



# Climate Change Action Plan Community Engagement Report | 2021





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## Executive Summary

The purpose of this community engagement was to investigate community sentiment and perception of Climate Change to inform the development of a new Climate Change Action Plan.

### Background

On 10 August 2021, The City of Kalamunda joined other Western Australian Local Governments by signing the WALGA Climate Change Declaration.

The City of Kalamunda acknowledges that:

- » Evidence shows that climate change is occurring.
- » Climate change will continue to have significant effects on the Western Australian environment, society and economy, and the Local Government sector.
- » Human behaviours, pollution and consumption patterns have both immediate and future impacts on the climate and environment.

The City of Kalamunda committed from date of signing to develop an internal Climate Change Action Plan (CCAP) for climate change actions across all Local Government functions, with a focus on the two, five and ten year future.

### Community Engagement

**Targeted consultation ran from 1 October 2021 to 2 December 2021**

Community Consultation for the project was delivered via a *Communications and Engagement Plan* prepared in line with IAP2 best practice principles.

The Plan progressed to IAP2 spectrum level 'collaborate' to partner with the public in each aspect of the decision including the development of alternatives and the identification of the preferred solution.

It was supported by an integrated marketing campaign.

Communications included website pages; a media release; posters; letters to stakeholders; a community survey; a newspaper advertisement; eNewsletters; and four face-to-face events including a Workshop, a live action Ice carving event and two Pop-up Pop-in Booths.

### Key Engagement findings:

**The Survey received 122 responses, and four (4) formal written submissions.**

The overarching sentiment was in strong favour of an Action Plan and of the City taking a leadership role in Climate Change/Emergency Action.

### Workshop: Climate Change 'Big Ideas' Forum

- » Thursday 2 December, 7.00pm – 8.30pm
- » 27 x Community members attended (31 registered)
- » The workshop was facilitated by the City's Engagement Specialists and Project leads.
- » Participants were highly motivated, engaged and contributed valuable conversations and 'Big ideas' to help formulate the City's Climate Change Action Plan. (Strong sentiment to call it a Climate *Emergency* Action Plan)

### Live Ice Carving Event:

A live ice-carving of a cockatoo was held at the Artisan Markets, providing opportunities for locals and visitors alike to provide feedback; to create a general awareness of Climate Change, to develop the sense of place, and ethos associated with the City of Kalamunda; and to provide a positive consultation experience.

Footpath stickers and posters with QR codes were placed in the market zone to further promote the project and lead attendees to the live ice carving and engage in conversations.

The event was filmed for additional (and future) Climate Change promotion/engagement.

**Pop-up Pop-in Booths:** Opportunities to engage in Face-to-face discussion on the project were provided at two Pop-up Pop-in Booths. 'Ice melt' sculptures provided conversation starters and engagement with the City's youth.

- 10 November 2021 - Outside the Kalamunda Library
- 22 November 2021 - Hawaiian's Forrestfield

**Social Media** raised a broader awareness of the Policy and of Climate Change initiatives already being implemented and promoted in the City - receiving over 47,703 Post Impressions, 17 comments and a 2.4% average engagement rate. The Pop-up Pop-in events were also promoted on the City's Facebook page.



## Communications and Engagement Objectives

- » Increase stakeholder awareness of the proposed *Climate Change Action Plan*.
- » Seek and receive meaningful feedback from the community to understand their position on Climate Change with a minimum of 100 survey responses. Including open invitation/participation to 'BIG Ideas' Climate Change Forum.
- » Increase stakeholder understanding and awareness of climate change and the need to take action immediately.
- » Seek and receive meaningful feedback from the community to identify the actions they would like to see in place to address risk to the environment, economy, infrastructure, and community health, safety and wellbeing.
- » Promote a positive consultation experience among stakeholders with the City in obtaining equitable levels of feedback from community and residents across the City.
- » Inform and update community on consultation outcomes.
- » All Objectives were met.

## Communications and Engagement tools

The city engaged with key stakeholders and the broader community via:

Engagement Tools	Objectives
Media Release (MR)	Targeting media outlets for a broader community reach.
Website: Linking to contributing nodes	Accessible, translatable, transparent. Single point reference. Links to Engagement Portal and Social Media.
Engagement Portal	FAQs, Online Survey, additional reading
Printed Survey	Print is tangible, tactile, is viewed as trustworthy and reaches stakeholders who are not online. The survey was distributed across all the City's buildings. eg. Libraries, Rec Centre.
Mail out	Directly targeting stakeholders
Social Media Campaign	Targeted posts can reach stakeholders 24/7: Facebook posts, LinkedIn, Twitter, Instagram.
Face-to-Face	One-on-one meetings as required to address stakeholder enquiries.
Email Direct Marketing	Reach City of Kalamunda Subscribers
Newspaper Advert	Reach broader community who do not have online access
Posters	Visual campaign
Pop-up Pop-in Booths	Opportunities for face-to-face discussions in a local setting
Live Ice Carving Event	Opportunities for face-to-face discussions in a local setting Broader stakeholder awareness Build community and placemaking. Provide footage for ongoing promotions in the Climate Change space
Footpath Stickers	Visual targeting of stakeholders out in the community; QR code linking back to the online EngageHQ portal

## Strategic Planning Alignment

### Kalamunda Advancing Strategic Community Plan to 2027

#### Priority 2: Kalamunda Clean and Green

Objective 2.1 - To protect and enhance the environmental values of the City.

