommended:

- pH
- Total Petroleum Hydrocarbons (TPH)
- Total Suspended solids (Non Filterable Residue)

Monitoring points would be all stormwater discharge points and at high risk areas within the wetland and unnamed watercourse (upstream and downstream of the site). The following table can be used as a guide for the discharge limits of the tested parameters. Should these limits be exceeded, expert advice should be sought.

The following criteria from the ANZECC Water Quality Guidelines 2000 and South Australian Environment Protection (Water Quality) Policy 2003 have been applied:

Water Quality Parameter	Not to Exceed
pH	6.5-9.0 (lowland and upland rivers)
Total Petroleum Hydrocarbons (TPH)	8mg/L over a sampling schedule if specified in a site licence
Suspended solids (SS) / Non Filterable Residue (NFR)	=10+0.6N (where N is background seasonal maximum in mg/L) or 25mg/L whichever is lower

Frequency of monitoring:

- Recommended: One off then reassess for frequency, unless specified otherwise by statutory authorities.
- During and after the cleanup operation of any major spillage.

Responsible person for organising monitoring:

Production Manager / Environmental Manager

Reporting:

Environmental Manager

Review:

Frequency of monitoring periods should be reviewed once development consent conditions and an EPL are issued to ensure managing risk adequately.

Collection of samples for monitoring:

During light rainfall samples will be taken from the middle of the outlet stream of water with the following collection bottles used:

- pH and SS / NFR 1.25L PET plastic bottle.
- Heavy metals 500ml nitric acid washed PET bottle.
- TPH 500ml PET bottle.

Protective gloves need to be worn by the sampler.

The sampling bottles are to be obtained from the laboratory undertaking the analyses. Each bottle will have a label, onto which would be entered the following information:

- Date and time (sampling);
- Sample No. and other identification;
- Analysis required;
- Sample location;
- Name of sample; and
- An indelible ink pen would be used.

A chain of custody form (Analysis Request Sheet) will need to be sent with the samples.

The sample bottles, for all analysis, other than TPH, will be filled to the top and then a small amount tipped out to leave a 20mm air gap. For TPH sampling, no air gap is permitted, and the bottle needs to be sealed when full.

The sample bottles shall be stored in ice (<4^{o}C) within an Esky, and delivered preferably on the day of the sampling to a NATA accredited laboratory.

Exceedances

If an exceedance of the discharge limit is reported this will require a further immediate sampling and investigation of the likely source.

7. COMPLAINTS/ INCIDENTS

Any complaints received or incident occurrences in relation to stormwater shall be handled in accordance with the *Complaints Response Procedure*.

8. RECORDS

Documentary records will be maintained by the HR & OHS Manager and will include the any stormwater monitoring undertaken at the site. All records will be maintained according to the *Control of Documents and Records Procedure* in the administration procedures manual.

- All records associated with the requirements of the Environment Protection Licence (EPL) must be kept for the duration specified in the EPL. Similarly, any records associated with the Development Consent must be kept for the duration specified in the DC.

NO:	EP7.8	DATE:	August 13
PREPARED BY:	Benbow Environmental	ISSUE NO.:	1

SUBJECT: 7.8 USE OF FIRE FIGHTING EQUIPMENT

1. PURPOSE

To ensure all staff and on-site contractors use the correct procedure in the operation of fire hose reels, fire extinguishers and fire hydrants, to prevent spread of fire and minimise threat to human health and environment in the case of a fire at either site.

2. SCOPE

This procedure applies to all personnel employed by Ingal and on-site contractors.

3. RESPONSIBILITIES

Production Manager

Ensure that all staff members follow the guidelines laid out in this document as per AS 1221-1997 *Fire hose reels* and AS 1841.5-1997 *Portable fire extinguishers. Part 5: Specific requirements for powder type extinguishers*.

Supervisors

Ensure that all staff members are fully trained in the use of all fire equipment, maintain training documents to ensure that all staff members are trained in the use of all fire equipment and ensure that all fire equipment is serviced every 6 months.

4. DEFINITIONS

Fire hose reel

Assembly consisting essentially of a hose, nozzle, drum, inlet pipe, connection fitting, stop valve and where required, a hose guide.

Fire extinguisher (foam)

Extinguisher from which foam is expelled by pressure stored within the body of the extinguisher as a whole.

Fire Hydrant

A fitting attached to a water main below street level. The hydrant incorporates a control valve and an outlet connection to which a standpipe is attached.

5. PROCEDURE FOR OPERATION OF A HOSE REEL

To turn on:

- Turn on stop valve to release hose.
- Run out hose.
- Turn on water at nozzle and direct stream at base of fire.

To turn off:

- Turn off water at nozzle.
- Wind up the hose and turn the stop valve to tighten the hose.

6. PROCEDURE FOR OPERATION OF A PORTABLE FIRE EXTINGUISHER

To turn on:

- Select appropriate type of fire extinguisher.
- Make sure the fire extinguisher is upright.
- Pull pin out.
- Aim at base of fire.
- Squeeze trigger.

To turn off:

- Release trigger and place pin in.
- Label the extinguisher as 'used' and call in fire service provider to fill or replace.

7. PROCEDURE FOR OPERATION OF A FIRE HYDRANT

Specific training is required in the use of fire hydrants due to safety implications as nozzles, if not correctly held, can strike personnel. Hydrants would only be operated by emergency response personnel, those site personnel corrected trained or left to be operated by the fire brigade.

8. ELEMENTS OF AN INDUCTION AND TRAINING PROGRAM

All site personnel should be trained in the operation of all fire fighting equipment.

An induction and training program should include the following elements:

- the operation of a fire extinguisher;
- the operation of a hose reel;
- proper use and fitting of personal protective equipment;
- the procedures to be followed in case of an emergency involving a fire;
- first aid and incident reporting procedures to be followed in case of injury or illness; and
- the operation of a fire hydrant is usually left to emergency response personnel eg. fire brigades.

The training provided will be practical and include hands-on sessions on the proper use of fire fighting equipment.

Training will be reviewed on a periodic basis.

Induction and training programs are to be documented and include the following information:

- The names of employees receiving training and the date(s) of attendance;
- An outline of the training content; and
- The names of persons providing the induction and training program.

A training document is shown overleaf.

COMPETENCY TRAINING DOCUMENT
SUBJECT: Operation of Fire Fighting Equipment

Name of person providing : induction and training — Signature :

Name of employee : — Signature :

Date(s) of attendance :

Outline of the course content

Topics to be Covered	Tick when topic finished
Operation of a fire extinguisher	
Operation of a hose reel	
Operation of a fire hydrant	
Information about the risk involved in the burning of flammable and harmful substances.	
Proper use and fitting of personal protective equipment	
Procedures to be followed in case of an emergency involving hazardous substances, including any special decontamination procedures to be followed	
First aid and incident reporting procedures	

Induction and Training in operation of fire fighting equipment has been completed and understood. I now feel competent to use fire fighting equipment.

Signature : Date:

(Employee/Attendee)

Induction and Training Attendee demonstrated appropriate competencies in use of fire fighting equipment.

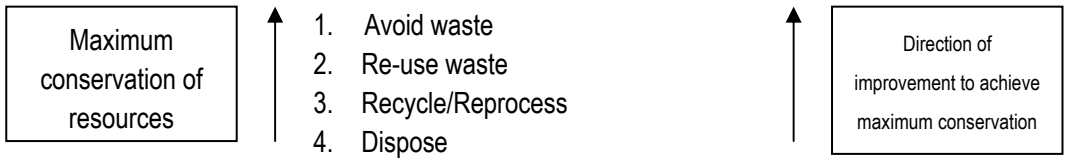
Signature : Date:

(Trainer)

NO:	EP7.9	DATE:	August 13
PREPARED BY:	Benbow Environmental	ISSUE NO.:	1
SUBJECT:	7.9 WASTE MANAGEMENT		

1. PURPOSE

To dispose of physically solid, liquid and gaseous waste according to the regulations. This will be carried out if the following hierarchy of waste management is followed.



Waste minimisation and resource recovery needs to be practised as part of the site's commitment to the principles of Ecologically Sustainable Development (ESD). (This basically means that the access of future generations to resources will not be denied or significantly reduced by our current waste of these reserves.)

2. RESPONSIBILITIES

- All staff and contractors of Glass Recovery Services
- Production Manager
- Environmental Manager

3. REFERENCES

- Protection of the Environment Operations Act, 1997;
- Waste Avoidance & Recovery Act 2001;
- Protection of the Environment Operations (Waste) Regulation 2005;
- Waste Classification Guidelines (NSW EPA);
- Development Consent Conditions D.A. No.: _____
- Environmental Impact Statement for the site prepared by Benbow (Ref no. 111144); and
- Site Environment Protection Licence No. _____.

4. DEFINITIONS

Waste includes:

a) any substance whether solid, liquid or gaseous that is discharged, emitted or deposited in the environment in such volume, constituency or manner as to cause an alteration in the environment; or

b) any discarded, rejected, unwanted, surplus or abandoned substance; or

c) any otherwise discarded, rejected, unwanted, surplus or abandoned substance intended for sale or for recycling, reprocessing, recovery or purification.

Waste must be classified in accordance with the DECC Waste Classification Guidelines as follows:

- Special waste;
- Liquid waste;
- Hazardous waste;
- Restricted solid waste;
- General solid waste (putrescible); and
- General solid waste (non-putrescible).

Classification of waste enables the generator to determine the appropriate handling, transport and disposal requirements if the waste cannot be reused or recycled.

Special Waste

Special waste includes clinical and related wastes, asbestos waste and waste tyres.

Liquid Waste

Liquid waste is waste that has an angle repose <5degrees; waste that becomes free flowing at or below 60ºC and is not generally capable of being picked up by a spade or shovel.

Hazardous Waste

Hazardous waste is waste with a pH ≤ 2 or ≥12.5 and containers that have not been cleaned and contained dangerous goods within the meaning of the Australian Code for the Transport of Dangerous Goods by Road and Rail.

Restricted Solid Waste

This type of waste is determined by chemical tests.

General Solid Waste (Putrescible)

General solid waste (putrescible) is waste from litter bins collected by local councils, food waste and grit or screenings from sewage treatment systems that have been dewatered so that the grit of screenings do not contain free liquids.

General Solid Waste (Non-Putrescible)

General solid waste (non-putrescible) is paper or cardboard, glass, plastic, rubber, plasterboard, ceramic, bricks, concrete or metal and containers previously containing dangerous goods as defined under the Australian Code for the Transport of Dangerous Goods by Road and Rail, from which residues have been removed by washing or vacuuming.

