

Risk Register & Treatment Schedule 2013



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Introduction

This document has been compiled to list and analyse the risks from natural and man caused hazards that may be reasonable expected to impact upon the Shire of Kalamunda Local Government Area. The identification of risk and the treatment of residual risk is a priority for the Shire of Kalamunda through the Local Emergency Management Committee.

Climate change

Participants were advised that throughout their deliberations as to likelihood that a particular source of risk may impact on the Kalamunda community and the likely consequence of such impact on the various elements at risk as detailed in figure 1 they should consider the effects of climate change in line with the following statement:

"There is broad scientific agreement that human activities that emit greenhouse gases have begun to change climate patterns globally and regionally; that they will continue to do so; and that some level of further climate change impacts are now inevitable. There is a need therefore to ensure that all Local Government decisions and plans consider climate change and appropriately take into account the predicted impacts and risks associated with projected climate changes.

Natural hazards and disasters are likely to be increased in both frequency and severity by climate change. So in considering the risks that climate change might pose to Local Government there is also a need to consider increased cost burden and legal liability."

Risk evaluation criteria

Risk evaluation criteria established under Stage 2 of the AWARE project were resubmitted to the workshop for review. The criteria serves to establish the community priorities based on the criteria; people, infrastructure, economy, public administration, environment and social/cultural.

Priority	Scope	Criteria
1	People: Loss of life or serious injury including near misses	Any reasonably preventable accident or incident that causes or is likely to cause death, serious injury or affects the health and wellbeing of people is unacceptable
2	Infrastructure: Including local government infrastructure, public amenities and lifelines	Any reasonably preventable accident or incident that results in substantial loss or damage to infrastructure is unacceptable
3	Public Administration: Includes local government's ability to cope with the situation and deliver services	Any reasonably preventable accident or incident that results in the loss or reduction in the capacity of the public administration to deliver normal services is unacceptable
4	Economy: Includes private business, local industry and employment	Any reasonably preventable accident or incident that affects the economy of the community is unacceptable
5	Environment: Includes damage to sensitive ecological areas and fauna	Any Reasonably preventable accident or incident that results in damage to or loss of sensitive ecosystems and fauna is unacceptable
6	Social/cultural: Includes the loss of community icons and community identity	Any reasonably preventable accident or incident that results in the disruption of the social and cultural setting of the community is unacceptable

Figure 1: Risk Evaluation Criteria

Sources of Risk

Sources of risk to which the Western Australian community may be exposed are identified and dealt with by way of State Emergency Management Plans (Westplans). The Kalamunda community has identified that the following sources of risk are likely to impact on the local community.

SOURCE OF RISK : Bush Fire

Description:

Bush fire occurs within all areas of the Shire. The fire behaviour can range from very mild to extremely unpredictable, dependent upon fuel loads, weather, topography, etc. The most severe fires occur from October through to April. There may be limited notification to the community at the initial stages of a fire with the duration and impact being unpredictable. There is continual public awareness regarding the consequences and reduction methods for bush fire throughout the State every year and locally by the Shire. Hazard reduction work is required to be undertaken prior to December and maintained by property owners from December through to March every year. The Bush Fires Act 1954 legislates for the control of bush fires. Local Government provided urban planning outcomes to reduce the risk to private residences from the threat of bush fire.

SOURCE OF RISK : Structure Fire

Description:

Structure fires occur occasionally within the Shire of Kalamunda with varying degrees of damage incurred. The fires can involve both commercial and private residential structures and can occur at any time. Structure fires can begin from a source within the structure (e.g. candle in a house, chemical reaction in a factory, etc) or from an external source (e.g. bush fires or other structure fires etc). They are generally isolated incidents though they may cause some impact on external structures. Structure fires may be caused by the structure being in the path of a bush fire or as the result of ember attack. Structure fires can become very intense extremely quickly, dependent upon fuel availability and type, weather conditions, etc and may be controlled very quickly or can burn over a number of days dependent upon the fuel source.