- » Strategy 2.1.1 - Enhance our bushland, natural areas, waterways and reserves.
- » Strategy 2.1.2 - Support the conservation and enhancement of our biodiversity. Strategy 2.1.3 - Community engagement and education in environmental management.

Objective 2.2 - To achieve environmental sustainability through effective natural resource management.

- » Strategy 2.2.1 - Facilitate the appropriate use of water and energy supplies for the City.
- » Strategy 2.2.2 - Use technology to produce innovative solutions to reduce power and water usage.

Objective 2.3 - To reduce the amount of waste produced and increase the amount of reuse and recycling of waste.

- » Strategy 2.3.1 - Identify and implement strategies to reduce waste.

#### Priority 3: Kalamunda Develops

- » Strategy 3.2.1 - Optimal management of all assets.

#### Priority 4: Kalamunda Leads

Objective 4.1 To provide leadership through transparent governance

- » Strategy 4.1.1 Provide good governance

Objective 4.2 To proactively engage and partner for the benefit of community

- » Strategy 4.2.2 Increase advocacy activities and develop partnerships to support growth and reputation

## MARKYT® Community Scorecard Report

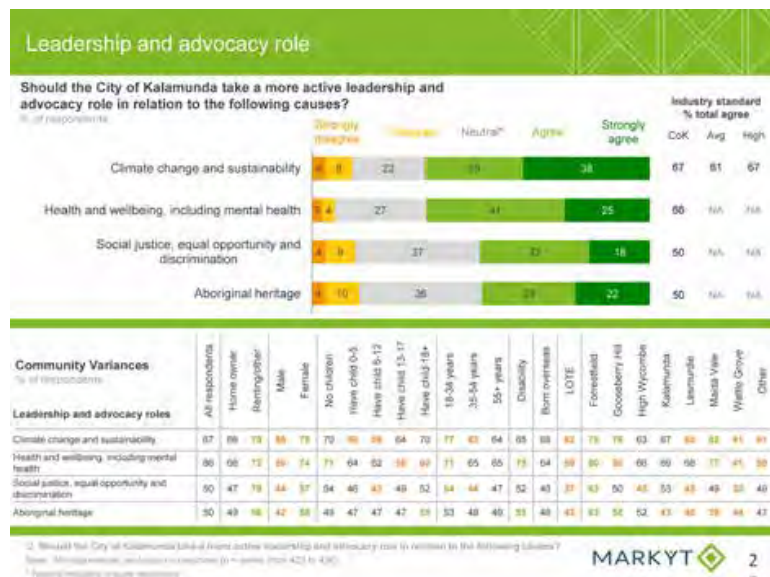
### 2020 Community Perceptions Survey

The City of Kalamunda commissioned CATALYSE® to conduct a MARKYT® Community Scorecard from 23 March to 14 April 2020. The purpose of the study was to evaluate community priorities and measure Council's performance against key indicators in the Strategic Community Plan.

Scorecard invitations were sent to 4,000 randomly selected households; 1,000 by mail and 3,000 by email.

483 randomly selected residents and ratepayers completed a scorecard.