Waste Facility

Any premises licensed to be used for the storage, treatment, reprocessing, sorting or disposal of waste.

Certain types of waste are required to be tracked from the source to waste disposal facility. This would apply to spent wastewater from the pre-treatment tanks, ash and dross.

5. RESPONSIBILITES

5.1 Responsibilities of Waste Generator (Glass Recovery Services)

The waste generator is responsible for the waste that extends from when it is generated. This includes transport. As such the generator must ensure the waste contractor is transporting, handling and disposing of the waste correctly. Penalties under the POEO Act apply to the generator for incorrect waste handling and dispatch.

The primary responsibility of the waste generator (and in some cases the storer) is to:

- Identify whether site meets with definitions of a Scheduled activity: waste activities;
- Classify the waste properly (irrespective of whether it is going to be disposed or reprocessed);
- Use a licensed transporter, (where the waste to be transported is a listed waste under POEO Act);
- If the waste is listed, the generator must also undertake waste tracking;
- Ensure environmentally safe disposal of their waste;
- In the case of a spill, the owner of the waste must report the spill to the NSW EPA immediately;
- The owner must inform the NSW EPA of the method of clean-up and the ultimate disposal point of the clean-up materials; and
- The waste generator must declare the quantities and nature of the waste.

Waste Classification and Management

The following is a list of waste that would be generated by Glass Recovery Services at the Penrith site.

Waste Name	Classification*	Management
General & office waste	General solid Waste (non putrescible)	Stored in designated 15m^3 waste bins and serviced by a licensed waste contractor for disposal at suitable landfill
Cardboard and paper waste	General solid Waste (non putrescible)	Stored in designated recycling bins and serviced by a contractor for recycling.
Scrap metal	N/A Recycled	Stored in a designated scrap steel bin and removed by a contractor for recycling off site.
Inert contaminants removed from incoming glass (i.e.: ceramics, etc)	General solid Waste (non putrescible)	Stored in a designated bin and removed by a contractor for recycling or disposal off site.
Waste Oil	Liquid	Collected in containers & manually decanted into designated waste oil drum. Recycled using a recycling contractor.
Dust Collector Fines	*** (Recycled)	Dust is removed from site for reprocessing by external recyclers.

* Waste classification according to *Waste Classification Guidelines* provided unless waste is recyclable.

*** Waste needs to be classified

Of these wastes, those shaded may require "tracking", segregation and disposal to a licensed waste facility.

5.2 Responsibilities of Waste Transporters

- All transporters of waste requiring tracking are required to hold an EPL.
- To transport waste in an environmentally sound manner.
- Ensure disposal of all waste is at an approved disposal facility.

6. PROCEDURE

6.1 General

- All waste material (solid, liquid or hazardous waste) would be stored away from waterways and stormwater drains in a designated storage area or 'solid waste compound' to prevent water pollution. Bins shall have lids if not stored in a roofed area to prevent litter escaping during strong winds.

- All wastes shall be segregated wherever possible.

- Recyclable materials, wherever possible to do so, are to be segregated and sent to a recycling centre.

- Other materials including recyclable materials (if necessary) will be sent to the local landfill facility by licensed contractors.

- Waste receptacles are to be labelled identifying the type and source of the waste. This enables certain liquids (eg. oils and solvents) to be recycled.

- Wastes as shaded in the table above must be tracked using the NSW EPA's waste tracking system for all licensed and unlicensed sites. Ingal have a responsibility to be aware of the classification of all wastes generated to ensure that management is in compliance with waste legislation. Any waste not yet classified shall be sampled and analysed to enable classification according to the *Waste Classification Guidelines.*

- Records of wastes will be taken by the Production Manager to enable waste auditing and a waste minimisation plan to be developed for the site. These records will be forwarded to HR & OHS Manager and maintained and filed by administration. A sample spreadsheet is provided overleaf for recording waste management activities. The spreadsheet should be filled in as follows:
  - Date
  - Waste Description
  - Form (Solid, Liquid, Sludge)
  - Classification (For NSW, Special, Liquid, Hazardous, Restricted Solid Waste, General Solid Waste (Putrescible) or General Solid Waste (Non-Putrescible))
  - Tracking Required (circle Yes/No). Tracking is required for waste as highlighted in the table above.
  - Quantity Disposed (specify unit - m3, kg, tonnes, Litres)
  - Destination (Recycling, disposal, reuse, specify contractor)

6.2 Solid Wastes

Solid waste should be segregated into:

- recyclable packaging materials
- recyclable paper and cardboard
- recyclable scrap steel
- general garbage and office wastes
- empty containers and drums

Segregation of contaminated materials is essential to prevent additional disposal costs should other wastes be combined with this waste. Contaminated solid wastes should be disposed of by a licensed waste contractor.

Wherever possible, workshop wastes should be reused or recycled.

6.3 Liquid Wastes

Liquid wastes include used oils and lubricants.

- Liquid wastes are not to be poured down the sewer or stormwater systems or otherwise released into the environment.

- For minor volumes, waste oils and lubricants are to be collected in the appropriate receptacles (original or equivalent) for the material. Examples of receptacles are glass flasks or bottles, plastic bottles or containers, metal pails or drums. Any receptacles used should be labelled appropriately, including any dangerous goods class signs if relevant.

- Liquid wastes of different types (eg. oils, lubricants and sludge) are not to be mixed within receptacles. Each receptacle is to contain identical wastes only.

- Waste oils and lubricants are to be kept within a bunded and roofed area designated on site before removal by a licensed contractor.

- Liquid waste shall only be transported by licensed contractors and disposed of to licensed waste facilities.

6.4 Recycling

- All materials (eg. Paper and cardboard, oils, solvents and metal) that are to be recycled should be stored in a designated area to maintain good housekeeping practices.

- Oils and lubricants that are temporarily stored for recycling should be done so in a suitably bunded and covered area, away from stormwater drains to minimise the potential for leakages to occur.

7. COMPLAINTS/ INCIDENTS

Any complaints received or incident occurrences in relation to waste shall be handled in accordance with the *Complaints Response Procedure*.

8. RECORDS

Documentary records will be maintained by the Production Manager and will include the quantity and type of listed liquid wastes transported off-site, by whom, and their destination. All waste records will be forwarded to the HR & OHS Manager and maintained according to the *Control of Documents and Records Procedure* in the administration procedures manual.

- All records associated with the requirements of the Environment Protection Licence (EPL) must be kept for the duration specified in the EPL. Similarly, any records associated with the Development Consent must be kept for the duration specified in the DC.

RECORD OF WASTE MANAGEMENT ACTIVITIES – SAMPLE FORM

Date	Waste Description	Form	Classification	Tracking Required	Consignment No.	Quantity Disposed	Destination
EXAMPLE: May 2013	Waste oil	Solid	J100	(YES) / NO	P100345679 25_SPP	250 L	Liquid Treatment Pty Ltd
				YES / NO			
				YES / NO			
				YES / NO			
				YES / NO			
				YES / NO			
				YES / NO			
				YES / NO			
				YES / NO			
				YES / NO			
				YES / NO			
				YES / NO			
				YES / NO			

Notes: Form (Solid, Liquid, Sludge);
Classification (Waste Classification Guidelines: Special, Liquid, Hazardous, Restricted Solid Waste, General Solid Waste (Putrescible) or General Solid Waste (Non-Putrescible)));
Tracking Required (circle Yes/No). Tracking is required wastes shaded in the table;
Quantity Disposed (specify unit - m^3, kg, tonnes, Litres);
Destination (Recycling, disposal, reuse, specify contractor)

NO:	EP7.10	DATE:	August 13
PREPARED BY:	Benbow Environmental	ISSUE NO.:	1
SUBJECT:	7.10 WORKPLACE INSPECTION		

1. PURPOSE

The purpose of this procedure is to set out the process relating to Workplace Inspections of Glass Recovery Services' Penrith facility in relation to the organisations environmental aspects and EMP.

2. RESPONSIBILITIES

- All staff and contractors of Glass Recovery Services
- Production Manager
- Environmental Manager

3. REFERENCES

- Protection of the Environment Operations Act 1997

4. DEFINITIONS

Workplace Inspections

Inspections conducted by the Environmental Officer using the environmental checklist provided to assess the housekeeping standard of the facility.

Environmental Harm

Any direct or indirect alteration of the environment that has the effect of degrading the environment and, without limiting the generality of the above includes any act or omission that results in pollution. (Ref: POEO Act)

Due Diligence

The systematic identification of the environmental risks and liabilities associated with an organisation's sites and operations.

5. PROCEDURE

- A sample Workplace Inspection Checklist is provided overleaf to be completed and recorded on a weekly basis. This information is used to check compliance and ensure due diligence. It is also used to determine whether action must be taken to rectify issues that have arisen that may have the potential to cause environmental harm. This checklist must be updated to correctly reflect specific site requirements once operations commence.

- Actions required must be undertaken in accordance with the *Corrective and Preventative Actions Procedure.*

- The Production Manager is responsible for ensuring that any actions required are implemented. The appropriate column of the checklist to indicate that these actions have been adequately undertaken is also the responsibility of the Production Manager or delegate.

- The Workplace Inspection must cover all production and external areas including:

  - The incoming material loading, unloading, transfer and storage areas;
  - The production area – crushing, separating and sorting operations;
  - The finished goods external storage area;
  - External areas including car parking areas, roadways, landscaped areas and gardens, stormwater drains, riparian land, wetland and boundaries;
  - Office areas and amenities; and
  - Dangerous goods, chemical and waste storage areas.

- The Workplace Inspection Checklist must be updated as required. Site management may prefer to update the checklist so it is more specific to each area.

6. RECORDS

All records of Workplace Inspections and any corrective actions (if required) must be maintained in accordance with the *Documents and Records Procedure*.

SUBJECT: WORKPLACE INSPECTION CHECKLIST - Page 1

Area:_____			Date:_____
ITEM CHECKED	YES	NO	DETAILS
Are all staff trained in environmental awareness?			
Is there any excessive or unusual odour or dust present?			
Are the hardstand areas clean and free of debris, sediment and organic material?			
Are the stormwater drains & pollution control devices free of rubbish, debris and odour?			
Is there excessive noise generating from equipment or activities, is the plant in good working condition?			
Are all dangerous goods, chemicals and wastes stored appropriately and in the correct location?			
Is any environmental documentation missing from display – signage, policy, emergency plan, MSDS register etc?			
Is the spill kit equipment in place and signage present?			
Is any fire fighting equipment missing, blocked from easy access or not been serviced in the past 6 months?			
Are safety signs visible and in good condition?			
Are any containers or items not in the correct location?			
Does the workplace appear to be in normal working order?			

