SEPP 33 - Risk Screening Document

Proposed Expansion works at:

BRS Resource Recovery Facility
16 Kerr Road
INGLEBURN NSW

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BULK RECOVERY SOLUTIONS
16 Kerr Road
INGLEBURN NSW

PURPOSE AND SCOPE OF THIS DOCUMENT

For dangerous goods installation designs where there is proposed storages above minor quantities, an investigation process must be followed in order to assess whether or not a proposal is suitable for a particular site or not. Such sites should be deemed "potentially hazardous" until a detailed risk assessment determines otherwise. The process flow chart is detailed in appendix 1.

NSW State Environmental Planning Policy 33[1], (SEPP 33) is a document published by the NSW Department of Planning which provides guidelines for local government and developers for ensuring that the safety and pollution impacts of an industrial proposal are addressed at an early stage of the development application process. Through this document an assessment procedure is followed which links the permissibility of a proposal to its safety performance. SEPP 33 ensures that only those industrial proposals which are suitably located, and able to demonstrate that they can be built and operated with an adequate level of safety, can proceed[2].

As detailed in SEPP 33 a "*hazardous industry*" is one which poses a significant risk when all locational, technical, operational and organizational safeguards are included.

A "*potentially hazardous industry*" is one which, when all safeguards are operating, imposes a risk level which is significantly lower.

SEPP 33 also incorporates a screening process which will determine whether or not a site is potentially hazardous. If deemed potentially hazardous, a preliminary hazard analysis is required.

Certain activities may involve handling, storing or processing a range of substances which in the absence of locational, technical or operational controls may create an off-site risk or offence to people, property or the environment. Such activities would be defined as potentially hazardous or potentially offensive. SEPP 33 also provides guidelines to assist councils and proponents to establish whether a development proposal would fit into such definitions and hence, come under the provisions of the policy.

The purpose of a PHA is to gain a better understanding of the risks and hazards associated with the site and to provide a reasonable basis for an informed judgment to be made on the acceptability of the site for the proposed development[3]. The PHA will outline in detail possible risks and hazards associated with this site. This will assist council in reaching an informed decision for the proposal.

It is important to note also that this investigation has been carried out by a suitably qualified person who understands the properties of the dangerous goods stored on site and the possible impact they may have on equipment and structures located on and off site. Under state legislation a system must be designed by a suitably qualified person who is experienced in this type of work[4].

REFERENCE AND ASSISTANCE DOCUMENTS

This document has been compiled with guidance from:

- Hazardous Industry Planning Advisory Paper No 4 'Risk Criteria for Land Use Safety Planning'
- Hazardous Industry Planning Advisory Paper No 6. 'Guidelines for Hazard Analysis"
- Hazardous and Offensive Development Application Guideline 'Applying SEPP 33'
- NSW Dept of Planning assessment guidelines "Multi Level Risk Assessment".

SITE DESCRIPTION

LOCATION

The site is an existing Industrial Recycling Facility located at 16 Kerr Road, Ingleburn. The site is located at the end of a dead end street on the North East side of the dead end roundabout. The site is located in an industrial estate with both sites to the north west and south defined as industrial. The site backs on to Henderson Road to the North and Railway to the East.

PROPOSAL

This site is an existing Industrial Recycling Facility with its use not proposed to change. The site proposes to expand their business load by increasing their operational hours and as a result increase their processing of materials. The site plans to expand the number of waste products accepted and increase the tonnes per annum (tpa) processed on site to 225,000 tpa and increase their stockpile of materials on site to 90,000 tonnes.

ON SITE MATERIALS

The site as a Industrial Recycling Facility will store and handle numerous materials with the proposed include:

Solid Waste Types

- Actual acid sulphate soils (ASS and potential acid sulphate soils (PASS)
- Fly ash
- General solid waste non-putrescible
- Grit and screening from sewage treatment systems that have been dewatered so that the grit or screenings do not contain free liquids
- Building and demolition waste
- Foundry sand
- Basalt sand
- Reclaimed asphalt
- Excavated road material
- Recovered aggregate
- Recovered fines
- Recovered glass fines

- Soils contaminated with a substance or waste referred to in Part 1 or 2 of Schedule 1 of POEO (waste)
- Recovered railway ballast
- Slag
- Soils CT1 and CT2
- Plaster board
- Construction and demolition waste
- General or specific exempted waste (RRE)
- Excavated natural material / virgin excavated natural material (ENM/VENM) (transfer only)