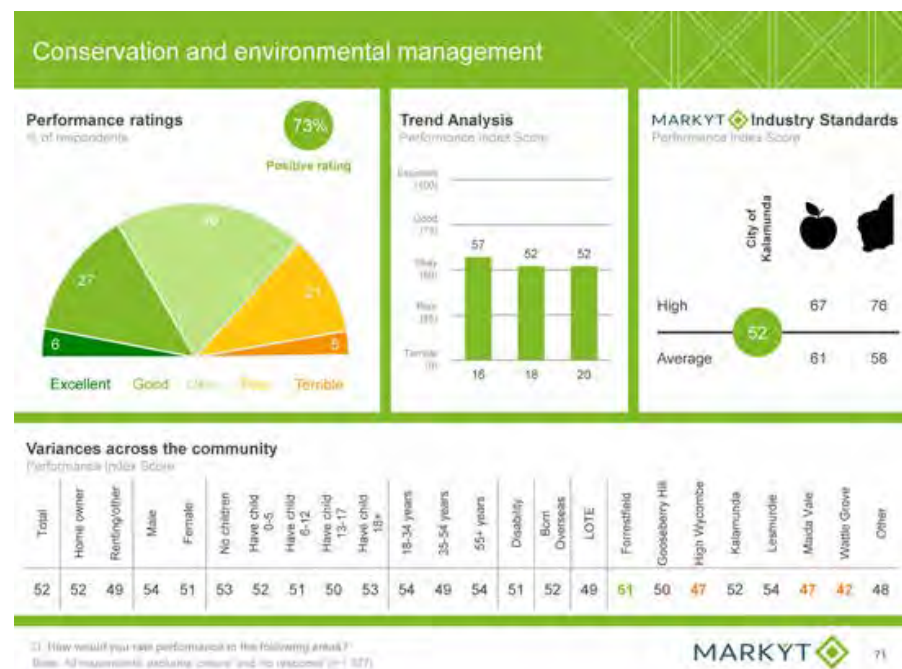
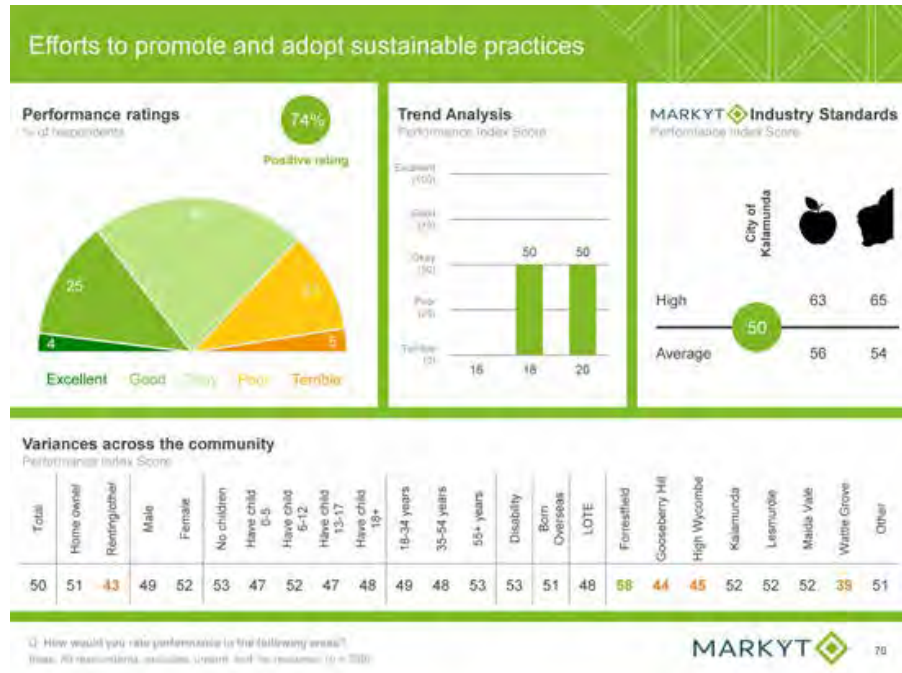
**67% Agreed or Strongly Agreed** the City's should take a more active leadership and advocacy role in relation to Climate change and sustainability.



## 2020 Community Perceptions Survey (Continued)

 **74% of respondents rated the City's efforts to promote and adopt sustainable practices with a positive rating.**

 **73% of respondents rated the City's performance in conservation and environmental management with a positive rating.**



# Climate Change 'Big Ideas' Community Forum

## Community Forum

Date: Thursday 2 December, 7.00pm – 8.30pm

Present: Manager PR, Director Assets, Community Engagement Specialist

» 27 x Community members (31 registered)

### Question asked on registering for the Climate Change 'Big Ideas' Forum: What interests you most about being involved in the Climate Change Action Forum?

