

6.0 Community Resilience Plan

The precincts and communities that will bounce back from future events will be those that have built a strong sense of ownership and belonging to the place. The communities that have recovered the quickest to some of the recent climate events have been those that have all come out to help in the clean-up, the recovery from the impact.

Building that sense of belonging at the start of the creation of a new community is one of the fundamentals to future resilience. Any community resilience plan must focus on creating this sense of belonging with its own community and its surrounding communities.

THE COMMUNITY CHARACTERISTICS

The resilience of a community is influenced by aspects such as demographics, community interdependency, governance, awareness and financial position / socio economics. At a broad level obtaining strong resilience in these areas sets up a good foundation for adaptive capacity of the community into the future.

FINANCIAL POSITION

The Alkimos / Eglinton district population has grown rapidly since 2012. With this growth the average financial position of the community has changed significantly and is likely to evolve further over the coming years. At the last Census (2016), median household income for the region was just over \$60,000 per year. While this income level is above the median level for Australia these levels of household income present a potential risk to the resilience of the community in the future. Community engagement with lower earning members of the community, particularly new members with high mortgage rates, over a third of average incomes, will be pivotal to ensuring future community resilience. This financial risk could be addressed through education, awareness and governance strategies which support egalitarian and sustainable growth of the individuals within the community. A focus on strategies that mitigate Climate Change Impact stresses through energy efficiency and home operating cost savings offer a significant opportunity. Lendlease and developer engagement of future residents early Governments intervention to reward and incentivise decisions that support climate mitigation and adaptation will provide mutually beneficial outcomes.

AWARENESS

With the population of the Alkimos area set to increase drastically with the Alkimos Beach and Vista communities, there is a significant opportunity to educate and involve the community in combatting and preparing for the effects of climate change. Focused education on how the community can prepare for, and deal with these effects is likely to provide the greatest benefit. Education programs and distribution of information including action plans to these new residents will help to ensure the future resilience of the community.

GOVERNANCE

Alkimos Beach and Alkimos Vista, along with Lendlease and partners LandCorp, are involved with several different local / regional state groups that provide services to communities. These groups provide the community with partial governance structures, and over time, assist with building a self-governing and managed community.

COMMUNITY DEMOGRAPHICS

The demographics of the current Alkimos community differs from that of Western Australia generally. The median age of 28 is noticeably lower than the WA median age of 36, along with the proportion of the population over 65, 3.5% in Alkimos compared to 14% across WA. This suggests that the Alkimos communities are likely to be younger with a higher percentage of young families. The Aboriginal and/or Torres Strait Islander population is presently 1%, with 55% of the community born overseas. Over a quarter of residents within the region who were born overseas have arrived within the last 5 years. This indicates that community involvement and shared community





spaces will be pivotal to bringing diverse cultures together at Alkimos.

COMMUNITY INTERDEPENDENCY

The Alkimos Beach and Alkimos Vista communities are separated from each other by a large reserve, and at the time of completion there will be little interdependency. This dynamic is likely to change with the completion of Alkimos Central, which will better integrate the two communities both economically and socially. This integration will increase diversity and improve the future resilience of these two communities as they can rely more on another other and more easily share a range of community services and infrastructure. The areas surrounding Alkimos Beach and Alkimos Vista are also master-planned communities, however they are not part of the Landcorp / Lendlease Joint Venture, and therefore initial integration between the communities is likely to minimal.

COMMUNITY SENSITIVE RISKS

The community sensitivity to climate risk is likely to evolve as it develops. Therefore, community resilience will change over time as the climate changes. The following represents a series of Climate Change impacts and examples, explored through the lens of key stakeholders, current and future community members.

HEATWAVE AND DROUGHT

Extended heatwaves and drought are key risks for the Alkimos Beach & Vista communities. These risks can easily become extreme for the young and elderly. The Alkimos Beach & Vista master planned communities offer several design features to help reduce exposure to high heat stress. These include water wise plant and tree selections, reducing asphalted areas with paved thresholds and the use of recycled water. These initiatives will assist in providing residents with shading, and efficient water use; while also helping to reduce the urban heat island effect.