Liquid and Muddy Water Waste Types

- Drilling mud and / or muddy waters
- Non-destructive drilling mud (treated and untreated)
- Grease trap waste
- Fire debris and fire wash water (no PFOS and PFAS)
- Sewage sludge and residues including debris and grit
- Asbestos contaminated water with gross pollutants
- Concrete washout water
- Cement slurry
- Waste oil / hydrocarbons
- Waste waters containing organic, inorganic, and emulsified substances
- Industrial waste water putrescible and non-putrescible
- Groundwater (including M250, J100, N160, N250, F100)
- Stormwater including contaminated with gross pollutants
- Waste water system grit and screenings from projects general solid waste (putrescible)
- Leachate
- Oily waters J120
- Asbestos containing drill mud and or waters from drilling operations and non-destructive digging
- Grit Screenings including gross pollutants and free liquid
- Product destruction
- Waste ink, dye, pigment, paint, lacquer and varnish (transfer only)
- Containers and drums containing controlled waste, oil and kerosene (transfer only)

SEPP 33 RISK SCREENING

PRELIMINARY

The screening method set out in Applying SEPP 33 (Department of Planning, 2011) provides the first step in the analysis. The screening method is based on broad estimates of the possible off-site effects or consequences from hazardous materials present on site, taking into account locational characteristics.

If the quantity/distance is less than the screening threshold, then no further analysis is necessary. The safety management regime in this case relies on observance of the requirements of engineering codes and standards.

If the quantities/distances exceed the screening threshold, further analysis is necessary.

HAZARDOUS MATERIAL STORAGE

As defined within the Department of Plannings Applying SEPP 33 documentation the Risk Screening process is based on the notion of Hazardous Materials being present on site. As outlined within this document Hazardous Materials that are covered and to be assessed under the SEPP 33 documentation must be classified as a Dangerous Good with by the Australian Code for Transportation of Dangerous Goods by Road and Rail (Dangerous Goods Code)" (otherwise known as the ADG Code).

Below summarizes an itemised assessment of the storages proposed for this site.

Solid Waste Types

- Actual acid sulphate soils (ASS and potential acid sulphate soils (PASS)
  Acid sulphate soil (ASS) is the common name given to soils and sediments containing iron sulfides. Acid sulphate soil is not defined as a Dangerous Good under the ADG Code
- Fly ash
  Fly ash is a by product of coal combustion and is not defined as a Dangerous Good under the ADG Code
- General solid waste non-putrescible
  General solid waste categorises an assortment of items such as glass, plastics, plasterboard, paper, bricks, garden waste just to name a few. This category of items are not defined as Dangerous Goods under the ADG Code
- Grit and screening from sewage treatment systems that have been dewatered so that the grit or screenings do not contain free liquids
  Dewatered grit and screening from sewage treatment systems are not defined as Dangerous Goods under the ADG Code
- Building and demolition waste
  Building and demolition waste will be a mixture of steel, timber, concrete and similar. These items are not defined as Dangerous Goods under the ADG Code.
- Foundry sand
  Sand is an inert material. It is not defined as Dangerous Goods under the ADG Code
- Basalt sand
  Basalt sand is an inert material. It is not defined as Dangerous Goods under the ADG Code
- Reclaimed asphalt
  Reclaimed asphalt is not defined as Dangerous Goods under the ADG Code
- Excavated road material
  Excavated Road Material is not defined as Dangerous Goods under the ADG Code
- Recovered aggregate
  Recovered aggregate is not defined as Dangerous Goods under the ADG Code
- Recovered fines
  Recovered Fines is not defined as Dangerous Goods under the ADG Code
- Recovered glass fines

Recovered glass sand is not defined as Dangerous Goods under the ADG Code

- Soils contaminated with a substance or waste referred to in Part 1 or 2 of Schedule 1 of POEO (waste)
- Recovered railway ballast
  Recovered railway ballast is not defined as Dangerous Goods under the ADG Code
- Slag
  Slag is not defined as Dangerous Goods under the ADG Code
- Soils CT1 and CT2
  Soils with a CT1 and CT2 classification are contamination grades assigned to the soil. Soils (CT1 and CT2) are not defined as Dangerous Goods under the ADG Code
- Plasterboard
  Plasterboard is not defined as Dangerous Goods under the ADG Code.
- Construction and demolition waste
  Construction and demolition waste will be a mixture of steel, timber, concrete and similar. These items are not defined as Dangerous Goods under the ADG Code.
- General or specific exempted waste (RRE)
  General or specific exempted waste (RRE) are not defined as Dangerous Goods under the ADG Code
- Excavated natural material / virgin excavated natural material (ENM/VENM) (transfer only)
  Excavated natural material/virgin excavated natural material are not defined as Dangerous Goods under the ADG Code