Respondent	Why did you register to attend the Forum? <b>*Note:</b> Text has been included without edits as provided. Where no response has been provided the entry has been deleted.
1	Local action for residents (things we can do to live a net zero lifestyle), and ideas and support for climate declaration initiatives of the City of Kalamunda, and what to advocate for - to other levels of government, for the good of our local communities
3	Contributing to reviewing any City and or WALGA Climate Action plans and discussing any other solutions.
4	The opportunity to contribute to developing strategies and actions to increase resilience and adaptation to climate change impacts in Kalamunda.
5	Hearing and reviewing Kalamunda City's plans and then helping to identify opportunities to improve/ implement them.
6	For the City of Kalamunda and each of its residents to set a true and effective path towards decarbonisation. To consider their carbon footprint in every daily decision made
7	To be able to help protect the future of my grandchildren and this fragile environment
8	Having a voice in matters to do with planning for and mitigating against Climate Change Impacts.
10	Remaining a Hills resident
11	Discussing effective ways to take urgent action and an opportunity to inform attendees about Citizens' Climate Lobby's mechanism for addressing emissions reduction.
12	Seeing how councils can take action after declaring climate emergencies and how communities can be involved in this :)
13	Seeing if volunteer groups can assist the City and its residents to reduce their carbon footprint.
14	Doing something about climate change. As it's an individual, it's easy to feel despondent. I hope to be able to be a positive part of making change and to understand some other ways I might be able to change the things I'm doing.
15	To represent a millennial voice of residents in city of Kalamunda
16	conversation and sharing of perspectives
17	Renewable energy, water conservation, greening of the suburb, building codes, reducing bush fire risk
19	I'd keen to be a part of ensuring our city is ready and resilient to the changing climate.
20	Pragmatic, meaningful steps that position the Hills for the future
21	An opportunity to listen to a range of views and be involved with a group of like minded people concerned about Climate Change, the impact on our community and how we can work together to take meaningful action at the local level.
22	Any action by individuals is a step in the right direction. I hope to hear the opinions of other on the subjects of climate change and how we might support more awareness linked with positive actions.
23	To share thoughts and ideas. To listen to other people's perspectives on climate change. To discuss the responsibilities and what can be done at the local level and in turn state and federal levels.
24	The opportunity to let the local community know about Citizens' Climate Lobby (Aust) group that's operating in Hasluck electorate and to hear about what other groups are doing locally.
26	We must all act on climate change, at every level - Individual, LGA, State, Federal and global.
27	As a local resident and member of the City, I'm keen to support the City Council in acting on this initiative.
28	Preserving our native vegetation
29	Being able to discuss positive actions that the City can take
30	[Redacted]

\* Identifying content has been redacted

## Group Brainstorming: State and Federal Government focus

### 'Big Ideas' - Group brainstorming:

Key
✓ = Indicates when a second group particularly liked the suggestion of another group.
● = Following the group brainstorming session, each attendee was given five dots and asked to select the ideas they thought should be a 'Top Priority'.

#### 1. What should the State and Federal Government focus on in their Climate Change efforts?

##### Top Priorities:

- Remove subsidies for fossil fuels and political donations from fossil fuels (consider farmers etc.)
- Collaboration between State and Federal Governments
- Local, State and Federal Government to fully cooperate and agree/for agreed efforts /actions - "A national policy". One policy.
- A plan with a trajectory to reach net-zero by 2030 with transparent audits and reporting ✓
- Aust as a climate leader - solar wind, tidal
- Subsidies for EV purchase
- Steadily increase in carbon price with dividends paid to citizens (See Aus. Climate Dividends / Citizens Climate Lobby Australia)
- Carbon neutrality as part of tender process ✓
- Legislate climate targets to avoid politicisation
- Protect native wildlife and old growth forests.
- Recycling facilities for each State
- State get behind WALGA initiatives

##### More:

What should the State and Federal Government focus on in their Climate Change-Emergency efforts?

Focus on investment in renewable energy (domestic and industrial)

Listen to the science and respond to advice of experts, like

they did with COVID-19

Increase roll out of microgrids

Diversify State economy away from carbon intensive industry

» Exporting renewable energy

» No new gas!

Stop damming wild rivers

Honour election promises around fracking and uranium

Stop draining aquifers ✓

Incentives for regenerative/sustainable agriculture ✓

State + Fed Government should model climate best practice - be change leaders ✓

Recycling of rubber and building waste for roads etc.

Transition to electric appliances and facilities

Eliminate gas infrastructure/ replace with electric

DBCA publish carbon impacts of prescribed burns (State) - report on loss of native animals

Work within regions to transition to carbon neutral communities ie. local sourcing, rail transport + (hydrogen)

Consultation with first Nation elders

Climate migration policies from a *humane* POV

Eliminate lights when not needed.

Strict criteria for land use by foreign investors

Ban further land clearing

Being more bold in aspirations and targets

Listen to majority of people and science

Pressure manufacturers to reduce waste

"WA Local Governments are already actively engaged in climate change mitigation and adaption activities, but regulatory hurdles at the State level hinder a range of beneficial projects such as large renewable energy projects, energy efficient street lighting retrofits and the protection of our urban forest, Cr Craigie said" - This is Lynn Craigie WALGA speaking about what State Govt needs to do!

Forget the debates and set the targets!