SUBJECT: WORKPLACE INSPECTION CHECKLIST - Page 2

Housekeeping (circle): Exceptional Good Average Poor Very Poor

Comments / Actions Required:

Name Position

Signature Date

ENVIRONMENTAL MANAGEMENT PLAN

ADMINISTRATION PROCEDURES MANUAL

GLASS RECOVERY SERVICES

126 ANDREWS ROAD, PENRITH

Issued and Approved by:	Date:

Document Reference: 137003_EMP Admin Procedures_Final
Date of Issue: 30 August 2013

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CONTENTS

NO:	AP1.1	DATE:	August 13
PREPARED BY:	Benbow Environmental	ISSUE NO.:	1
SUBJECT:	1.1 COMMUNICATION PROCEDURE		

1. PURPOSE

To encourage open communication between Glass Recovery Services and all groups with which the company interfaces. This includes Community groups, regulatory authorities and non-regulatory agencies, and other industries.

2. RESPONSIBILITIES

- Production Manager
- Environmental Manager

3. PROCEDURE

Glass Recovery Services shall deal with the neighbouring community in a manner that highlights the company's concern for both their amenity and the local environment.

The Switchboard, upon receipt of an enquiry shall:

- Record in Diary or Log Book:
  - Name of Caller;
  - Address/Employer (if appropriate);
  - Telephone Number; and
  - Details of Enquiry.

- Connect/refer caller to one of the following staff members who are able (and authorised) to discuss the subject of the enquiry with the caller.
  - Production Manager;
  - Environmental Manager; and
  - Other designated staff members.

- Authorised staff member requests details of the information required by the caller.

- Authorised staff should respond to the enquiry directly if possible, or agree to send out official correspondence which effectively answers the callers request for information.

Glass Recovery Services shall foster open communications with the other stakeholders of the site to ensure that an integrated approach is used to deal with issues which reflect on all stakeholders.

- The Environmental Manager shall liaise with adjacent facilities to evaluate what communications protocols are required to ensure any environmental management issues from either party are addressed promptly.

- The Environmental Manager shall request to be included on adjacent facilities distribution lists regarding internal communications which relate to the Glass Recovery Services' activities.

- The Environmental Manager shall include adjacent facilities on distribution lists regarding matters that relate to them.

- Regular internal communications regarding environmental management of the site (this may involve including the environment as an agenda item on monthly site meetings) shall be undertaken and documentation retained. This may include but is not limited to environmental issues have arisen, modifications to environmental management at the site or findings of a workplace inspection.

- Environmental management shall be included in the site induction and shall be communicated to all new employees and contractors.

- All internal and external communications shall be documented and retained by the relevant personnel.

- Review this procedure and established protocols if changes to contractual or licence agreements occurs.

- Review this procedure and established protocols if changes to stakeholders occurs.

NO:	AP1.2	DATE:	August 13
PREPARED BY:	Benbow Environmental	ISSUE NO.:	1

SUBJECT: 1.2 COMPLAINTS RESPONSE

1. PURPOSE

To ensure that a "complaints oriented" process is in place to focus on the type, date, time and origin of the complaint, together with "feedback" to the complainant regarding (if appropriate) investigation of the complaint and any remedial action arising from the complaint.

2. SCOPE

The procedure can be applied to such issues as excessive noise, odour and emissions to air. The essential element of the procedure is:

Scenario A: A resident/occupier of adjoining premises telephones to register a complaint or ask questions related to the operation of the site (eg, noise, waste, odour, air emission).

Scenario B: An adjacent facility or a regulatory authority has received a complaint through their Complaint Handling Procedure and their investigations include the area and operations at the sites.

3. RESPONSIBILIITES

- All staff and contractors of Glass Recovery Services
- Production Manager
- Environmental Manager

4. PROCEDURE

- All complaints or enquiries should be handled in a courteous manner, every complaint is a potential opportunity for improvement in environmental management.

- Record in Log Book and on a Complaint Response Form:
  - Name of Complainant;
  - Address;
  - Telephone Number; and
  - Details of Complaint:
    - date, time of occurrence, precise location of event.

- Connect/refer caller to one of the following staff members who are authorised to discuss the complaint with the caller:
  - Production Manager;
  - Environmental Manager; and
  - Personnel with environmental responsibilities.

- If on-site personnel are not available re-direct the caller to a nominee (eg. Safety, Quality and Environmental Officer who has expertise in assessing the validity of the complaint eg., noise or odour measurement, materials analysis, etc.).

- Authorised staff member requests details of the complaint or information required by the caller.

- Authorised staff also agrees to have complaint investigated or to send out official correspondence from the Environmental Manager which effectively responds to the callers complaint or request for information.

- Complaint investigated by site staff or nominee and action appropriate to the circumstances taken.
  - Appropriate action may include:
    - Conducting an on-site inspection to determine any relationship between maintenance operations and time of occurrence of the complaint, eg., complaints about noise emissions during hours outside of maintenance operations.
    - Details of material emissions observed by the complainant and relationship to on-site materials inventory.
    - Where complaints relate to excessive noise, conduct of noise measurements at location of the complaint (similar time of day). Compare results with previous measurements (if available) and where an increase has occurred, further investigate operating sources, recommend remedial action for preparation of an action plan.

- On completion of the action plan ensure that complainant is fully informed of remedial measures.

- Complete both Complaint Response Log and Log Index.

- If remedial actions involve changes to established work practices, notify supervisory staff and where appropriate modify job instructions and ensure that employees are retrained accordingly.

- Communications between Glass Recovery Services and adjacent facilities in relation to any complaints should be carried out with reference to the communications procedure.

COMPLAINT RESPONSE PAGE 1 OF 2

REF: 1.2F01 REV: 1

LOG BOOK REFERENCE NO:……

DATE: ……TIME:……AM/PM

NAME OF PERSON WHO RECEIVED CALL:……

NAME OF COMPLAINANT:……TELEPHONE NO……

ADDRESS: ……

DETAILS OF COMPLAINT:

DATE OF OCCURANCE:……TIME AM/PM:……

TYPE OF INCIDENT:

NOISE	☐	STORMWATER	☐
AIR EMISSIONS	☐	ODOUR	☐
TRAFFIC/TRANSPORT	☐	FIRE	☐
EROSION/SEDIMENT	☐	WASTE	☐
OTHER	☐	DETAILS:……	

PRECISE LOCATION OF INCIDENT: ……

PARTICULAR DETAILS RELATING TO THE INCIDENT: ……

……

……

COMPLAINT RESPONSE PAGE 2 OF 2

ACTION TAKEN:

COMPLAINANT TRANSFERRED TO:

PRODUCTION MANAGER ☐ SUPERVISOR ☐
Name: _____

ENVIRONMENTAL MANAGER ☐ AUTHORISED PERSONNEL ☐

MESSAGE TAKEN FOR:……..

CORRECTIVE AND PREVENTATIVE ACTION:

INFORMATION BULLETIN SENT ☐

COMPLAINT INVESTIGATED BY: ..... CPAR NO.....

RESULTS OF INVESTIGATION: .....

.....

.....

.....

ON COMPLETION OF CORRECTIVE AND PREVENTATIVE ACTION:

LETTER SENT TO COMPLAINANT YES NO N/A DATE:.....

WORK PRACTICE MODIFIED YES NO N/A DATE:.....

COMPLAINT RESPONSE COMPLETE: ……..

PRINT NAME

SIGNATURE: ……

DATE: ..... TIME: .....AM/PM

COMPLAINT RESPONSE LOG BOOK INDEX

REF: 1.2F02 REV: 1

COMPLAINT NUMBER	DATE	COMPLAINANT	CALL RECEIVED BY	RESPONSIBLE MANAGEMENT REPRESENTATIVE	COMPLAINT ACTION AND RESPONSE SIGN & DATE

NO:	AP1.3	DATE:	August 13
PREPARED BY:	Benbow Environmental	ISSUE NO.:	1

SUBJECT: 1.3 CONTROL OF DOCUMENTS & RECORDS

1. PURPOSE

To ensure all documents and records relating to the environment, environmental management, incidents, approvals and actions are controlled.

2. RESPONSIBILITY

- Production Manager
- Environmental Manager
- Staff with specific environmental responsibilities

3. REFERENCES

- AS/NZS ISO 14001:2004 – Environmental Management Systems – Requirements with guidance for use.

4. DEFINITIONS

Environmental Document
A written account containing information related to environmental approvals, actions or activities.

Environmental Record
Anything providing evidence or information about past events relating to the environment.

5. PROCEDURE

- For the purposes of this procedure, environmental documents and records shall be divided into three (3) categories as follows:

  (i) Licences and approvals such as the site's Environment Protection Licence (EPL), Development Consent Condition and General Terms of Approval;
  (ii) Active Documents such as the Environment Management Plan, Emergency and Pollution Incident Response Management Plan, Work and Environmental Procedures; and
  (iii) Records such as Workplace Inspection Records, Waste Records and Monitoring Results.

- A register of all environmental documents and records must be maintained with the EMP. A sample register is provided overleaf.

- All environmental documents and records must be made available to all staff upon request.

Licences and Approvals

- Copies of current versions of all environmental licences and approvals must be maintained by Environmental Manager and made available to all staff and over the internal computer system.

- When an environmental licence or approval is re-issued, revised or updated by a regulatory authority, the previous version must be identified as "superseded". All staff should be made aware of the updated version of the licence or approval.

Active Documents

- Changes to active documents must be approved by the Environmental Manager prior to use. The revision status of active documents must be identified upon any changes made.

- Review of active documents should be undertaken at least annually. Responsible persons should be identified on the document.

- Ensure current versions of documents are available at areas of use.

- All active documents must have a unique identification number and be registered in the document register.

Environmental Records

- All environmental records must contain the date of issue and list the responsible person within the record.

- Environmental records must be maintained by the responsible person for at least 4 years after the date of issue.

DOCUMENT REGISTER (Example Only) REF: 1.3F01

Document Name & Number	Status / Date/ Revision No.	Responsible Person	Location(s)
Environmental Protection Licence No. ____			• Office • System
Sydney Water Tradewaste Agreement No. ____			• Office • System • WWTP
Development Consent Conditions, DA No. ____			• Office • System
Environmental Management Plan	1		• Office • System
Waste Records / Register	N/A		
Material Safety Data Sheets	Various		
Internal Environmental Audits			
External Environmental Audits			

NO:	AP1.4	DATE:	August 13
PREPARED BY:	Benbow Environmental	ISSUE NO.:	1

SUBJECT: 1.4 CORRECTIVE AND/OR PREVENTATIVE ACTION

1. PURPOSE

To address actual and potential environmental non-conformities by implementing corrective and/or preventative actions.