DFES and the Shire of Kalamunda promote community awareness promotions (e.g. candle education, installation of smoke alarms, etc). Synergy also promotes electrical appliance safety programs in the community. The Building Code of Australia provides acceptable standards of structural sufficiency and safety (including safety from fire).

SOURCE OF RISK : Severe Storm**Description:**

Storms can affect the whole of the Shire of Kalamunda on an annual basis and can occur throughout the year and are usually associated with abnormal weather patterns. Severe storms are generally to be expected during the winter months between June and August but can occur at other times of year as a result of cyclonic activity in the north of the State. During severe storms, wind gusts can exceed 100km/h and cause widespread damage to private dwellings, industrial and commercial properties and local government infrastructure.

The Bureau of Meteorology (BoM) produces daily weather forecasts and predictions for public awareness. Public awareness is also undertaken by the media and DFES by promoting reduction messages and education. The Shire of Kalamunda undertakes drainage maintenance to reduce the risk of localised flooding. The Shire conducts tree lopping around power lines and has curb side rubbish collection to reduce the incidence of loose materials during the winter season.

SOURCE OF RISK : Road Transport Emergency**Description:**

The Shire of Kalamunda has an extensive road network maintained by the Shire and Main Roads WA. The roads are utilised by private and commercial vehicles, with the main arterial roads being, Abernethy Road, Kalamunda Road, Welshpool Road, Tonkin Highway and Roe Highway. These roads carry a wide variety of vehicles ranging from heavy transport vehicles carrying a variety of goods including livestock and hazardous materials to private vehicles and passenger coaches at all times of the day and night. Though large scale road transport emergencies are relatively uncommon, these main arterial roads in many cases are adjacent to residential and commercial areas and may pose a threat to the safety of the community.

Driver education and management (e.g. fatigue, drugs, etc) and vehicle maintenance policies developed by and enforced by transport companies go a long way to reducing the incidence of road transport emergencies. Road maintenance and upgrading programs by State and local governments ensure that the road network is as safe as reasonably practicable. The declaration of specific routes for special classes of vehicles (e.g. hazardous materials and road trains, etc) ensures the likelihood of conflict with other road users is reduced. The Department for Planning and Infrastructure addresses issues by monitoring and keeping nationally consistent compliance across the road transport industry. WAPol conducts road safety education and enforcement programs.

SOURCE OF RISK : Agricultural Disease**Description:**

The Shire of Kalamunda is host to large fruit producing areas being the second largest apple producing area in the State. Agricultural diseases have been detected in the area occasionally, though the direct impact on the community is unknown. Agricultural diseases can occur at any time of the year and are spread by a variety of sources including animals and human activity. Dieback in native forests is a potentially devastating disease and is spread by animals (wild pigs), human contact and vehicle movement in protected areas.

The Department of Agriculture and Food has strict guidelines and policies in place that govern and inform the agricultural industry of best practice and expected threats. The Department of Environment and Conservation monitor quarantined State forest areas.

SOURCE OF RISK : Air Transport Emergency**Description:**

The Perth domestic and international airports are located on the western boundary of the Shire of Kalamunda. There are designated flight paths over the Shire and a designated crash zone located in the eastern part of the Shire. Air transport emergencies are rare, the last recorded incident impacting upon the Shire of Kalamunda located on the area of the Zig Zag in Gooseberry Hill. The movement and volume of air traffic has increased dramatically over the years which carries an increased risk of an air transport emergency occurring at any time of the day or night throughout the year. Should an air crash occur, the impact on the community would vary dependent upon where the crash site was located. Most air crash incidents occur during takeoff or landing.

SOURCE OF RISK : Hazardous Materials**Description:**

The movement of hazardous materials occurs at all times of the year. The use and storage of chemicals on agricultural land and in commercial facilities is wide spread. Due to the amount of hazardous materials transported through and being used within the Shire, there is concern that an incident involving the interaction between hazardous materials and certain aspects of the community could occur. As hazardous materials in various forms are used on a daily basis throughout the Shire, the impact of an incident would have varying consequences on the community, the environment dependent upon the hazardous materials involved, the size or scope of the incident and the area in which it occurs. There are records of hazardous materials incidents of a minor nature occurring within the Shire, though there is no known incident that has occurred where the community has been directly affected.