Stop any deforestation now

Become vegetarians 😊



## Group Brainstorming: City of Kalamunda Focus

### What should the City focus on in its Climate Change efforts? (And Action Plan Development)

#### Top Priorities:

- Become the City that models and sets the standard for climate action ✓
- Building awareness of climate change emergency for residents of the City:
  - » Informing
  - » Education
  - » Consulting
  - » Empowering
- All decisions must first consider 'carbon footprint' and alternative options ✓
- At least 50% carbon reduction by 2030 25
- Link climate investments to cost savings or economic development
- Incentivise better household waste management (to reduce household waste).
- Highlight and celebrate initiatives already undertaken by the City
- Use the existing facts and policies eg. IPCC policy for policy makers
- FOGO
- Ensure council actions the Biodiversity Strategy and Urban Forest Strategy and retention of trees on private property and hold developers to account.

#### More:

- Develop a 'sexy' motto involving professional marketing
- Manage feral animals - cat to be indoors \*
- Reducing energy use and waste/unnecessary use and creating efficiencies
- Change attitudes towards use of finite resources
- Workshops like this with city staff to identify changes to be made within their workplace
- Workshops like this for small /local business to identify change to be made
- Encourage 'green' building
- Better links to public transport
- mandated through the City's Local Planning Scheme



- Prioritise the retention of tree canopy
- New estates have plants for residents incl. mature trees
- Stop idling vehicles
- Community batteries/subsidies for residential homes
- Reduce urbanised development
- Re-evaluate land use- subject to environmental consideration
- Containers for change in accessible locations eg. Forrestfield shops/Woolies Kalamunda
- Improve stormwater harvesting and aquifer recharge
- Audit and report publicly all waste/recycling/and other factors bush reserves regularly to understand trends (feedback) to community
- Be open and transparent
- Ensure council actions the Biodiversity Strategy and Urban Forest Strategy and retention of trees on private property and hold developers to account.

## Group Brainstorming: Industry focus

### What should Industry Focus on in their Climate Change Efforts?

#### Top Priorities:

- Industry reporting/ transparency re emissions
- Prevent them from clearing all urban canopy
- Circular economy
- Supporting small business in transition
  - » Installing a micro-grid in industrial areas.
- Source local support local
- Force land developers to conserve
- Bush and re-vegetate around buildings
- Reuse, recycle ... not as an option but a requirement!
- Prioritise and coordinate lobbying around key carbon reduction priorities
  - » SMEs
  - » Big Business
  - » Lobby groups
- Transition to all - electric facilities/appliances
- Source sustainable inputs
  - » Energy - Wave, wind, solar, geothermal
  - » Materials
  - » Green - steel, concrete, aluminum, hydrogen
- Carbon neutral
- Industry to be leaders and not wait for Govt policy
- Reduce/eliminate fossil fuel subsidies - balance needs of different sectors
- Electrified transport - trucks, 'last mile' couriers
- Increase Research and Development and sharing of 'best practice'

#### More:

What should Industry Focus on in their Climate Change Emergency Efforts?

- Battery storage
- Recyclable products
- More canopy on industrial land
- More alternative fuel transition
- Industry held to account for surface and sub-surface runoff
- Industry and local government to lobby State Government for subsidy to smart vehicles
- Accredited - accreditation programmes
- Understand emissions/ audit/ access to tools
- Improve efficiency
- Advertise carbon miles with products
- Eliminate waste
  - » Esp. due to cosmetic issues
  - » Obsolescence
- Recycle
- Cradle to grave responsibility for products
- Standardise products



## Group Brainstorming: Reducing Impact

### What can community members to do reduce Climate Change Impact?

#### Top Priorities:

- A community climate change event:
  - » Education
  - » Awareness
  - » Celebration of achievement 😊
- Solar panels, batteries and insulation
- Advocate for climate emergency actions
- Partnering/connecting with other Hills communities
- Support local/shop local ✓✓
- Review personal commitment to climate action
- Join Friends Groups; get involved
- Consume less ✓
- Have conversations with your friends, family and close peeps.
- Use your vote  - Personi who cares
- Encourage use of rainwater tanks in homes
- Reduce A/C temp by 1°C to 23°/27°C

#### More:

- What can community members to do reduce Climate Change-Emergency Impact?
- Spread and share awareness of climate emergency
- Partnering with school and local community groups to initiate sustainability programs.
- Home composting ✓
- Buy less packaged products ✓
- Reduce plastic consumption
- Reducing number of pets
- Involve/inform you kids
- Repaint roof, seal eaves for fire protection, include water tanks
- Planting waterwise and wildlife friendly gardens
- East more plants (plant - based diet) ✓
- Plant more, chop less
- Use organic/green fertiliser in gardens to limit chemicals (synthetic) in ground water
- Water wise gardens, less area of lawn
- Reduce artificial grass
- Physical barriers in orchards/market gardens for insects/ birds (as practical)
- Advocate for emergency funding of climate change measures before and after critical events.
- Create an annual 'High Profile Award' for community members
- Design to use solar passive buildings ✓✓
- Transition from gas to electric (delete your gas bills).
- Work with BP (and others) to offer power for the community
- Electric vehicles and charging station
- Advocate for - make charging stations at prominent, attractive locations.
- Continue (increase) planting trees and shrubs on verges and city land
- Catch public transport when available (new station)