2. RESPONSIBILITY

- Production Manager
- Environmental Manager
- Staff with specific environmental responsibilities

3. DEFINITIONS

Corrective Action

Action taken to correct an identified or detected non-conformance with existing procedures for a number of reasons which could include failures, non-conformances, inadequate or non-existent procedures, inadequate working conditions, etc.

Preventative Action

Action taken prior to detection of a non-conformance etc. to prevent an incident or corrective action occurring. Used for all pro-active continuous improvements.

4. PROCEDURE

Identifying & Addressing Non-conformities

- Non-conformities relating to the environment can be detected by the following:

  (iv) In-house detection of non-conformances;
  (v) Audit verified non-conformance;
  (vi) A near miss of potential non-conformance; or,
  (vii) Public complaint.

- Prior to the implementation of new process, activity or product, identification of environmental aspects and potential significant impacts should be undertaken. In addition to this, safeguards or procedures should be put in place to minimise the risk of these impacts from occurring.

- When a non-conformity is identified, corrective action to mitigate the environmental impact should be put in place. Further investigation into the cause of the non-conformity would need to be undertaken to determine what preventative measures can be implemented to ensure the non-conformity does not recur.

Corrective and/or Preventative Action Request (CPAR) Forms

- Corrective and/or Preventative Action Request (CPAR) forms shall be kept and overseen by management.

- Forms shall be issued to appropriate personnel with control over the source of the non-conformance.

- The issuing of the CPAR form shall be initiated by any of the following events, if considered justified:

  (i) NSW EPA, Penrith City Council, Sydney Water or other regulatory agency direction or request;
  (ii) In-house detection of non-conformances or potential non-conformances;
  (iii) Audit verified non-conformance; or
  (iv) Public complaint.

- Records shall be maintained by management, who shall also be responsible for defining, implementing and maintaining Corrective and Preventative Action procedures.

GLASS RECOVERY SERVICES	CORRECTIVE AND/OR PREVENTATIVE ACTION	REF: 1.4F01 REV: 1

☐ CORRECTIVE ACTION ☐ PREVENTATIVE ACTION

Name of personnel requesting corrective/preventative action: Signature:

_____ _____

Personnel responsible for action: Date:

_____ _____

Outline of the 'Initiating Event' and necessary corrective and/or preventative actions (to be filled out by those requesting action):

Actions taken to fulfil the requirement of the corrective and/or preventative action:

Corrective and/or preventative action complete:

Signature : Date:

NO:	AP1.5	DATE:	August 13
PREPARED BY:	Benbow Environmental	ISSUE NO.:	1

SUBJECT: 1.5 ENVIRONMENTAL TRAINING

1. PURPOSE

The purpose of this procedure is to set out the process to follow to:

- identify staff and/or contractors competency requirements for the activities which they perform which can, or have the potential to cause significant environmental impacts;
- make certain training activities to ensure adequate awareness and competency to undertake these activities are completed; and
- retain associated records.

2. RESPONSIBILITIES

- Production Manager
- Environmental Manager
- Staff with specific environmental responsibilities

3. REFERENCES

- AS/NZS ISO 14001:2004 – Environmental Management Systems – Requirements with guidance for use.

4. DEFINITIONS

Competence

The ability to understand information presented, to appreciate the consequences of acting (or not acting) on that information, and to make a choice.

Environmental Training

The transmission of knowledge, skills, attitudes, motivations, etc., concerning the environmental requirements of activities, products or services to workers, supervisors, managers, and others through classroom sessions, demonstrations and simulated exercises. The objective of environmental education and training is favourable behaviour change.

Awareness

To be mindful or heedful of something, knowledge gained through perceptions, the attitudes of others.

Senior Management
For the purposes of this procedure, Senior Management include all staff with a managerial role.

5. PROCEDURE

TRAINING OBJECTIVES

The objectives of environmental training are:

- To ensure that a continuous "state of readiness" exists for dealing with anticipated emergencies.
- To create and maintain an organisation capable of dealing with anticipated emergencies.
- To ensure that attendance, completion and review of the results of training is documented and recorded.
- To emphasise the importance of conformity with the environmental policy and procedures and with the requirements of the EMP.
- To make staff aware of the significant environmental aspects and related actual or potential impacts associated with their work, and the environmental benefits of improved personal performance.
- To ensure roles and responsibilities in achieving conformity with the requirements of the EMP are known and understood.
- To ensure environmental procedures relating to their work activities are known and understood.

The following levels of knowledge are considered a minimum requirement for a complete understanding of emergency and environmental procedures.

LEVEL 1 – All Staff

Immediate and detailed knowledge required by employees at the site, either permanent or casual. This also includes contractors.

- How to communicate an emergency situation and who to contact.
- How to respond, what assistance is available.
- Where to go in an emergency, how to evacuate to a safe location, who will co-ordinate an evacuation.
- Awareness of environmental aspects and potential impacts of their work activities and the environmental benefits of improved personal performance.
- Awareness of the corporate environmental policy and objectives of the site EMP.
- Awareness of individual accountability under environmental legislation applicable to the site including penalties for offences under the Protection of the Environment Operations Act, 1997.

LEVEL 2 – Personnel with Environmental Responsibilities

Level 2 employees would include those individuals with specific environmental responsibilities and those at a supervisory level. In addition to having a complete understanding of all level 1 requirements, training in environmental management and/or procedures specific to their job requirements would be necessary. Specific responsibilities would need to be designated and clearly understood.

Training in environmental management would include how manage environmental aspects of the site activities and how to identify environmental improvements.

Specific and detailed information is required by persons trained to respond to emergency situations including supervisors, persons with accredited first-aid skills, service personnel and means of contact with external emergency services.

Personnel with specific environmental duties would need to be trained in the relevant procedures such as incident prevention, maintenance and environmental monitoring, correct storage and handling of dangerous goods and competency testing undertaken on a regular basis.

LEVEL 3 – Senior Management

Senior management would require a complete understanding of emergency and environmental procedures (Level 1 training) and environmental management (Level 2 training). In addition to this, the following are considered the minimum requirement for environmental training of senior management:

- General knowledge of their responsibilities, statutory duties, media contact and how the procedures are designed to operate.
- Awareness of environmental aspects and potential impacts of their work activities, new and existing site operations and the environmental benefits of improved personal performance.
- Knowledge and awareness of current legislation and impacts of changes to plant operations on legal and other requirements and environmental management on site.

SPECIFIC TRAINING DUTIES

CEO / General Manager

The Company Director has the duty of ensuring that adequate resources are available to provide all employees with the appropriate level of environmental training required to undertake their work tasks.

Environmental Officer

Duties of the Environmental Officer in relation to environmental training are to:

- Ensure that environmental responsibilities are delegated to cover all requirements of the EMP.
- Ensure the site environmental training program appropriately covers all requirements in this procedure.
- Ensure competency testing is carried out on a regular basis and documented.
- Liaise with the Supervisors and Plant Manager to ensure all personnel are appropriately trained and competency tested.

Production Manager

Functional duties include:

- Establish and maintain an Evacuation Plan for the site, including documentation, training handouts, signposting, etc.
- Establish and ensure relevant Emergency Response Procedure for site.
- Liase with external emergency services, establish a timetable for regular training and simulated exercises to test the adequacy and effectiveness of the Plan.
- Ensure that routine inspections of all emergency equipment is carried out and results documented.
- Establish budgets for the procurement and servicing of emergency equipment including personal protective and communication equipment, (eg. respiratory protection, loud hailers, spill control hardware, etc).
- Deputising duties in relation to emergency response during periods of absence from the site.
- Establish an environmental training program to be implemented at the site including maintaining and updating the environmental component of the site induction.
- Ensure appropriate training is provided to individuals, particularly those required to undertake specific environmental duties on a day to day basis.
- Ensure individuals required to carry out specific environmental duties on a day to day basis undertake competency testing.

Nominee

Normally resident in a particular area or department, delegated by the Chief Warden to carry out such duties as:

- First response to the emergency (spillage or fire).
- Where appropriate, the orderly evacuation of people to designated safe locations.

Level of knowledge will include the location of evacuation exits and pathways, designated safe areas (marshalling areas), protection systems and emergency contacts.

Supervisors

Supervisors have the responsibility for providing the training to site employees. The main functional duties in relation to environmental training would include:

- Ensuring all new employees undergo environmental training as part of their site induction.
- Ensuring the appropriate training is provided to employees with specific environmental responsibilities.
- Assessment of staff's competence and maintaining training records.

TRAINING REQUIREMENTS

- The training requirements of all levels of personnel performing work related to environmental issues shall be regularly assessed and recorded. Training shall relate to all tasks completed in fulfilling work duties and responsibilities.

- Regular training programmes shall be undertaken either in-house, through consultants, or through another recognised third party.

- All new employees or contractors shall undergo site induction training. Induction training should include environmental awareness and testing for understanding.

- Records of personnel training involvement and level of competency attained shall be kept and maintained.

- Personnel's competency shall be regularly tested.

- Training should cover as a minimum but not be restricted to the following areas:
  - Environmental awareness;
  - Legal Requirements;
  - Emergency response including spill procedure; and
  - EMP and associated procedures including incident prevention & control, maintenance and environmental monitoring.

Environmental Awareness

Environmental awareness training shall be included in the site induction and shall be completed by all site employees and contractors. Trained staff shall be required to have a basic understanding of environmental issues related to the site activities. The training shall include but not be limited to the following:

- Basic environmental definitions including pollution in terms of noise, air, waste, stormwater, wastewater and soil & groundwater;
- The corporate environmental policy;
- Basic overview of environmental legislation;

- A basic description of the environmental aspects and potential impacts of the site operations. Significant environmental impacts should be highlighted;
- Controls and safeguards that are in place to minimise environmental impacts of operations and how these work;
- Awareness and main objectives of the site EMP;
- Awareness of their individual legal responsibilities with regards to the environment and that they are accountable for their own actions; and
- Awareness of staff to notify concerns and / or incidents to.