Consequence

Following is a list of consequences attributable to the identified sources of risk and how they might impact on the elements of the community.

Severe storm

People	Environment	Economy	Public Administration	Social & Cultural	Infrastructure
Death	Reduction of Flora and fauna habitat	financial loss	Partial loss of capacity	Social networks	Long term loss of lifelines
Permanent Injury	Erosion	Major	Minor disruption to normal services	Walk trails	Medium term loss of lifelines
Minor Injury	Air pollution	Moderate	Loss of reputation	National Parks	Short term loss of lifelines
Displacement temporary and permanent	Affects on water catchment and water quality	Minor	Damage to reputation	Heritage listed buildings	Damage to public buildings
Psychological impact	Increase in weed infestation	Loss of employment		Areas of cultural significance (Aboriginal sites)	Damage to bridges and culverts
Population loss		Loss of tourism			
		Labour shortages			

Structure fire

People	Environment	Economy	Public Administration	Social & Cultural	Infrastructure
Death	Air pollution	Moderate financial loss	Minor disruption to normal services	Social networks	Long term loss of lifelines
Permanent Injury	Toxic substances in drains	Minor financial loss		Heritage listed buildings	Medium term loss of lifelines
Minor Injury	Disposal of toxic materials	Major financial loss		Traffic management	Short term loss of lifelines
Displacement	Water quality				Damage to public buildings
Human health	Ground water contamination				
Mental health/stress					
Financial					

Road Transport Emergency

People	Environment	Economy	Public Administration	Social & Cultural	Infrastructure
Death	Air pollution	Financial loss	Minor disruption to normal services	Social networks	Medium term loss of lifelines
Permanent Injury	Chemical contamination	Moderate	Damage to reputation	Short term displacement	Short term loss of lifelines
Minor Injury	Fire	Minor			Damage to public infrastructure
Displacement	Waterways contamination	3 rd party loss			
Mental stress on volunteers	Water table contamination	Loss of employment			
Post traumatic stress	Air quality	Liability			
Hospitalisation		Insurance			

Agricultural & Animal Disease

People	Environment	Economy	Public Administration	Social & Cultural	Infrastructure
Human health issues	Disease affect on ecosystems	financial loss	Damage to reputation	Restriction of public movement	Resource implications
Mental stress	Treatment affect on ecosystems	Major		Closure of walk trails	
Chemical Contamination	Waterways	Moderate		Loss of community identity	
Loss of business	Loss of insect species	Minor			
Loss of employment		Loss of income			
		Loss of business			
		Loss of market share			
		Land value reduction			

Air Transport Emergency

People	Environment	Economy	Public Administration	Social & Cultural	Infrastructure
Death	Air pollution	Moderate financial loss	Minor disruption to normal services	Social networks	Medium term loss of lifelines
Permanent Injury	Chemical contamination	Minor financial loss	Damage to reputation	Short term displacement	Short term loss of lifelines
Minor Injury	Fire				Damage to public infrastructure
Displacement	Ground contamination				
Human health issues					
Volunteer trauma and stress					
Post trauma stress					

Hazardous Materials

People	Environment	Economy	Public Administration	Social & Cultural	Infrastructure
Death	Flora and fauna habitat	Moderate financial loss	Minor disruption to normal services	Social networks	Medium term loss of lifelines
Permanent Injury	Air pollution	Minor financial loss	Damage to reputation	Short term displacement	Short term loss of lifelines
Minor Injury	Chemical contamination of water catchment	Minor financial loss	Cost of recovery/decontamination		Damage to public infrastructure
Displacement	Fire				
Short and long term Health risk	Cleanup issues				
Rehabilitation	Rehabilitation of affected area				

Likelihood

Likelihood describes the chances that a particular source of risk may impact upon the community.