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## Group Brainstorming: Biggest Barriers

### What do you think are the biggest barriers for Climate Change Action?

#### Top Priorities:

- Understanding that 'change' can/will save you money.
- Put monetary value on trees/environmental
- Lack of leadership
- "I'm only one person, what difference can I make?" feeling powerless
- Development Issues
  - » ●● Poor government
  - » ● Land clearing
- Misinformation by fossil fuel industry in denial and conservative media misinformation
- Lack of engagement with current state of the climate
- Ban political donation – provide all parties / candidates with campaign and operating budget paid by taxpayer
- Politics
- Consumerism
- Involvement of younger generations in ideas
- Lack of value of mature trees
- Change resistance
- Lack of personal responsibility

#### More:

- What do you think are the biggest barriers for Climate Change Emergency Action?
- Growth economy
- Population growth
- Cost – lack of Federal/ State Govt incentives
- Portrayal of issue in the media
- No consideration for the environmental impact of new developments
- Lack of ecological /environmental budget to be incorporated in investment decisions
- Lack of opportunity for community to put forward ideas (tonight excepted)

Need young communicators to convey the issue to younger generation in some socio-economic situations.

- Apathy
- People's dislike of change
- Climate deny-ers (very loud)
- Lack of community understanding
- Attitudes
- Despair – doing nothing (sense of powerlessness)
- Fear
- Protection of jobs
- Lobby groups
- Limited innovation
- Access to technological solutions
- Lack of narrative with advantages of policies to mitigate
- Political
- Age group priorities
- Business priorities
- Cost to Government
- Development Issues
  - » Creating heat traps
  - » Improper orientation
  - » Incentives/fines
  - » Inadequate penalties – don't match the crime
- Developers have too much priority including land clearing
- This is my land I can do with it as I want
- Ensuring City contractors limit vegetation removal – listening to local residents
- Lack of space in streetscapes /planning for urban canopy
- Poor public transport system – disabled access to transport systems.
- Planning policies

## Feedback via Mentimetre: Individual actions

### 'Big Ideas' feedback via Mentimetre

- » 26 x voices logged on to Mentimetre.
- » Mentimetre allows workshop participants to use their smartphones to anonymously answer questions. Their responses are visualised on-screen and in real-time.
- » Note: the comments are as provided, without editing

#### 1. Workshop participants were asked how they were feeling.



#### 2. What actions are you, as an individual, currently doing to reduce/prevent climate change and the effect of climate change?

Voice	Individual actions currently taken to reduce/prevent effects of climate change.			
1	Solar panels.	Revegetation of property and wildlife corridors Land for Wildlife to protect native flora and fauna	Lights changed to LED Member of the City Environmental Committee	Current reading of carbon footprint Reduce clearing in subdivisions Electric car charging Subsidise home batteries Solar farm All buildings with solar panels Limit spread of urbanisation
2	Planting many trees & shrubs	Energy efficient lights & globes	It's Climate Emergency Action Plan - please amend name from the outset	
3	Low water use garden	Reducing plastic wastes	Member of Perth Hills Climate Change Interest Group	
4	Renewable energy batteries		Electric vehicle	
5	Water wise gardens, solar panels, solar hot water, using public transport, supporting sustainable business, sustainable food options			Containers for change, REDcycle

Feedback via Mentimetre: Individual actions (Continued)

Voice	Individual actions currently taken to reduce/prevent effects of climate change.				
6	Planting for habitat, ground cover and revegetation. Long cutting grass to cover soil through summer. Composting heaps	All street trees in the city with a number so feedback on its health and need for care. No removal for large trees on public and private land with meaningful penalties to help ensure compliance.	Recycling in the hope that none goes to landfill. Local batteries for night drawdown. Dealing with plastic strategies	Rainwater catchment for home and garden use. Storm water cleansing so it leave the City drinkable.	Meaningful and proven action that is regularly reported on.
7	Planting native plants and increasing tree canopy	Composting	Raising issues with local and state government	Rebates for installation of energy savings devices /home modifications	Start a repair cafe
8	Planting native gardens, growing my own food, solar panels				
9	Driving electric	Collect all rain water	Buy sustainability sourced materials for anything I make	Commit to 50 % reduction by 2030	Building regulations to reduce household energy use All community events to consider sustainably sourced materials or becoming carbon neutral
10	Solar panels, solar battery, solar hot water. Majority native garden				
11	Solar power and hot water, have taken the no-fly pledge.		Taken the no fly pledge. Solar power and hot water. Member of the Nature Reserves Preservation Group		
12	Minimise using vehicles.		Reduce spending on things/goods		
13	Solar PV and solar hot water, reducing driving where possible, home insulation to reduce need for heating and cooling.				
14	Solar hot water system Reuse water ie washing vegetable etc for plants Maintaining our natural tree canopy		Composting food waste Encourage native animals and birds Reduce plastic waste etc		
15	Electric car, solar, planting trees				
16	Reducing plastic waste, solar, electric vehicle, growing food		Building resilient community,		