Master planning to provide adequate open community space for sporting / recreation as well as better solar orientation will also assist in mitigating against urban heat island effect while also providing opportunities for the community to connect.

Developer lead sustainable design education and design guidelines coupled with initiatives such as the Eco-coaching programme, energy smart home package, solar PV rebates and online resources will help to build community knowledge and capacity

and assist new home owners to build with the future climate in mind.

As the communities develop and grow, education and awareness campaigns will be necessary to ensure that the they are adequately prepared to deal with increases in heat and drought. Council sponsored campaigns to assist residents to better understand and participate as part of the broader community and initiatives such as "Know Your Neighbour" and "eWatch" will also assist in building stronger communities' ties and resilience.

State Emergency Management Plans (Westplan) covering Heatwave emergency response and preparation provide overarching governance strategies in the management of heatwave emergencies.

FLOODING AND EXTREME RAINFALL CYCLONES

With the Alkimos Beach and Vista communities' proximity to the ocean, flooding and extreme rainfall are particularly important risks to prepare for. While historically few cyclones are experienced on the South-West Coast of Australia, there can be and is potential for more very powerful storms under cyclone category, likely to cause large scale coastal erosion and damage to property.

Educating the new residents of Alkimos Beach and Vista, along with awareness campaigns will be major drivers in ensuring the resilience of these communities to cyclones and high intensity storms. These could be targeted by group or area, and could focus on specific risks, or emergency services and how they can assist community members in a time of crisis.

A notification system via Facebook and Council / Community apps can provide safety instructions and support to the community during extreme events, building their preparedness to act appropriately during these events.

COASTAL INUNDATION AND SEA LEVEL RISE

Being located directly adjacent to the sea, the Alkimos Beach has a heightened risk to sea level rise and coastal inundation. Master planning has considered costal setbacks and effective dune system vegetation and maintenance to limit erosion. Only temporary and sacrificial structures have been planned or installed within the 50-year coastal inundation modelling line with both homes,





mixed use development and other significant infrastructure located outside of this zone.

BUSHFIRE WEATHER AND EFFECTS

With the increasing temperatures and reduced rainfall, as a result of future climate change, Alkimos Beach and Vista will be increasingly vulnerable to bushfires. The Wanneroo Council has addressed these issues within their own Climate Change Adaption and Mitigation Strategy, with management & recovery plans, establishment of an emergency management committee and the employment of Fire Protection Officers.

The Alkimos Beach and Vista communities must be made aware of and educated in fire management strategies, available emergency services and recovery plans to ensure the future resilience to potential bushfire and its effects.

Humidity changes are often felt in combination with rainfall and temperature changes. As with extreme heat and rainfall, communication and awareness plays a pivotal role in the community's ability to be resilient.





EMERGENCY PREPAREDNESS

The Alkimos Beach and Vista communities form part of the City of Wanneroo, which has in place a number of emergency and disaster plans to assist the community in dealing with and recovering from disasters or emergency events.

The Local Emergency Management Arrangements for The City of Wanneroo was completed with consideration of surrounding local government plans including:

- City of Joondalup
- City of Stirling
- Town of Bassendean
- City of Bayswater
- Shire of Kalamunda

The plan outlines the physical attributes of the local area and the surrounding suburbs, other interdependent plans and authorities and special considerations, including vulnerable groups.

This following table illustrates the prioritisation of local hazards, responsible HMAs, relevant Westplans and Local Plans pertaining to the COW.