Emergency & Spill Response

A core organisation shall be trained to co-ordinate activities during emergency situations:

- As a priority, to be able to move persons away from life-threatening situations and account for their presence at designated safe locations. This may include partial or total evacuation.
- To be able to initiate a first response to emergencies, including alerts to external emergency services so that control is exercised to reduce the risk of injury or damage to property.
- To be able to co-ordinate the isolation of equipment necessary to bring the emergency under control.

The organisation will be trained to a level of capability for dealing with:

- Spillage incidents or emissions and the controlled disposal of wastes in accordance with legislative requirements;
- Initial response to fire using available fire control equipment;
- Medical emergencies in which there is an immediate threat to life safety and requiring accredited first-aid skills; and
- Bomb threats or other security breaches.

The <Title of responsible person> or nominated staff member will at times also be required to liase with responding external emergency services.

EMP & Environmental Procedures

Training and competency testing in specific environmental procedures would be required for individuals with specific environmental responsibilities.

Specific duties would include but are not limited to:

- Specialised first aid and emergency duties;
- Maintenance of pollution control equipment;
- Any environmental monitoring such as stormwater monitoring and tradewaste compliance monitoring;
- The storage and handling of dangerous goods; and
- Waste Management.

EMP & Administrative Procedures

Training in specific administrative procedures would be required for individuals with specific environmental administrative responsibilities.

Specific duties would include but are not limited to:

- Environmental auditing;
- Legal / Other Requirements;
- Aspects and potential impacts;
- Incident response and implementation of corrective and preventative actions; and
- Administrative duties including document control and how to respond to complaints.

Pollution Incident Response Management

Training in Pollution Incident Response Management is detailed in the Emergency and PIRMP for the site.

COMPETENCY TRAINING DOCUMENT

REF: 1.5F01 REV: 1

Name of person providing : induction and training

Signature :

Name of employee :

Signature :

Date(s) of attendance :

Outline of the course content

Course to include :

Topics to be covered	Tick when topic finished

Induction and Training in …….. has been completed and understood. I now feel competent to ……

Signature : Date:

(Employee/Attendee)

Induction and Training Attendee demonstrated appropriate competencies in ……

Signature : Date:

(Trainer)

NO:	AP1.6	DATE:	August 13
PREPARED BY:	Benbow Environmental	ISSUE NO.:	1
SUBJECT:	1.6 IDENTIFYING ASPECTS & IMPACTS AND DETERMINING SIGNIFICANCE		

1. PURPOSE

The purpose of this procedure is to set out the process to follow to identify environmental aspects of the site's activities, products and services that can be controlled and influenced by you. Also, to document how to determine those aspects that have or can have significant impacts on the environment. In particular, this procedure would be used when a new activity or product or when a process within the system is modified. This would enable any potential significant impacts identified to be addressed to ensure that the risk of it occurring is minimised. The procedure needs to address the development, implementation and maintenance phases of the EMP.

2. RESPONSIBILITIES

- Production Manager
- Environmental Manager
- Staff with specific environmental responsibilities

3. REFERENCES

- AS/NZS ISO 14001:2004 – Environmental Management Systems – Requirements with guidance for use.
- AS/NZS ISO 14004:2004 – Environmental Management Systems – General guidelines on principles, systems and support techniques.

4. DEFINITIONS

Environment

Environment is defined in ISO14001, 3.6 as: *'Surroundings in which an organisation operates, including air, water, land, natural resources, flora, fauna, humans and their interrelation.'*

Environmental Aspect

An environmental aspect is defined in ISO14001, 3.6 as: *'An element of the organisation's activities, products or services which can interact with the environment.'*
NOTE: A significant environmental aspect has or can have a significant environmental impact.

Environmental Impact

An environmental impact is defined in ISO14001, 3.6 as: *'Any change to the environment whether adverse or beneficial, wholly or partially resulting from an organisation's environmental aspects'.*

Significant

Having or likely to have a major effect. With respect to an environmental effect, an adverse impact in the context of its magnitude, geographic extent, duration, frequency, degree of reversibility, possibility of occurrence or any combination of the foregoing.

5. PROCEDURE

Identifying Aspects

- Generate a process flow diagram of the existing or new process / activity. Include all ancillary activities and resources required (such as chemicals) for the process to be carried out. Identify how these activities will be undertaken. Referring to or developing standard operating procedure may be useful.

  For example: A simple example would be unloading a delivery of raw materials using a forklift truck. Resources used would include fuel and labour.

- Identify any waste products or environmental emissions that would be generated from the activity and how these will be managed.

  In addition to the example from the previous point, waste products would include products of combustion from the use of fuel and the generation of waste oil from the engine and gearbox. Generation of noise from the operation of the forklift would also be a potential impact.

- Consider how these activities, resources and waste materials may interact with the environment. Both normal and abnormal conditions including start-ups, shut downs, maintenance and emergency situations should be considered. It is recommended that quantitative and or qualitative data be collected to aid understanding and identification. Participation of staff most familiar with each activity, product or service would also be beneficial.

  The products of combustion generated in the previous example would be released to the air. Noise from forklift operations would change the surrounding acoustic environment.

- Maintain all documentation relating to the generation or modifications to the process flow diagram and identification of aspects such as the Environmental Aspects Register, according to the Control of Documents and Records procedure.

Identifying Impacts

- Once the aspects of the existing or new process have been identified and recorded, the potential impacts on the environment can be determined. Consider how these aspects could impact on the surrounding air, water, land, natural resources, flora, fauna and humans.

  From the previous forklift operation example, potential impacts from the aspects identified can be determined as follows:
  - There is potential for a leak or spill of fuel onto the ground and contamination of waters and land;
  - The release of products of combustion to air may impact by generating air pollution; and
  - A change to the acoustic environment due to the generation of noise which may impact on nearby residences by causing nuisance noise.

- Potential impacts should be recorded in accordance with the Control of Documents and Records procedure.

Determining Significance

- In determining the significance of environmental impacts, it is important to consider the following:
  - Beneficial as well as adverse environmental impacts;
  - Actual and potential environmental impacts;
  - The part of the environment that may be affected;
  - Characteristics of the local environment; and
  - Nature of changes to the environment.

- The Glass Recovery Services internal risk assessment procedure <insert reference> should be used in determining whether a potential impact would be significant. This risk assessment process is based around the current process for OH&S purposes. Definitions of the "Likelihood" descriptor are relevant in this case. However, the "Consequences or Impact" descriptors can be re-defined for environmental purposes as follows:

HOW LIKELY IS AN EVENT TO OCCUR?

LIKELIHOOD

Level	Descriptor	Description
A	Almost Certain	The event is expected to occur in most circumstances.
B	Likely	The event will probably occur in most circumstances.
C	Moderate	The event should occur at some time.
D	Unlikely	The event could occur at some time.
E	Rare	The event may occur only in exceptional circumstances.

IF IT DOES, WHAT ARE THE WORST CASE SCENARIO CONSEQUENCES?

CONSEQUENCES OR IMPACT

Level	Descriptor	Description
1	Insignificant	No injuries.
2	Minor	First Aid treatment.
3	Moderate	Medical treatment required.
4	Major	Extensive injuries, loss of product capability.
5	Catastrophic	Death.

Use the information above to find risk level (i.e. Likelihood 'C', Consequence '3', would equal 'S' or Significant Risk.

LEVEL OF RISK

Likelihood — Consequence

	Insignificant 1	Minor 2	Moderate 3	Major 4	Catastrophic 5
A (almost certain)	S	S	H	H	H
B (likely)	M	S	S	H	H
C (moderate)	L	M	S	H	H
D (unlikely)	L	L	M	S	H
E (rare)	L	L	M	S	S

LEGEND

H = High Risk
S = Significant Risk
M = Moderate Risk
L = Low Risk

NO:	AP1.7	DATE:	August 13
PREPARED BY:	Benbow Environmental	ISSUE NO.:	1

SUBJECT: 1.7 IDENTIFYING LEGAL & OTHER REQUIREMENTS

1. PURPOSE

The purpose of this procedure is to set out the process to follow to identify applicable legal and other requirements that relate to your environmental aspects, and determine how these requirements apply to your environmental aspects. The procedure needs to address the development, implementation and maintenance phases of the EMP.

2. RESPONSIBILITIES

- Production Manager
- Environmental Manager
- Staff with specific environmental responsibilities

3. REFERENCES

- AS/NZS ISO 14001:2004 – Environmental Management Systems – Requirements with guidance for use.
- AS/NZS ISO 14004:2004 – Environmental Management Systems – General guidelines on principles, systems and support techniques.

4. DEFINITIONS

Environment

Environment is defined in ISO14001, 3.6 as: *'Surroundings in which an organisation operates, including air, water, land, natural resources, flora, fauna, humans and their interrelation.'*

Environmental Aspect

An environmental aspect is defined in ISO14001, 3.6 as: *'An element of the organisation's activities, products or services which can interact with the environment.'*
NOTE: A significant environmental aspect has or can have a significant environmental impact.

Environmental Impact

An environmental impact is defined in ISO14001, 3.6 as: *'Any change to the environment whether adverse or beneficial, wholly or partially resulting from an organisation's environmental aspects'.*

Legal Requirements
Conditions essential by law that are imposed on a company's activities, products or services including international, national, state and local government legal requirements, contractual agreements with public authorities, customers.

Other Requirements
Conditions not essential by law that can apply to a company's activities, products or services such as voluntary programs, guidelines, codes of practice, Australian Standards or industry standards.

5. PROCEDURE

Legal and other requirements may require identification under a number of circumstances. Trigger mechanisms include:

- The annual EMP review;
- New or changes to environmental legislation;
- New or changes to a process/operation at the site;
- New contractual arrangements; and
- New voluntary agreements or corporate policy.

The broad legal requirements that may apply, what it applies to and the relevant regulatory authorities are listed in the following table:

Legal Requirement	Applies to	Regulatory Authority
Protection of the Environment Operations Act,1997 & Regulations	• Licensing of scheduled activities. • Environmental Emissions such as air, water, noise & waste. • Pollution Incident Response Management Plans for EPL holders.	NSW EPA for Licensed premises
Waste Avoidance and Resource Recovery Act,1997	Waste	NSW EPA
Environmental Planning and Assessment Act, 1979	Environmental Planning (ie: development applications)	Penrith City Council Department of Planning & Infrastructure
Waste Classification Guidelines	Waste	NSW EPA
Water Management Act, 2000	Water Control Approvals	NSW Office of Water

The Government of New South Wales Legislation home page located at http://www.legislation.nsw.gov.au/ contains NSW legislation in force, both Acts and statutory instruments (regulations etc and environmental planning instruments). These are constantly consolidated and kept up-to-date in the "in-force" database.