Feedback via Mentimetre: Individual actions (Continued)

Voice	Individual actions currently taken to reduce/prevent effects of climate change.				
17	Solar power and hot water	Drive electric vehicle charged from 100% renewable via synergy greenpower	Eat mostly vegetarian	Buy with no packaging where possible	Only buy biodegradable or recyclable products, used where possible
18	Plant trees to improve canopy cover, shade and habitat	Work with the agricultural community to increase carbon sequestration and reduce emissions	Talk to youth about what they want the future to look like	Reduce, reuses, recycle	Working with local, state and national environmental groups
19	Reducing usage across all aspects of our household, investing in companies that provide sustainable options.				
20	Solar panels with batteries, solar hot water, Planting with natives, electric car, reuse & recycle				
21					
22	Driving as little as possible		Using low energy light bulbs		
23	Minimal spending		Started a community group to influence policy across the Perth Hills		
24	Planning to buy an electric vehicle				
25	The elephant in the room World population about 9 billion and rising. Every one hopes food. Health care, vonsumet goods and of course employment. Current inustry and commerce is aimed at growth while climate change solutions are in the opposite				
26	Planting treesavtive in to Friends Grouo Zero emissions home and daily living Support for carbon positive programme - donations Vice chair Perth hills climate change action group				

## Feedback via Mentimetre: Want included in Action Plan

### 3. What great ideas would you include in the City of Kalamunda's Climate Change Action Plan?


Voice	'Great Ideas' for the City of Kalamunda's Climate Change Action Plan				
1					
2					
3	Net zero by 2050	EV charging stations			
4	Encourage efficient housing	Recycling medical blister pack			
5	Community battery / reduced cost for residents to buy home batteries, containers for change location local to Kalamunda, FOGO	Wind farm, ongoing climate action group, support local businesses to become more sustainable	Grey water education and incentives for residents to invest		
6					
7	Rebates for installation of energy saving devices /home modifications	Planting fire retardant vegetation in public areas	Repair cafe		
8	Increase tree canopy, invest in EV infrastructure, community veggie gardens				
9					
10	Community batteries. Solar power for all council buildings.	Medical waste recycling.	Prompt implementation of actions		
11	Building the awareness and capacity of residents to reduce their environmental impact				
12					
13	All council plans and policies must consider impact of Climate Change.				
14	Community battery and Microgrid system	Encouraging use of home rainwater tanks	No destruction of tree canopy	Grey water use	Subsidise costs for every day person
15	Set planning standards - incentives such as grey water usage, double glazing, verge shade trees				
16	Electric car charging	User pays waste removal to encourage minimising landfill waste			
17	A greenhouse gas emissions audit	Call it an emergency as voted by ratepayers			
18	Solar farm sounds great	EV fleet by 2030	Connecting our kids to Country so they understand what nature is	Change the name to a Climate Emergency Action Plan	
	Reduce vegetation loss; replant street trees	Solar panels on all City buildings, with batteries	Alignment with the 17 UN sustainability goals	Integrate Water Sensitive Urban Design in all projects, including retrofitting older infrastructure	
19	Encourage better management of rubbish - there is no incentive to reduce rubbish or to compost.			Better public transport linkages.	



Feedback via Mentimetre: Want included in Action Plan (Continued)

Voice	'Great Ideas' for the City of Kalamunda's Climate Change Action Plan		
20	Using electric vehicles for City of Kalamunda including rubbish collection vehicles, ev charging, retain vegetation & encourage planting natives		
21	Ok solar hw/planting trees/ low energy light/	Chesper battery storage /ev charging stations/ pd Imote	commity education
22	A community battery and microgrid system	Supporting legislated carbon price.	
23	Identify gaps in the market and invest in those areas - eg. Community batteries, electric ride share and on demand bus services, - and then shift out of the market as industry begins to meet demand and reinvest in the next gaps	Explore diverse hire and public electric transport options - scooters, Bikes,	invest where it delivers savings to government, businesses and residents - eg solar, community batteries etc
24	Targets for 2030 & 2050		
25			
26	Alert from all of the points in the Perth hills climate change action group I would add - micro grids with community battery - partnered with cities power partnerships Climate Council Community empowerment initiatives such as Switch Your Thinking		