Descriptions of Likelihood Table

Descriptor	Description
Almost Certain (A)	It is expected to occur in most circumstances; and/or high level or recorded incidents and/or strong anecdotal evidence; and/or a strong likelihood the event will recur; and/or great opportunity, reason or means to occur; may occur once every year or more.
Likely (B)	Will probably occur in most circumstances; and/or regular recorded incidents and strong anecdotal evidence; and/or considerable opportunity, reason or means to occur; may occur once every five years.
Possible (C)	Might Occur at some time; and/or few, infrequent, random recorded incidents or little anecdotal evidence; and/or very few incident in associated or comparable organisations, facilities or communities; and/or some opportunity, reason or means to occur; may occur once every twenty years.
Unlikely (D)	Is not expected to occur; and/or no recorded incidents or anecdotal evidence; and/or recent incidents in associated organisations, facilities or communities; and/or little opportunity, reason or means to occur; may occur once every hundred years.
Rare (E)	May occur only in exceptional circumstances; may occur once every hundred years or more.

Figure 2: Descriptions of Likelihood

Consequence

Determination of the level of consequence or impact a certain source of risk may exert on the community is an important element of the process and is always a difficult concept to master. By estimating qualitatively the likely magnitude of the consequences for each source of risk, taking into account the existing control measures, the consequences of the sources of risk impacting on the various elements of the community can be decided upon. The descriptor of confidence can be found on page 17.

Consequence Table

Consequence Level	People	Environment	Economy	Public Administration	Social Setting	Infrastructure
Catastrophic (5)	Widespread multiple loss of life (mortality > 1 in 10,000), health system unable to cope, displacement of people beyond ability to cope	Widespread severe impairment or loss of ecosystem functions across species and landscapes, irrecoverable environmental damage	Unrecoverable financial loss > 3% of the government sector's revenues, asset destruction across industry sectors leading to widespread business failures and loss of employment	Governing body unable to manage the event, disordered public administration without effective functioning, public unrest, media coverage beyond region or jurisdiction	Community unable to support itself, widespread loss of objects of cultural significance, impacts beyond social and psychological capacity in all parts of the community	Long term failure of significant infrastructure and service delivery affecting all parts of the community, ongoing external support at large scale required
Major (4)	Multiple loss of life (mortality > 1 in 100,000), health system over-stressed, large numbers of people displaced (more than 24 hours)	Severe impairment or loss of ecosystem functions affecting many species or landscapes, progressive environmental damage	Financial loss 1-3% of the government sector's revenues requiring major changes in business strategy to (partly) cover loss, significant disruptions across industry sectors leading to multiple business failures and loss of employment	Governing body absorbed with managing the event, public administration struggles to provide merely critical services, loss of public confidence in governance, media coverage beyond region or jurisdiction	Reduced quality of life within the community, significant loss or damage to objects of cultural significance, impacts beyond emotional and psychological capacity in large parts of the community	Mid to long term failure of significant infrastructure and service delivery affecting large parts of the community, initial external support required
Moderate (3)	Isolated cases of loss of life (mortality > 1 in 1,000,000)/health system operating at maximum capacity, isolated cases of displacement of people (less than 24 hours)	Isolated but significant cases of impairment or loss of ecosystem functions, intensive efforts for recovery required	Financial loss 0.3-1% of the government sector's revenues requiring adjustments to business strategy to cover loss, Disruptions to selected industry sectors leading to isolated cases of business failure and multiple loss of employment	Governing body manages the event under emergency regime, public administration functions with some disturbances, isolated expression of public concern, media coverage within the region or jurisdiction	Isolated or temporary cases of reduced services within community, repairable damage to objects of cultural significance, impacts within social and psychological capacity of the community	Isolated cases of short to mid-term failure of infrastructure and service delivery, localised inconveniences
Minor (2)	Isolated cases of serious injuries, health system operating within normal parameters	Isolated cases of environmental damage, one off recovery efforts required	Financial loss 0.1 - 0.3% of the government sector's revenues requiring activation of reserves to cover loss, disruptions at business level leading to isolated cases of loss of employment	Governing body manages the event under emergency regime, public administration functions with some disturbances, isolated expression of public concern, media coverage within region or jurisdiction	Isolated temporary cases of reduced services within community, repairable damage to objects of cultural significance, impacts with emotional and psychological capacity of the community	Isolated cases of short to mid-term failure of infrastructure and service delivery, localised inconveniences
Insignificant (1)	Near misses or minor injuries, no reliance on health system	Near misses or incidents without environmental damage, no recovery efforts required	Financial loss < 0.1% of the government sector's revenues, to be managed within standard financial provisions, inconsequential disruptions at business level	Governing body manages the event within normal parameters, public administration functions without disturbances, public confidence in governance, no media attention	Inconsequential short term reduction of services, no damages to objects of cultural significance, no adverse emotional and psychological impacts	Inconsequential short term failure of infrastructure and service delivery, no disruption to the public services