Bushfire (Primarily	DFES (Gazetted fire district)	Fire & Rescue Services	FRS SOPs	Fire (2013)
COW) & Urban Fire (Structural)	DPaW (DPaW managed land)	DPaW District Office	Regional Park Emergency Plans	
	Local Government Authority	City of Wanneroo	Bush Fire Response Plan	
Severe Storm	DFES	Yes	Yes	Storm (2014)
Marine Transport Emergency	ransport Transport Hillarys		Yes	Marine Transport Emergency (2011)
Rail Transport Public Transport Authority		Yes	Yes	PTA Rail Crash (2013)
Air Transport Emergency	WA Police	Yes	Yes	Air Crash (2014)
Human Epidemic			Yes	Human Epidemic (2014)
Hazardous Materials Incident	DFES	Yes	Yes	Hazmat (2010)

The local emergency management arrangements for the COW are based on the premise that the HMA's responsible for the above threats will develop, test and review appropriate emergency management plans. However, the COW in its role as a local government authority is committed to providing HMA and combat agencies with assistance and support where

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Excerpt of prioritisation of local hazards, responsible managing agencies and relevant and local plans to assist in an emergency in Local Emergency Management Arrangements for The City of Wanneroo (Wanneroo, 2018)

The plan also outlines the emergencies that are likely to occur and the responsible parties and plans that will come into action in the event of those emergencies. The plan also outlines the location of emergency headquarters and the local systems used to warn and inform the community.

Vulnerable Groups

The City of Wanneroo Emergency Management Plan identifies vulnerable groups such as those who have a low socio-economic status and those with psychological or physical attributes that place them at greater risk. These include but are not limited to:

- Homeless
- Linguistically diverse
- Children
- Elderly
- Disabled (permanently or temporarily through illness or injury

It highlights that those vulnerable or their carers should make it known to emergency services in their specific area of their limitations during an event. This means that emergency services are aware of key locations that may require more assistance during a time of an emergency. Vulnerable groups should seek local information and prepare their own emergency plans.

Specific vulnerable groups and their locations are listed in the Local Emergency Management Arrangements for The City of Wanneroo Guidelines for Emergency Preparation and it specifically identifies the address and risk of each location.

The plan also outlines Evacuation and welfare centres to be used in the event of an emergency



Community health and safety



Safety	Health
Abandoned shopping trolley	Asbestos information
Bicycle ID Card	Food & liquor
Business safety and security	Health forms for businesses

City of Wanneroo Community health and Safety website (Wanneroo, 2018)

The City of Wanneroo website contains community health and safety information. This part of the site outlines things like: emergency survival kit, home security, fire information emergency management and general community safety.





GUIDELINES FOR COMMUNITY EMERGENCY PREPAREDNESS

The Red Cross provide a national checklist, the Red Cross RediPlan to help the community plan and prepare for emergencies. The checklist includes but is not limited to:

- Knowing what emergency types might affect an individual/community
- Location of emergency information
- How to prepare your finances
- · How to protect your home and or business
- Key things to include in a personal emergency plan

The checklist can be found here:

<u>www.redcross.org.au/files/Red_Cross_RediPlan_-</u> disaster_preparedness_guide.pdf

The City of Wanneroo provides essential information on how to be prepared for an emergency. The council website provides information on how to prepare your home, pets as well as knowing your neighbours and lists of emergency contacts and links.

It also explains how to prepare an emergency survival kit and provides the following list of essential things:

- Portable battery-operated AM/FM radio
- Waterproof torch
- Spare batteries
- First aid kit with manual
- Candles with waterproof matches
- Woolen blankets
- Emergency contact numbers
- Ensure your pet is wearing an identification tag
- If you're leaving take a leash, basket, medication, food and a familiar toy

In addition, guidance is provided to homeowners and businesses to help them prepare for storm events. This includes:

- Securing any loose objects
- Keeping tree branches trimmed clear of house/powerlines
- Create an emergency kit battery powered torch etc.
- Have an emergency plan and practice it with family
- Ensure everyone in your household is prepared

 Discuss possible scenarios and responses with your household.