Other internet pages that may be of use include:

- NSW EPA website: http://www.epa.nsw.gov.au/
- Penrith City Council website: http://www.penrithcity.nsw.gov.au/
- Standards Australia: http://www.standards.com.au
- NSW Office of Water: http://www.water.nsw.gov.au/

Checklist for identification of legal or other requirements relating to a new or change in process / operation and new or change to legislation.

- Identify the activity / process to be undertaken according to the procedure for identifying aspects and impacts and determining significance. It is important to have a thorough understanding of the process, what it involves and any implications it may have on the environment.

- Determine the legal or other requirements that may apply by considering aspects and potential impacts of the activity and the following:
  - Are there specific contractual clauses which relate to environmental management requirements?
  - Will dangerous goods to be used? If so what classes / quantities / msds would be helpful. Dangerous Goods legislation would apply. Changes to or requirements for a notification to WorkCover may be required.
  - Is development consent required? This can be determined using the POEO Act or by seeking advice of Council or an environmental consultant. If development consent is required, a development application will need to be made and the development will need to comply with relevant planning laws. These can be identified by contacting council or at http://www.penrithcity.nsw.gov.au/ the planning website: http://www.planning.nsw.gov.au/
  - Will the process / activity generate any waste? If so this waste will need to be assessed according to the NSW EPA's Waste Classification Guidelines. What quantity of waste is anticipated? This may require licensing under the POEO Act.
  - Will the process generate or change the quantity or nature of wastewater? Changes to or requirements for a Tradewaste Agreement may be required. Sydney Water can be contacted for advice regarding modifications to the permit.
  - Will the process generate noise emissions? If so, an application for an environmental licence may be required.
  - Will the process generate air emissions? If so, an application for an environmental licence may be required.
  - Will other requirements apply such as new contractual arrangements, voluntary agreements / codes, corporate requirements (ie: new policy, triple bottom line reporting)?
  - Applicable Australian standards / Codes of Practice or Guidelines are likely to be referenced in legislation that applies to the process.

- Further assistance can be obtained by contacting the relevant regulatory authority or seeking advice from an independent environmental consultant.

NO:	AP1.8	DATE:	August 13
PREPARED BY:	Benbow Environmental	ISSUE NO.:	1

SUBJECT: 1.8 INTERNAL ENVIRONMENTAL AUDITS

1. PURPOSE

The purpose of this procedure is to set out the process relating to internal and external auditing of site operations in relation to the organisations environmental aspects and EMP.

2. RESPONSIBILITIES

- Production Manager
- Environmental Manager
- Staff with specific environmental responsibilities

3. REFERENCES

- AS/NZS ISO 14001:2004 Environmental management systems – requirements with guidance for use.
- AS/NZS ISO 19011:2003 Guidelines for Quality and/or Environmental Management Systems Auditing.

4. DEFINITIONS

Internal Audit

According to AS/NZS ISO 14001: Systematic, independent and documented process for obtaining audit evidence and evaluating it objectively to determine the extent to which the environmental management system audit criteria set by the organisation are fulfilled.

5. PROCEDURE

An audit of the EMP shall be conducted on a regular basis. During the first two years of implementation this should be conducted at least quarterly. The objective of the audit shall be to assess site compliance to the Environmental Management Plan. A site-specific checklist could be developed to assist in undertaking the audits. It is recommended that external consultants conduct a review of the audit every 2 years.

Internal environmental systems audits shall be undertaken. The audit shall encompass the assessment of the following:

- Assess the effectiveness of the Environmental Management System as a whole, and the procedures used in the application of the system;
- Review of Monitoring Program results and/or reports for non-conformances, and records of corrective and preventive actions on areas of non-compliance to the Environmental Management Plan. Assessment of the adequacy of these actions;
- Degree of conformance to nominated procedures, and review of complaint register;
- Identification of areas of the system which could be improved, and identifying where possible missing procedures, procedures which require updating, documentation which could be simplified, or other target areas;
- Overall commitment to, and implementation of, the Environmental Management Plan;
- Updates in industry best practice;
- Changes in legislation;
- Annual set of objectives/target; and
- Revisions to objectives/targets due to Regional or Global initiatives by Government.

Attachment 3: Determination of Development Application 12/0539.

PENRITH CITY COUNCIL
Serving Our Community

DETERMINATION OF DEVELOPMENT APPLICATION

P E N R I T H C I T Y C O U N C I L

DESCRIPTION OF DEVELOPMENT

DA No.	DA12/0539
Description of development	Extension of Hardstand Area & Associated Land Filling
Classification of development	The classification of the building(s) forming part of this consent is as follows: ▪ N/A

DETAILS OF THE APPLICANT

Name & Address	Claron Consulting Pty Ltd PO Box 115 CASTLE HILL NSW 1765

NOTES

1. Your attention is drawn to the attached conditions of consent in attachment 1.
2. You should also check if this type of development requires a construction certificate in addition to this development consent.
3. It is recommended that you read the Advisory Note enclosed with this consent.

DETAILS OF THE LAND TO BE DEVELOPED

Legal Description:	Lot 1 DP 747153
Property Address:	126 Andrews Road PENRITH NSW 2750

DECISION OF CONSENT AUTHORITY

Was a Commission of Inquiry held for the development? NO

In accordance with Section 81(1) (a) of the Environmental Planning and Assessment Act 1979, consent is granted subject to the conditions listed in attachment 1.

Date from which consent operates	This consent commences on expiration of 28 days from 30 April 2013 in accordance with Section 83 of the Environmental Planning and Assessment Act.
Date the consent expires	23 April 2016
Date of this decision	23 April 2013

Please note that this consent will lapse on the expiry date unless the development has commenced in that time.

OTHER APPROVALS

APPROVAL BODIES:

APPROVAL BODY NAME	DATE OF GENERAL TERMS OF APPROVAL	REF. NO.	NO. OF PAGES	RELEVANT LEGISLATION
Department of Primary Industries Office of Water	04 March 2013	10 ERM2012/0568	5	Water Management Act 2000

The approval bodies listed above have provided General Terms of Approval for this development in accordance with the relevant legislation. A copy of these General Terms of Approval is provided with this development consent notice. Compliance with the relevant State Government departments' General Terms of Approval are required in conjunction with the following conditions listed in Attachment 1: Conditions of Consent issued by Penrith City Council.

RIGHTS OF APPEAL

1. The applicant may request Council to review its determination pursuant to Section 82A of the Environmental Planning and Assessment Act 1979 within 6 months of receiving this Notice of Determination.

   You cannot make this request if the development is Designated Development, Integrated Development, or State Significant development.

2. If a written objection was made in respect to the Application for Designated Development, the objector can appeal against Council's decision to the Land and Environment Court within 28 days after the date of this Notice. The objector cannot appeal if a Commission of Inquiry was held.

3. If the applicant appeals against Council's decision, objector(s) will be given a notice of the appeal and the objector(s) can apply to the Land and Environment Court within 28 days after the date of this appeal notice to attend the appeal and make submissions at that appeal.

4. An appeal to the Land and Environment Court is made by lodging an application to the Court in accordance with the Rules of the Court.

REASONS

The conditions in the attached schedule have been imposed for the following reasons:

- To ensure compliance with the terms of the relevant Planning Instrument.
- To ensure that no injury is caused to the existing and likely future amenity of the neighbourhood.
- Due to the circumstances of the case and the public interest.
- To ensure that adequate road and drainage works are provided.
- To ensure that satisfactory arrangements are made to satisfy the increased demand for public recreation facilities.
- To ensure that access, parking and loading arrangements will be made to satisfy the demands created by the development.
- To ensure the structural integrity of the development.
- To ensure the protection of the health and safety of the occupants of the development.

POINT OF CONTACT

If you have any questions regarding this consent you should contact:

Assessing officer	Mahbub Alam Environmental Planner
Contact telephone number	(02) 4732 7693

SIGNATURE

Name Mahbub Alam

Signature 

For the Development Services Manager

ATTACHMENT 1: CONDITIONS OF CONSENT

GENERAL

1 The development must be substantially in accordance with the following plans:

Description	Drawing No	Drawn By	Date
Detail and Contour Survey	X11354-S2	Brown Smart Consulting	05/10/2012
Concrete Hardstand and Wetland Plan	112354.W SK901, Rev-01	Brown Smart Consulting	31/10/2012
Locality Plan	000, Revision: 02	Brown Smart Consulting	-
General Layout Plan	001, Revision: 02	Brown Smart Consulting	10/12/2012
Earthworks and Drainage Plan, Sheet 1 of 2	101, Revision: 02	Brown Smart Consulting	10/12/2012
Earthworks and Drainage Plan, Sheet 2 of 2	102, Revision: 02	Brown Smart Consulting	10/12/2012
Sections	103, Revision: 02	Brown Smart Consulting	10/12/2012
Erosion and Sediment Control Plans and Details	201, Revision: 02	Brown Smart Consulting	10/12/2012
Landscape Plan (sheet 1/3, sheet 2/3 and sheet 3/3)	Issue - B	BioDesign and Associates Pty Ltd	22/04/13
Waste Management Plan	-	Claron Consulting Pty Ltd	-

and any supporting information received with the application, except as may be amended in red on the attached plans and by the following conditions.

2 **The development shall not be used or occupied until an Occupation Certificate has been issued.**

3 A **Construction Certificate** shall be obtained prior to commencement of any building works.

4 This consent does not grant approval for the use of the site. Any future use of the site is subject to separate approval or must rely on an existing valid/operational consent.

5 The applicant shall comply with the conditions contained in the General Terms of Approval issued by the NSW Office of Water Reference 10 ERM2012/0568, dated 04 March 2013. In this regard, a Controlled Activity Approval shall be obtained prior to the issue of a Construction Certificate.

DEMOLITION

6 All demolition works are to be conducted in accordance with the provisions of AS 2601-1991 "The Demolition of Structures". **Prior to demolition**, all services shall be suitably disconnected and capped off or sealed to the satisfaction of the relevant service authority requirements.

All demolition and excavated material shall be disposed of at a Council approved site or waste facility. Details of the proposed disposal location(s) of all excavated material from the development site shall be provided to the Principal Certifying Authority **prior to commencement of demolition.**

7 You should read Council's Fact Sheet titled "Handling and Disposal of Fibrous Cement Products" **before any demolition works commence on the site.**

Prior to commencement of demolition works on site, a portaloo with appropriate washing facilities shall be located on the site and the Principal Certifying Authority is to be satisfied that:

- Measures are in place so as to comply with the WorkCover Authority's "Short Guide to Working with Asbestos Cement" and
- The person employed to undertake the works is a licensed asbestos removal contractor and is holder of a current WorkCover Asbestos Licence.