Figure 3: Descriptors of Consequence

Level of Risk

Each of the risk statements having been rated for likelihood and consequence were then assigned a level of risk. The Risk Register comprising 44 risks appears on pages 17-22 following. Risks were assigned a level of Extreme, High, Medium or Low dependent upon the likelihood and consequence descriptor assigned to each. The level of risk matrix appears on page 15.

Qualitative Risk Analysis Matrix - Level of Risk*

Consequences \ Likelihood	Insignificant 1	Minor 2	Moderate 3	Major 4	Catastrophic 5
(A) Almost Certain	Medium	Medium	High	Extreme	Extreme
(B) Likely	Low	Medium	High	High	Extreme
(C) Possible	Low	Low	Medium	High	High
(D) Unlikely	Low	Low	Medium	Medium	High
(E) Rare	Low	Low	Low	Medium	Medium

E	Extreme Risk	Immediate action required
H	High Risk	Senior management attention needed
M	Moderate Risk	Management responsibility must be specified
L	Low Risk	Manage by routine procedures

Figure 4: Level of Risk Matrix

Confidence Level

The ratings for each of the above confidence criteria will help rate the confidence in the overall risk assessment process. This rating will be conducted for each risk at the end of the risk analysis phase. It will be recorded in the risk register in order to communicate uncertainty and to support the decision-making process concerning the need for detailed risk analysis, or the selection of risk treatment measures. In general if the overall confidence in the process is low, further analysis might be warranted, and a more detailed analysis should be conducted. Depending upon the significance of the decision, the confidence rating should be done in conjunction with an external party or otherwise validated by a third party, such as through peer review or other validation mechanism.

(Extracted from the National Risk Assessment Guide Exposure Draft 2009)

The confidence table guided the participants to make an assessment of their level of confidence in the information and data provided in each workshop through which the level of risk for each risk statement was assigned and In addition, whether based on the data quality and confidence level, a risk may or may not be identified for further treatment.

Confidence Criteria	Low Confidence	Moderate Confidence	High Confidence
Data/Information	Neither community nor hazard specific; anecdotal only	Community or hazard specific; validated historical or scientific	Community and hazard specific; validated historical and scientific
Team Knowledge	Neither hazard nor process (risk assessment) specific	Hazard or process specific	Hazard and process specific
Agreement	Neither on interpretations nor on ratings	On interpretation or ratings	On interpretation and ratings

Figure 5: Confidence Level Matrix

Through this process, a risk, although rated as 'High' and having regard to all of the available information relating to mitigation may be assessed as being "As Low as Reasonably Practicable."

Risk Register Review Process

During Stage 2 of the Community Emergency Risk Management (CERM) program, a comprehensive list of risks was compiled to identify each source of risk and the impact the source of risk may have on the elements at risk. The risk register was scrutinised as a part of Stage 3

The LEMC reviewed each of the existing risk statements in line with the following criteria:

1. To ensure that each risk statement reflected the relationship between the source of risk and each element of the vulnerable community;
2. To ensure each risk statement is relevant to the risk;
3. To consider to requirements for further risk statements if relevant.