The City of Wanneroo website also provides information to assist people in preparing for hot weather. This targets people who may be at increased risk of heat related illness, especially those with medical conditions. Links are provided to WA Department of Health Heat stress / hot weather advice and information resources. Key advice to stay healthy when it's hot includes:

- Drinking plenty of fluids and try to stay inside with a fan or air conditioner on
- If you have to go outside, go in the early morning or late evening and stay in the shade
- To help you sleep use a water spray mister on your face and body.
- Keep taking any regular medicine even if you feel unwell because of the heat.
- Cars can get dangerously hot never leave babies, young children or pets alone in a car even if the air conditioning is on.
- If you are pregnant or breastfeeding you should drink more water than usual.
- Always wear shoes outside on hot days the ground can easily burn the feet of babies or young children.
- Keep your home cool by closing curtains, blinds and windows during the day.
- If it is safe, open windows at night to let cool air in.
- Animals can suffer and even die on very hot days so keep them in the house or make sure they have shade in the garden and always leave them plenty of water.

Vulnerable Groups

The City of Wanneroo Local Emergency Management Plans highlights the high proportion of young people aged from 0 to 17 years and diverse multicultural population with large variety of languages being spoken in the home. There are 8 Residential Aged Care Facilities within the City of Wanneroo that offers respite care and 3 Aged Care Facilities that do not offer a respite service.

Vulnerable people are more likely present in the following facilities located in or around Alkimos Beach and Vista.

Schools





- Retirement and aged Care Facilities Childcare Centres
- Government Service / Community Buildings

The city of Wanneroo Emergency Risk Register identifies and considers vulnerable community groups in formulating the Local Emergency Management response plan for the local area, ensuring that potential effects can be appropriately managed and that any specific resources necessary to assist in preparation and recovery can be made available to these groups.

WHAT TO DO DURING AN EMERGENCY EVENT

The City of Wanneroo website explains what to do during a disaster, focussing on communication as a key to understand what action to take.

The Council advises that if evacuation of an area is necessary, the City will notify residents of the appropriate evacuation centre, by radio, television, the City website / social media and the Department of Fire & Emergency Services (DFES).

Emergency locations

The City of Wanneroo Emergency locations are confirmed in the event of an emergency. The locations may vary depending on the event and necessary level of response / action. Maintaining links to communication channels is crucial if an event occurs. Nominated emergency evacuation centres are outlined within the Local Emergency Management Arrangements document and City of Wanneroo Emergency Resources Registers.

RECOVERY AFTER AN EMERGENCY EVENT

The Local Emergency Management Arrangements for The City of Wanneroo outlines the principles and aims of recovery for the community. A central "One-Stop-Shop" location will be established by Council as an effective method of providing the affected community with access to information and assistance and to assist in recovery following an emergency event. This will provide a central information point and would include representatives from relevant recovery service providers to provide information and advice for the local community. The One Stop Shop may be established in identified City of Wanneroo buildings and the location and contact details will be disseminated to the community when a decision is made as to where the

appropriate location will be to set up a One Stop Shop. Dependent on the locality of the emergency incident, a One Stop Shop can be set up at any of the following City of Wanneroo nominated Evacuation / Welfare Centre locations:

Welfare Centre	Address	Phone Number
Wanneroo Recreation Centre	440 Scenic Drive, Wanneroo	9405 5000 1300 13 83 93
Phil Renkin Leisure Centre	59 Lisford Avenue, Two Rocks	9405 5000
		1300 13 83 93
Gumblossom Community Centre	17 Tapping Way, Quinns Rocks	9405 5000 1300 13 83 93
Hainsworth Centre	29 Hainsworth Avenue, Girrawheen	9405 5000
		1300 13 83 93
Alexander Heights Community	18 Linto Way, Alexander Heights	9405 5000
Centre		1300 13 83 93
Butler Community Centre	Corner Kingsbridge Boulevard and Connolly	9405 5000
	Drive Butler	1200 12 92 02

Excerpt of Emergency Welfare/Evacuation Centre Locations -Local Emergency Management Arrangements for The City of Wanneroo (Wanneroo, 2018)

The City of Wanneroo and Joondalup have formed a Local Emergency Management Committee responsible for coordinating recovery of Wanneroo and its suburbs, partnership with local and state authorities following a disaster event.