Any demolition works involving the removal of all asbestos shall only be carried out by a licensed asbestos removal contractor who has a current WorkCover Asbestos Licence.

All asbestos laden waste, including asbestos cement flat and corrugated sheeting must be disposed of at a tipping facility licensed by the Environmental Protection Authority to receive asbestos wastes.

8 Dust suppression techniques are to be employed during demolition to reduce any potential nuisances to surrounding properties.

9 Mud and soil from vehicular movements to and from the site must not be deposited on the road.

10 Demolition works will be restricted to the following hours in accordance with the NSW Environment Protection Authority Noise Control Guidelines:

- Mondays to Fridays, 7am to 6pm
- Saturdays, 7am to 1pm if inaudible on neighbouring residential premises, otherwise 8am to 1pm
- No demolition work is permitted on Sundays and Public Holidays.

In the event that the demolition relates to works inside the building and do not involve external walls or the roof, and do not involve the use of equipment that emits noise then the demolition works are not restricted to the hours stated above.

The provisions of the Protection of the Environment Operations Act, 1997 in regulating offensive noise also apply to all construction works.

ENVIRONMENTAL MATTERS

11 Erosion and sediment control measures shall be installed **prior to the commencement of works on site** including approved clearing of site vegetation. The erosion and sediment control measures are to be maintained in accordance with the approved erosion and sediment control plan(s) for the development and the Department of Housing's "Managing Urban Stormwater: Soils and Construction" 2004.

(Note: To obtain a copy of the publication, you should contact Landcom on (02) 98418600).

The approved sediment and erosion control measures are to be installed **prior to and maintained throughout the construction phase of the development until the land, that was subject to the works, has been stabilised and grass cover established.** These measures shall ensure that mud and soil from vehicular movements to and from the site does not occur during the construction of the development.

12 No fill material is to be imported to the site without the prior approval of Penrith City Council in accordance with Sydney Regional Environmental Plan No.20 (Hawkesbury-Nepean River) (No.2-1997). No recycling of material for use as fill material shall be carried out on the site without the prior approval of Council.

13 All waste materials stored on-site are to be contained within a designated area such as a waste bay or bin to ensure that no waste materials are allowed to enter the stormwater system or neighbouring properties. The designated waste storage areas shall provide at least two waste bays / bins so as to allow for the separation of wastes, and are to be fully enclosed when the site is unattended.

14 All excavated material and other wastes generated as a result of the development are to be re-used, recycled or disposed of in accordance with the approved waste management plan.

Waste materials not specified in the approved waste management plan are to be disposed of at a lawful waste management facility. Where the disposal location or waste materials have not been identified in the waste management plan, details shall be provided to the Certifying Authority as part of the waste management documentation accompanying the Construction Certificate application.

All receipts and supporting documentation must be retained in order to verify lawful disposal of materials and are to be made available to Penrith City Council on request.

15 The operating noise level of plant and equipment shall not exceed 5dB(A) above the background noise level when measured at the boundaries of the premises. The provisions of the Protection of the Environment Operations Act 1997 apply to the development, in terms of regulating offensive noise.

CONSTRUCTION

16 Stamped plans, specifications, a copy of the development consent, the Construction Certificate and any other Certificates to be relied upon shall be available on site at all times during construction.

The following details are to be displayed in a maximum of 2 signs to be erected on the site:

- the name of the Principal Certifying Authority, their address and telephone number,
- the name of the person in charge of the work site and telephone number at which that person may be contacted during work hours,
- that unauthorised entry to the work site is prohibited,
- the designated waste storage area must be covered when the site is unattended, and
- all sediment and erosion control measures shall be fully maintained until completion of the construction phase.

Signage but no more than 2 signs stating the above details is to be erected:

- at the commencement of, and for the full length of the, construction works onsite, and
- in a prominent position on the work site and in a manner that can be easily read by pedestrian traffic.

All construction signage is to be removed **when the Occupation Certificate has been issued for the development.**

17 **Prior to the commencement of construction works**:

(a) Toilet facilities at or in the vicinity of the work site shall be provided at the rate of one toilet for every 20 persons or part of 20 persons employed at the site. Each toilet provided must be:

- a standard flushing toilet connected to a public sewer, or
- if that is not practicable, an accredited sewage management facility approved by the council, or
- alternatively, any other sewage management facility approved by council.

(b) All excavations and backfilling associated with the erection or demolition of a building must be executed safely and in accordance with the appropriate professional standards. All excavations associated with the erection or demolition of a building must be properly guarded and protected to prevent them from being dangerous to life or property.

(c) If an excavation associated with the erection or demolition of a building extends below the level of the base of the footings of a building on an adjoining allotment of land, the person causing the excavation to be made:

- must preserve and protect the building from damage, and
- if necessary, must underpin and support the building in an approved manner, and
- must, at least 7 days before excavating below the level of the base of the footings of a building on an adjoining allotment of land, give notice of intention to do so to the adjoining allotment of land and furnish particulars of the excavation to the owner of the building being erected or demolished. The owner of the adjoining allotment of land is not liable for any part of the cost of work carried out for the purposes of this condition, whether carried out on the allotment of land being excavated or on the adjoining allotment of land, (includes a public road and any other public place).

(d) If the work involved in the erection or demolition of a building is likely to cause pedestrian or vehicular traffic in a public place to be obstructed or rendered inconvenient, or involves the enclosure of a public place, a hoarding or fence must be erected between the work site and the public place:

- if necessary, an awning is to be erected, sufficient to prevent any substance from, or in connection with, the work falling into the public place,
- the work site must be kept lit between sunset and sunrise if it is likely to be hazardous to persons in the public place, and any such hoarding, fence or awning is to be removed when the work has been completed.

18 Construction works or subdivision works that are carried out in accordance with an approved consent that involve the use of heavy vehicles, heavy machinery and other equipment likely to cause offence to adjoining properties shall be restricted to the following hours in accordance with the NSW Environment Protection Authority Noise Control Guidelines:

- Mondays to Fridays, 7am to 6pm
- Saturdays, 7am to 1pm if inaudible on neighbouring residential premises, otherwise 8am to 1pm
- No work is permitted on Sundays and Public Holidays.

Other construction works carried out inside a building/tenancy and that do not involve the use of equipment that emits noise are not restricted to the construction hours stated above.

The provisions of the Protection of the Environment Operations Act, 1997 in regulating offensive noise also apply to all construction works.

ENGINEERING

19 All roadworks, drainage works and dedication, required to effect the consented development shall be undertaken at no cost to Penrith City Council.

20 Any Construction Certificate issued by the Principal Certifying Authority or Certifying Authority shall incorporate plans and details for erosion and sediment control in accordance with the Department of Housing's "Managing Urban Stormwater: Soils and Construction" 2004.

21 The stormwater drainage system shall be provided generally in accordance with the concept plan/s lodged for development approval, prepared by Brown Smart Consulting, reference number X11354.W, Dwg. Nos 000, 001, 101, 102, 103, 201, revision 2, dated 10 December 2012.

The proposed development and stormwater drainage system shall be designed to ensure that stormwater runoff from upstream properties is conveyed through the site without adverse impact on the development or adjoining properties.

Engineering plans and supporting calculations for the stormwater drainage system are to be prepared by a suitably qualified person and shall accompany the application for a Construction Certificate.

Prior to the issue of a Construction Certificate, the Certifying Authority shall ensure that the stormwater drainage system has been designed in accordance with Penrith City Council's Design Guidelines and Construction Specification for Civil Works.

22 Stormwater runoff from parking, uncovered paved areas shall be directed to a stormwater pre-treatment system. The treatment devices shall be designed to remove expected pollutant loadings in accordance with the Department of Environment, Climate Change & Water's 'Managing Urban Stormwater - Environmental Targets / Treatment Techniques - October 2007' publication.

Any Construction Certificate issued by the Principal Certifying Authority or Certifying Authority shall incorporate:

- Specification & installation details of the stormwater pre-treatment system.
- The approval of an operation and maintenance manual / schedule for the proposed device.

A copy of the approved operation and maintenance manual/ schedule shall be submitted to Penrith City Council with notification of the Construction Certificate issue.

23 **Prior to the issue of a Construction Certificate,** the Certifying Authority shall ensure that the proposed development is compatible with the recommendations of the Flood Report prepared by Brown Smart Consulting, reference number X11354.W, revision 2, dated 10 December 2012.

Details prepared by a qualified person, demonstrating compliance with this report, shall form part of any Construction Certificate issued.

24 **Prior to the commencement of works on site**, including approved clearing of site vegetation, erosion and sediment control measures shall be installed. The erosion and sediment control measures are to be installed in accordance with the approved erosion and sediment control plan(s) for the development and the Department of Housing's "Managing Urban Stormwater: Soils and Construction" 2004.

25 Erosion and sediment control measures shall remain in place and be maintained until all disturbed areas have been rehabilitated and stabilised.

26 **Prior to the issue of an Occupation Certificate**, the Principal Certifying Authority shall ensure that all works within the road reserve have been inspected and approved by Penrith City Council.

27 After completion of all civil works, works-as-executed drawings and compliance documentation shall be submitted to the Principal Certifying Authority in accordance with Penrith City Council's Design Guidelines and Construction Specification for Civil Works.

An original set of works-as-executed drawings and copies of compliance documentation shall also be submitted to Penrith City Council with notification of the issue of the Occupation Certificate where Council is not the Principal Certifying Authority.

28 Prior to the issue of an Occupation Certificate, the Principal Certifying Authority shall ensure that the:

a) Stormwater pre-treatment system/s

- Have been satisfactorily completed in accordance with the approved Construction Certificate and the requirements of this consent.
- Have met the design intent with regard to any construction variations to the approved design.
- Any remedial works required to been undertaken have been satisfactorily completed.

Details of the approved and constructed system/s shall be provided as part of the works-as-executed drawings.

29 Prior to the issue of an Occupation Certificate, a restriction as to user and positive covenant relating to the:

a) Stormwater pre-treatment system/s

shall be registered on the title of the property. The restriction as to user and positive covenant shall be in Penrith City Council's standard wording as detailed in Penrith City Council's Design and Construction Guidelines and Construction Specification for Civil Works.