Risk Register and Treatment Schedule

The workshop conducted at the conclusion of the quarterly LEMC meeting utilised the LEMC members along with subject matter experts drawn from the Shire of Kalamunda and other support organisations. The intent of the workshop was to finalise the risk register, ensure that documented treatment strategies were correct and identify any further treatment strategies could be employed to further mitigate the risk to the community.

Risk Register

RISK No.	RISK STATEMENT	LIKELIHOOD RATING	CONSEQUENCE RATING	LEVEL OF RISK	ELEMENT AT RISK	Treat Risk Y/N NO	Confidence Level
01	There is a risk that a bush fire will cause death or serious injury to people	Likely	Moderate	High	People	NO	High
02	There is a risk that a bush fire will cause short or long term displacement of persons	Likely	Major	High	People	NO	High
03	There is a risk that a bush fire will cause damage to or destroy aspects of the environment	Almost Certain	Minor	Medium	Environment	NO	High
04	There is a risk that a bush fire will cause damage to or destroy infrastructure	Almost Certain	Minor	Medium	Infrastructure	NO	High
05	There is a risk that a bush fire will affect the economy of the community	Likely	Insignificant	Low	Economy	NO	High
06	There is a risk that a bush fire will affect the operation of the public administration	Likely	Minor	Medium	Public Administration	NO	High
07	There is a risk that a bush fire will affect the social and cultural aspects of the community	Likely	Minor	Medium	Social & Cultural	NO	High

RISK No.	RISK STATEMENT	LIKELIHOOD RATING	CONSEQUENCE RATING	LEVEL OF RISK	ELEMENT AT RISK	Treat Risk Y/N NO	Confidence Level
08	There is a risk that a structure fire will cause death or serious injury to people in the community	Likely	Minor	Medium	People	NO	High
09	There is a risk that a structure fire will cause damage to elements of the environment	Possible	Minor	Low	Environment	NO	High
10	There is a risk that a structure fire will affect the economy of the community	Unlikely	Insignificant	Low	Economy	NO	High
11	There is a risk that a structure fire will affect the operation of the public administration	Unlikely	Insignificant	Low	Public Administration	NO	High
12	There is a risk that a structure fire will affect the social and cultural aspects of the community	Unlikely	Insignificant	Low	Social & Cultural	NO	High
13	There is a risk that a structure fire will cause damage to or destroy infrastructure	Likely	Minor	Medium	Infrastructure	NO	High
14	There is a risk that a severe storm will cause death or serious injury to people	Unlikely	Moderate	Medium	People	NO	Moderate

RISK No.	RISK STATEMENT	LIKELIHOOD RATING	CONSEQUENCE RATING	LEVEL OF RISK	ELEMENT AT RISK	Treat Risk Y/N NO	Confidence Level
15	There is a risk that a severe storm will cause short or long term displacement of people	Possible	Minor	Low	People	NO	Moderate
16	There is a risk that a severe storm will cause damage to elements of the environment	Likely	Minor	Medium	Environment	NO	Moderate
17	There is a risk that a severe storm will affect the economy of the community	Possible	Insignificant	Low	Economy	NO	Moderate
18	There is a risk that a severe storm will affect the operation of the public administration	Possible	Minor	Low	Public Administration	NO	Moderate
19	There is a risk that a severe storm will Affect the social setting of the community	Possible	Minor	Low	Social & Cultural	NO	Moderate
20	There is a risk that a severe storm will cause damage to or destroy infrastructure	Possible	Minor	Low	Infrastructure	NO	Moderate
21	There is a risk that a road transport emergency will cause death or serious injury to people	Almost Certain	Moderate	High	People	NO	Moderate