STAKEHOLDERS

The stakeholders and contacts for Alkimos Beach and Vista communities and further information and guidance before, during and after an emergency include:

- Life threatening emergencies 000
- Police/fire/ambulance (mobiles 000 and 112)
- State Emergency Services (DFES)
 Emergency Assistance 132 500
 1300 657 209 Hotline
- City of Wanneroo Emergency Information Line - 1300 657 209
- Westernpower (loss of power) 13 13 51
- ATCO Gas Natural Gas, emergencies, leaks, faults – 13 13 52
- Water Corporation 13 13 75
- Joondalup Health Campus 08 9400 9030
- Red Cross WA 1800 810 710
- Optus 13 13 44
- Telstra 13 22 03
- Ashby Operations / Emergency Recovery Centre – 1300 13 83 93





Stakeholders involved in the preparation of this plan include:

- Nadja Kampfhenkel Sustainability Manager Communities Western Australia
- Laura Bowdell Development Manager Communities Western Australia
- Jacob Abbott Assistant Development Manager Communities Western Australia
- Rebecca Clarkson Community Partnerships Manager Western Australia
- Melissa Gaspari Environment and Ethical Assessment Consultant
- Darryl Stuckey Environment and Ethical Assessment Manager





EMERGENCY RESPONSE AND CLIMATE CHANGE CONTACTS

Contacts	Stakeholder	Website	Email	Phone	Postal Address or Office Location (Main Locations Only)	Social Media
Key Community Contacts	City of Wanneroo Council	www.wanneroo.wa.gov.au	Online feedback form	(08) 9405 5000	Head Offices: 23 Dundebar Road Wanneroo WA 6065 Postal Address: City of Wanneroo Locked Bag 1 Wanneroo WA 6946	Twitter: @CityofWanneroo Facebook: www.facebook.com/CityofWann eroo Youtube: CityWanneroo
	Mayor/Leader of community groups	www.wanneroo.wa.gov.au/i nfo/20003/council/19/meet_t he_mayor	tracey.roberts@wanner oo.wa.gov.au	(08) 9405 5440	Head Offices: 23 Dundebar Road Wanneroo WA 6065	
	Local Police	www.police.wa.gov.au/Cont act%20Us/LPT/WANNERO O		(08) 9406 2222	1 Friars Dr, Sinagra, 6065	Facebook: www.facebook.com/wapolnwm etro/ Twitter: @WannerooPolice
	Public Transport	www.pta.wa.gov.au	enquiries@pta.wa.gov. au_	General Enquires: (08) 9326 2000 Emergencies: (08) 9220 9999	Summers St, East Perth WA 6004	
	Public Transport	www.transwa.wa.gov.au	info@transwa.wa.gov.a u	Administration: (08) 9326 2000	Postal address: Transwa P.O. Box 8125 Perth Business Centre WA 6849	
	Public Transport	www.transperth.wa.gov.au	Online feedback form	Infoline: 13 62 13	Postal address: Public Transport Authority Transperth Train Operations PO Box 383 Northbridge WA 6865	Twitter: @Transperth Facebook: www.facebook.com/Transperth Youtube: TransperthOnline