Liquid and Muddy Water Waste Types

- Drilling mud and / or muddy waters
  Drilling mud as a byproduct of exploration type works is not defined as a Dangerous Good under the ADG Code
- Non-destructive drilling mud (treated and untreated)
  Digging Waste as a majority will be soil is an inert material and is not defined as a Dangerous Good under the ADG Code
- Grease trap waste
  Grease trap waste is not defined as a dangerous Good under the ADG Code
- Fire debris and fire wash water (no PFOS and PFAS)
  Fire debris and fire wash water (no PFOS and PFAS) is not defined as a dangerous Good under the ADG Code. The debris and water will be required to undergo any number of treatment depending on the contaminates.
- Sewage sludge and residues including debris and grit
  Sewage sludge is not defined as Dangerous Goods under the ADG Code
- Asbestos contaminated water with gross pollutants
  Asbestos contaminated water with gross pollutants is not defined as Dangerous Goods under the ADG Code. Asbestos whilst a known carcinogen is not itself a Dangerous Goods
- Concrete washout water

Concrete is an inert material and not defined as a Dangerous Good under the ADG code.

- Cement slurry
  Cement is an inert material and not defined as a Dangerous Good under the ADG code.
- Waste oil / hydrocarbons
  There is potential that some items within this category may be defined as class 3 flammable liquids under the Dangerous Goods under the ADG Code.
- Waste waters containing organic, inorganic, and emulsified substances
  Waste water is not defined as a dangerous Good under the ADG Code. The groundwater will be required to undergo any number of treatment depending on the contaminates.
- Industrial waste water putrescible and non-putrescible
  Industrial wastewater will contain numerous pollutants but is not defined as Dangerous Goods under the ADG Code
- Groundwater (including M250, J100, N160, N250, F100)
  Groundwater is not defined as a dangerous Good under the ADG Code. The groundwater will be required to undergo any number of treatment depending on the contaminates.
- Stormwater including contaminated with gross pollutants
  Contaminated Stormwater is not defined as a dangerous Good under the ADG Code. The stormwater will be required to undergo any number of treatment depending on the contaminates
- Waste water system grit and screenings from projects general solid waste (putrescible)
  Waste water system grit and screenings from projects general solid waste (putrescible)are not defined as Dangerous Goods under the ADG Code
- Leachate
  Leachate varies widely in composition due to its nature however it is not defined as Dangerous Goods under the ADG Code
- Oily waters J120
  Oily water will contain numerous pollutants but is not defined as Dangerous Goods under the ADG Code
- Asbestos containing drill mud and or waters from drilling operations and non-destructive digging
  Asbestos although a known carcinogen is not defined as Dangerous Goods under the ADG Code
- Grit Screenings including gross pollutants and free liquid
  Grit Screenings including gross pollutants and free liquid are not defined as Dangerous Goods under the ADG Code
- Product destruction
  Material derived from Product destruction is not defined as Dangerous Goods under the ADG Code
- Waste ink, dye, pigment, paint, lacquer and varnish (transfer only)
  There is potential that some items within this category may be defined as class 3 flammable liquids under the Dangerous Goods under the ADG Code.
- Containers and drums containing controlled waste, oil and kerosene (transfer only)

There is potential that some items within this category may be defined as class 3 flammable liquids under the Dangerous Goods under the ADG Code.

As can be seen there are some Dangerous Goods proposed to be stored at this Recycling facility. Of the proposed Dangerou Goods stored they will all be flammable liquids. It is also noted that there are many varying and diverse products that are also proposed with the majority of sites storage not defined as Dangerous Goods under the ADG Code.

HAZARDOUS MATERIALS SUMMARY

Product	Quantity	UN	Class and PG
Hydrocarbons	500 litres	3295	3 PG II, III
Paints, Lacquer, Varnish	500 litres	1263	3 PG II, III
Keroeine, Oil	500 litres	1223	3 PG III

This site is proposed to store at any one time approximately 2000L of a mixture of Class 3 flammable liquids. Due to the nature of the business as a recycling plant varying products and quantities may be received however it is proposed that of the industries that would be accepted these flammable liquids would fall into the category of PG II's. The products that this centre proposes to accept is anticipated to include Paints, Lacquer, Varnish's, Kerosene and Oils.

CALCULATIONS

The screening method set out in Applying SEPP 33 (Department of Planning, 2011) provides the first step in the analysis. The screening method is based on broad estimates of the possible off-site effects or consequences from hazardous materials present on site, taking into account locational characteristics.

If the quantity/distance is less than the screening threshold, then no further analysis is necessary. The safety management regime in this case relies on observance of the requirements of engineering codes and standards. If the quantities/distances exceed the screening threshold, further analysis is necessary.