LANDSCAPING

30 All landscape works are to be constructed in accordance with the stamped-approved landscape concept plan (except as may be amended in red on the plan and by the conditions of this consent) and Sections C6 "Landscape Design", and F5 "Technical Information" of Penrith Council's Development Control Plan 2010.

Landscaping shall be maintained:

- in accordance with the approved plan, and
- in a healthy state, and in perpetuity by the existing or future owners and occupiers of the property.

If any of the vegetation comprising that landscaping dies or is removed, it is to be replaced with vegetation of the same species and, to the greatest extent practicable, the same maturity as the vegetation which died or was removed.

31 All trees that are required to be retained as part of the development are to be protected in accordance with the minimum tree protection standards prescribed in Sections C6 "Landscape Design" and F5 "Technical Information" of Councils Development Control Plan 2010.

32 No trees are to be removed, ringbarked, cut, topped or lopped or wilfully destroyed (other than those shown on the approved plans) without the prior consent of Penrith City Council and in accordance with Council's Tree Preservation Order and Policy.

33 Existing landscaping is to be retained and maintained at all times.

34 The recommendations of the Arborist's Statement prepared by Susan Hobley, BioDesign & Associates, dated 22 April 2013 must be implemented as part of the approved works.

CERTIFICATION

35 **Prior to the commencement of any earthworks or construction works on site**, the proponent is to:

a) employ a Principal Certifying Authority to oversee that the said works carried out on the site are in accordance with the development consent and related Construction Certificate issued for the approved development, and with the relevant provisions of the Environmental Planning and Assessment Act and accompanying Regulation, and

b) submit a Notice of Commencement to Penrith City Council.

The Principal Certifying Authority shall submit to Council an "Appointment of Principal Certifying Authority" in accordance with Section 81A of the Environmental Planning and Assessment Act 1979.

Information to accompany the Notice of Commencement

Two (2) days before any earthworks or construction/demolition works are to commence on site (including the clearing site vegetation), the proponent shall submit a "Notice of Commencement" to Council in accordance with Section 81A of the Environmental Planning and Assessment Act 1979.

36 An Occupation Certificate is to be obtained from the Principal Certifying Authority on completion of all works.

The Certificate shall not be issued if any conditions of this consent, but not the conditions relating to the operation of the development, are outstanding.

A copy of the Occupation Certificate and all necessary documentation supporting the issue of the Certificate is to be submitted to Penrith City Council, if Council is not the Principal Certifying Authority.

Name: Mahbub Alam

Signature:

For the Development Services Manager

Department of Primary Industries
Office of Water

Contact: Gina Potter
Phone: 02 8838 7566
Fax: 02 8838 7554
Email: gina.potter@water.nsw.gov.au
Our ref: 10 ERM2012/0568
Our file: 9056177
Your ref:

The General Manager
Penrith City Council
PO Box 60
Penrith NSW 2751

Attention:

4 March 2013

Dear Sir/Madam

Re: Integrated Development Referral – General Terms of Approval
Dev Ref:
Description of proposed activity: Industrial Building - alterations and additions
Site location: Lot 1 DP747153 126 Andrews Road Penrith

I refer to your recent letter regarding an integrated Development Application (DA) proposed for the subject property. Attached, please find the Office of Water's General Terms of Approval (GTA) for works requiring a controlled activity approval under the *Water Management Act 2000* (WM Act), as detailed in the subject DA.

Please note Council's statutory obligations under section 91A (3) of the *Environmental Planning and Assessment Act 1979* (EPA Act) which requires a consent, granted by a consent authority, to be consistent with the general terms of any approval proposed to be granted by the approval body.

If the proposed development is approved by Council, the Office of Water requests that these GTA be included (in their entirety) in Council's development consent. Please also note the following:

- The Office of Water should be notified if any plans or documents are amended and these amendments significantly change the proposed development or result in additional works on waterfront land (which includes (i) the bed of any river together with any land within 40 metres inland of the highest bank of the river, or (ii) the bed of any lake, together with any land within 40 metres of the shore of the lake, or (iii) the bed of any estuary, together with any land within 40 metres inland of the mean high water mark of the estuary).

- Once notified, the Office of Water will ascertain if the amended plans require review or variation/s to the GTA. This requirement applies even if the proposed works are part of Council's proposed consent conditions and do not appear in the original documentation.

- The Office of Water should be notified if Council receives an application to modify the development consent and the modifications change any activities on waterfront land.

- The Office of Water requests notification of any legal challenge to the consent.

As the controlled activity to be carried out on waterfront land cannot commence before the applicant applies for and obtains a controlled activity approval, the Office of Water recommends the following condition be included in the development consent:

> "The Construction Certificate will not be issued over any part of the site requiring a controlled activity approval until a copy of the approval has been provided to Council".

The attached GTA are not the controlled activity approval. The applicant must apply (to the Office of Water) for a controlled activity approval **after consent** has been issued by Council **and before** the commencement of any work or activity on waterfront land.

Finalisation of a controlled activity approval can take up to eight (8) weeks from the date the Office of Water receives all documentation (to its satisfaction). Applicants must complete and submit (to the undersigned) an application form for a controlled activity approval together with any required plans, documents, the appropriate fee and security deposit or bank guarantee (if required by the Office or Water) and proof of Council's development consent.

Application forms for the controlled activity approval are available from the undersigned or from the Office of Water's website:
www.water.nsw.gov.au Water licensing › Approvals › Controlled activities

The Office of Water requests that Council provide a copy of this letter to the applicant.

The Office of Water also requests that Council provides the Office of Water with a copy of the determination for this development application as required under section 91A (6) of the EPA Act.

Yours Sincerely

Gina Potter
Licensing Officer (Controlled Activities)
Office of Water - Licensing South

General Terms of Approval

for work requiring a controlled activity approval under s91 of the Water Management Act 2000

Our Reference: 10 ERM2012/0568 **File No:** 9056177

Site Address: Lot 1 DP747153 126 Andrews Road Penrith

DA Number:

LGA: Penrith City Council

Number	Condition
Plans, standards and guidelines	
1	These General Terms of Approval (GTA) only apply to the controlled activities described in the plans and associated documentation relating to and provided by Council: (i) Site plan, map and/or surveys **in relation to the proposed hardstand area, associated drainage works and VMP only** Any amendments or modifications to the proposed controlled activities may render these GTA invalid. If the proposed controlled activities are amended or modified the NSW Office of Water must be notified to determine if any variations to these GTA will be required.
2	Prior to the commencement of any controlled activity (works) on waterfront land, the consent holder must obtain a Controlled Activity Approval (CAA) under the Water Management Act from the NSW Office of Water. Waterfront land for the purposes of this DA is land and material in or within 40 metres of the top of the bank or shore of the river identified.
3	The consent holder must prepare or commission the preparation of: (i) Vegetation Management Plan (ii) Works Schedule (iii) Erosion and Sediment Control Plan (iv) Soil and Water Management Plan
4	All plans must be prepared by a suitably qualified person and submitted to the NSW Office of Water for approval prior to any controlled activity commencing. The following plans must be prepared in accordance with the NSW Office of Water's guidelines located at www.water.nsw.gov.au/Water-Licensing/Approvals/default.aspx (i) Vegetation Management Plans (ii) Riparian Corridors (iii) In-stream works (iv) Outlet structures
5	The consent holder must (i) carry out any controlled activity in accordance with approved plans and (ii) construct and/or implement any controlled activity by or under the direct supervision of a suitably qualified professional and (iii) when required, provide a certificate of completion to the NSW Office of Water.
6	The consent holder must carry out a maintenance period of two (2) years after practical completion of all controlled activities, rehabilitation and vegetation management in accordance with a plan approved by the NSW Office of Water.

www.water.nsw.gov.au
Macquarie Tower, 10 Valentine Avenue, Parramatta NSW 2150 PO Box 3720 Parramatta NSW 2124 Australia | t + 61 2 8281 7777 | f + 61 2 8838 7554 I e information@water.nsw.gov.au I ABN 47 661 556 763
170912

Our Reference: 10 ERM2012/0568 **File No:** 9056177

Site Address: Lot 1 DP747153 126 Andrews Road Penrith

DA Number:

LGA: Penrith City Council

Number	Condition
7	The consent holder must reinstate waterfront land affected by the carrying out of any controlled activity in accordance with a plan or design approved by the NSW Office of Water.
8	The consent holder must use a suitably qualified person to monitor the progress, completion, performance of works, rehabilitation and maintenance and report to the NSW Office of Water as required.
9	The consent holder must provide a security deposit (bank guarantee or cash bond) - equal to the sum of the cost of complying with the obligations under any approval - to the NSW Office of Water as and when required.
10	N/A
11	The consent holder must not locate ramps, stairs, access ways, cycle paths, pedestrian paths or any other non-vehicular form of access way in a riparian corridor other than in accordance with a plan approved by the NSW Office of Water.
12-13	N/A
14	The consent holder must ensure that no materials or cleared vegetation that may (i) obstruct flow, (ii) wash into the water body, or (iii) cause damage to river banks; are left on waterfront land other than in accordance with a plan approved by the NSW Office of Water.
15	The consent holder is to ensure that all drainage works (i) capture and convey runoffs, discharges and flood flows to low flow water level in accordance with a plan approved by the NSW Office of Water; and (ii) do not obstruct the flow of water other than in accordance with a plan approved by the NSW Office of Water.
16	The consent holder must stabilise drain discharge points to prevent erosion in accordance with a plan approved by the NSW Office of Water.
17	The consent holder must establish all erosion and sediment control works and water diversion structures in accordance with a plan approved by the NSW Office of Water. These works and structures must be inspected and maintained throughout the working period and must not be removed until the site has been fully stabilised.
18	The consent holder must ensure that no excavation is undertaken on waterfront land other than in accordance with a plan approved by the NSW Office of Water.
19	The consent holder must ensure that any excavation does not result in (i) diversion of any river (ii) bed or bank instability or (iii) damage to native vegetation within the area where a controlled activity has been authorised, other than in accordance with a plan approved by the NSW Office of Water.
20	N/A
21	The consent holder must ensure that the surfaces of river banks are graded to enable the unobstructed flow of water and bank retaining structures result in a stable river bank in accordance with a plan approved by the NSW Office of Water.
22	N/A
23	The consent holder must establish a riparian corridor along the wetland in accordance with a plan approved by the NSW Office of Water.

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Our Reference:	10 ERM2012/0568	**File No:** 9056177
Site Address:	Lot 1 DP747153 126 Andrews Road Penrith	
DA Number:		
LGA:	Penrith City Council	

Number	Condition
END OF CONDITIONS	

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