RISK No.	RISK STATEMENT	LIKELIHOOD RATING	CONSEQUENCE RATING	LEVEL OF RISK	ELEMENT AT RISK	Treat Risk Y/N NO	Confidence Level
22	There is a risk that a road transport emergency will cause damage to or destroy infrastructure	Likely	Insignificant	Low	Infrastructure	NO	Moderate
23	There is a risk that a road transport emergency will destroy or cause damage to aspects of the environment	Likely	Minor	Medium	Environment	NO	Moderate
24	There is a risk that a road transport emergency will impact on the social and cultural setting of the community	Possible	Minor	Low	Social & Cultural	NO	Moderate
25	There is a risk that a road transport emergency will affect the economy of the community	Possible	Insignificant	Low	Economy	NO	Moderate
26	There is a risk that a road transport emergency will affect the operation of the public administration	Unlikely	Insignificant	Low	Public Administration	NO	Moderate
27	There is a risk that agricultural diseases will affect human health in the community	Unlikely	Insignificant	Low	People	NO	Moderate
28	There is a risk that agricultural diseases will cause damage to or loss of certain aspects of the environment	Likely	Minor	Medium	Environment	NO	Moderate

RISK No.	RISK STATEMENT	LIKELIHOOD RATING	CONSEQUENCE RATING	LEVEL OF RISK	ELEMENT AT RISK	Treat Risk Y/N NO	Confidence Level
29	There is a risk that agricultural diseases will affect the economy of the community	Possible	Minor	Low	Economy	NO	Moderate
30	There is a risk that agricultural diseases will affect the social & cultural aspects of the community	Unlikely	Minor	Low	Social & Cultural	NO	Moderate
31	There is a risk that agricultural disease will affect infrastructure	Rare	Insignificant	Low	Infrastructure	NO	Moderate
32	There is a risk that an air transport emergency will cause death or serious injury to people	Unlikely	Major	Medium	People	NO	High
33	There is a risk that an air transport emergency cause damage to certain aspects of the environment	Possible	Minor	Low	Environment	NO	High
34	There is a risk that an air transport emergency will affect the economy of the community	Unlikely	Moderate	Medium	Economy	NO	Moderate
35	There is a risk that an air transport emergency will affect the social and cultural aspects of the community	Unlikely	Minor	Low	Social & Cultural	NO	High
36	There is a risk that an air transport emergency will affect the operation of the public administration	Possible	Moderate	Medium	Public Administration	NO	High

RISK No.	RISK STATEMENT	LIKELIHOOD RATING	CONSEQUENCE RATING	LEVEL OF RISK	ELEMENT AT RISK	Treat Risk Y/N NO	Confidence Level
37	There is a risk that an air transport emergency will cause damage to or destroy infrastructure	Possible	Major	High	Infrastructure	NO	Moderate
38	There is a risk that a hazardous materials spill will affect human health	Almost Certain	Moderate	High	People	Yes	Moderate
39	There is a risk that a hazardous materials spill will cause the displacement of people	Almost Certain	Moderate	High	People	NO	Moderate
40	There is a risk that a hazardous materials spill will cause damage to aspects of the environment	Likely	Moderate	High	Environment	NO	Moderate
41	There is a risk that a hazardous materials spill will affect the economy of the community	Possible	Minor	Low	Economy	NO	Moderate
42	There is a risk that a hazardous materials spills will affect the social and cultural aspects of the community	Possible	Insignificant	Low	Social & Cultural	NO	Moderate

RISK No.	RISK STATEMENT	LIKELIHOOD RATING	CONSEQUENCE RATING	LEVEL OF RISK	ELEMENT AT RISK	Treat Risk Y/N NO	Confidence Level
43	There is a risk that a hazardous materials spill will affect the operation of the public administration	Possible	Minor	Low	Public Administration	NO	High
44	There is a risk that a hazardous materials spill will cause damage to infrastructure	Unlikely	Minor	Low	Infrastructure	NO	Moderate

Treatment Schedule

Risk Reference	Treatment Options	Is the Treatment to be Implemented Y/N	Risk Level		Agency Responsible	Timetable for Implementation	Monitoring Strategies
			Current Level	Target Level			
38	Make enquiries with DFES and compile a register of facilities within the Shire of Kalamunda where reportable quantities of hazardous materials are stored.	Yes	High	Medium /Low	DFES LEMC	1 st Quarter 2011	LEMC to monitor at regular meetings