Table 1 outlines the Screening Methods to be used for the relevant classes stored and the minimum applicable quantities. In this instance as only Class 3 PG II and PG III are proposed to be stored, Figure 9 is to be utilised on the basis that the storage exceeds 5 tonne.

Calculations Summary

In this instance as the proposed storages are estimated to be approximately 1500L and therefore not exceeding the 5 tonne minimum storage, the site is deemed to be not potentially hazardous and the application of SEPP 33 does not apply.

OTHER ASSESSMENT PROCESSES

Whilst it is acknowledged that as there are a significant number of non Dangerous Goods Storages on site that are not incorporated in the SEPP 33 Assessment it does not negate that there are risks associated with these materials. The nature of being an Industrial Recycling facility means that there are numerous hazardous type materials

that will require handling. Below is a list, although not exhaustive, of department approvals and industry guidelines that must be consulted to:

- Council Approvals and Conditions
- Fire Authority Approvals and Conditions
- EPA Approvals and Conditions
- Protection of the Environment Legislation Miscellaneous Amendment Act 2017
- Protection of the Environment Operations Act 2017
- Protection of the Environment Operations (General) Regulation 2009
- Protection of the Environment Operations (Waste) Regulation 2014

CONCLUSION

This proposal has been determined, via the screening methods of the NSW State Environmental Planning Policy 33 (SEPP 33) as being "not potentially hazardous". Due to the sites proposed storages not exceeding the minimum quantities outlined, there is no further assessment required under the NSW State Environmental Planning Policy 33 (SEPP 33).

DOCUMENT REFERENCES

[1] State Environmental Planning Policy 33, Hazardous & Offensive Development Application Guidelines. – Department of Planning NSW, January 2011.
[2] State Environmental Planning Policy 33, Hazardous & Offensive Development Application Guidelines. – Department of Planning NSW. Page 1, 1.2 the policy, last para
[3] State Environmental Planning Policy 33, Hazardous & Offensive Development Application Guidelines. – Department of Planning NSW. Page 9, 4.2
[4] Protection of the Environment Operations (Underground Petroleum Storage Systems) regulation 2014 division 1, clause 5 and 6
[5] State Environmental Planning Policy 33, Hazardous & Offensive Development Application Guidelines. – Department of Planning NSW. Page 18, table 2
[6] State Environmental Planning Policy 33, Hazardous & Offensive Development Application Guidelines. – Department of Planning NSW. Page 15 Definition "Hazardous Materials"

OTHER REFERENCES

Australian Standards:

AS 1940-2017	"The Storage & Handling of Flammable & Combustible Liquids"
AS/NZS 1596-2014	"Storage and Handling of LPG Gas"
AS 4897-2008	"The Design, Installation and Operation of Underground Petroleum Storage Tanks"
AS 3000-2007	"Electrical Wiring Rules".
AS/NZS 60079.10.1-2009	"Classification of Areas. Explosive gas atmospheres". Annex ZA "Examples of Hazardous Area Classification".
AS 2832.2-2003	"Cathodic Protection of Metals – Compact buried structures".
AS 2239-2003	"Galvanic (sacrificial) Anodes for Cathodic Protection".
AS/NZS 3788-2006	"Pressure Equipment – In-service inspection".
AS 4037-1999	"Pressure Equipment – Examination & testing".
AS/NZS 1841.5-2007	"Portable Fire Extinguishers".
AS 2444-2001	"Portable Fire Extinguishers and Fire Blankets". Select. & location.
AS 1692-2006	"Tanks for Flammable and Combustible liquids".

Codes of Practices:
Australian Code for the Transportation of Dangerous Goods by Road and Rail, Seventh edition.
NSW Code of Practice 2005 for Storage & Handling of Dangerous Goods.
NSW Work Health and Safety Act and Regs 2011.

Planning NSW Guidelines:
Hazardous and Offensive Development Application Guidelines - Applying SEPP 33
Hazardous and Offensive Development Application Guidelines - Multi-Level Risk Assessment
Hazardous Industry Planning Advisory Paper No. 4 - Risk Criteria for Land Use Safety Planning
Hazardous Industry Planning Advisory Paper No. 6 - Guidelines for Hazard Analysis
Hazardous Industry Planning Advisory Paper No. 8 - Hazard and Operability Studies

Other Documentation:
Local Authorities requirements, NSW WorkCover and EPA Acts and Regulations.
Equipment Suppliers Specifications, Requirements and Instructions.
Fuel System Specifications and Drawings.
Site Specific drawings and suppliers specifications.

APPENDIX 1

MULTI LEVEL RISK ASSESSMENT FLOW CHART