Contacts	Stakeholder	Website	Email	Phone	Postal Address or Office Location (Main Locations Only)	Social Media
	Alkimos Beach	https://communities.lendlea se.com/alkimos-beach/	alkimosbeachcustomer service@lendlease.co m	1800 255 466	Sales and Information Centre Corner of Graceful Boulevard and Painted Parkway, Alkimos Beach WA 6038	Facebook: www.facebook.com/AlkimosBe ach
	Alkimos Vista	https://communities.lendlea se.com/alkimos-vista/	alkimosvistacustomers ervice@lendlease.com	1800 255 466	Sales and Information Centre Shop 10 of The Gateway Shopping Precinct Turnstone Street, Alkimos, WA, 6038	Facebook: www.facebook.com/AlkimosBe ach
Emergency Contacts	Emergency Services	www.dfes.wa.gov.au	Online feedback form	132 500	Emergency Services Complex 20 Stockton Bend Cockburn Central WA 6164	Twitter: @dfes_wa Facebook: www.facebook.com/dfeswa
	Ambulances	www.stjohnambulance.com. au	stjohn@stjohnambulan ce.com.au	000 General Enquiries: (08) 9334 1222	209 Great Eastern Highway Belmont WA 6104	Twitter: @stjohn_wa Facebook: www.facebook.com/StJohnWes ternAustralia
	Fire Brigades	www.dfes.wa.gov.au		000 General Enquiries: 08 9300 9222	47 Drovers Place Wanneroo WA 6026	Twitter: @dfes_wa Facebook: www.facebook.com/dfeswa
	Westernpower	https://westernpower.com.a u/	Online feedback form	13 10 87	Postal addresses: Main Western Power Mailing Address GPO Box L921, Perth WA 6842	Facebook: www.facebook.com/westernpo werwa/ Twitter: @westernpowerwa





Contacts	Stakeholder	Website	Email	Phone	Postal Address or Office Location (Main Locations Only)	Social Media
	Horizon Power	www.horizonpower.com.au/	Online feedback form	13 23 51	Bentley Office 18 Brodie Hall Drive Bentley, Western Australia 6102	Facebook: https://www.facebook.com/Hori zonPowerWA Twitter: @HorizonPower_WA
	ATCO Gas Australia	www.atcogas.com.au	enquiries@atcogas.co m.au	13 13 52 08 6163 5000	81 Prinsep Road Jandakot WA 6164	Twitter: @ATCOGasAus
	Water Corporation	www.watercorporation.com. au	Online feedback form	13 13 75	Water Corporation PO Box 1600 Osborne Park DC WA 6916	Twitter: @watercorpwa Facebook: www.facebook.com/WaterCorp oration
	Telstra	www.telstra.com.au https://outages.telstra.com/	Online feedback form	13 22 03	620 Gnangara Rd Landsdale WA 6065	Twitter: @Telstra Facebook: www.facebook.com/Telstra
	Insurance Council of Australia	www.insurancecouncil.com. au	Online feedback form	1300 728 228	Level 4, 56 Pitt Street Sydney NSW 2000 AUSTRALIA	Twitter: @ICAUS
Emergency Shelter Locations	See City of Wanneroo Emergency Management Plans					
Communicat ion Channels	Local Radio FM	https://897fm.com.au/	Online feedback form	Text: 0418 897 897 08 6304 2333	Level 4 in Building 18 at the Edith Cowan University Campus, Joondalup	Facebook: www.facebook.com/89.7fm
	Community News	www.communitynews.com.a u/wanneroo-times/news/	Online feedback form	13 20 13	34 Stirling Street, Perth, WA 6000	Twitter: @commnewsgroup Facebook: www.facebook.com/commnews group





Contacts	Stakeholder	Website	Email	Phone	Postal Address or Office Location (Main Locations Only)	Social Media
	Bureau of Meterology	www.bom.gov.au	Online enquiries form through the website	(08) 9263 2222	PO Box 1370 West Perth WA 6872	Twitter: @BOM_au @BOM_WA Facebook: www.facebook.com/bureauofm eteorology
Additional Contacts	CSIRO	https://www.csiro.au/en/Res earch/OandA/Areas/Assessi ng-our-climate	Online enquiries form through the website	1300 363 400	GPO Box 1700 Canberra ACT 2601 Australia	Twitter: @CSIROnews Facebook: www.facebook.com/CSIROnew s
	Main Roads WA	www.mainroads.wa.gov.au	enquiries@mainroads. wa.gov.au	138 138	Don Aitken Centre Waterloo Crescent East Perth WA 6004	Twitter: @Perth_Traffic Facebook: www.facebook.com/MainRoads WesternAustralia/