4. Please rate the workshop content.

Please rate the workshop content 



# EngageHQ (Survey)

## Demographics

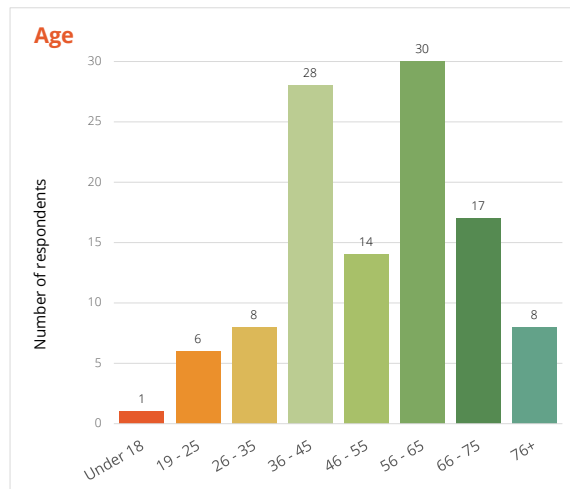
**The Survey received 122 responses**

**In addition, four (4) formal written submissions were received from Stakeholders.**

The survey was a mixture of rating style questions and open comment questions.

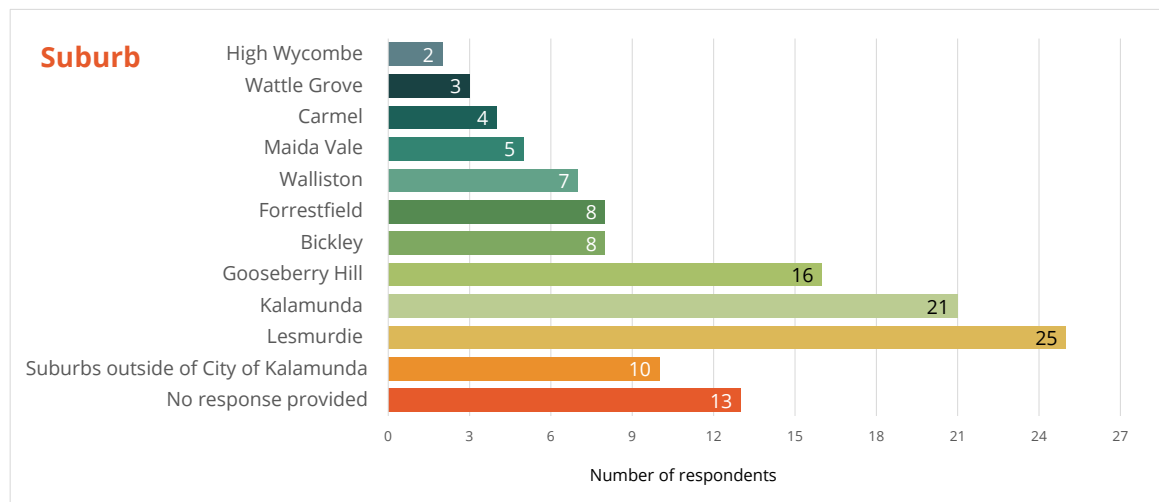
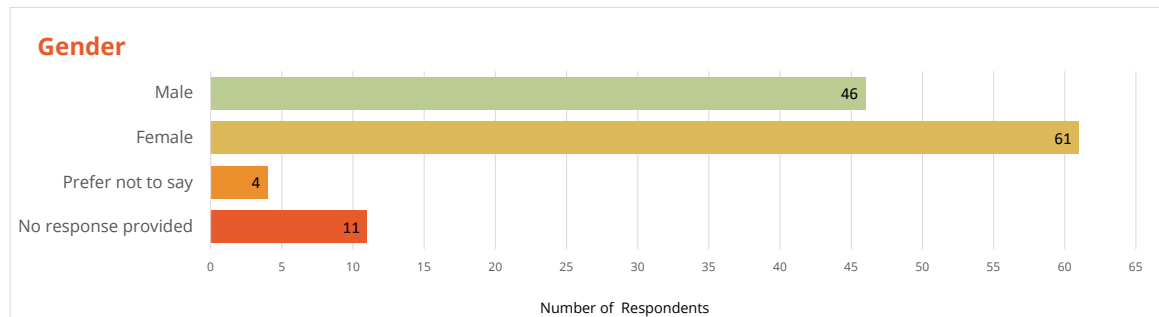
### Engage Traffic

- 468** Total visits
- 42** Maximum visits per day
- 191** Informed Visitors  
*An informed visitor has taken the 'next step' from being aware and clicked to access more information.*
- 401** Aware Visitors  
*Aware visitors will have visited at least one page.*



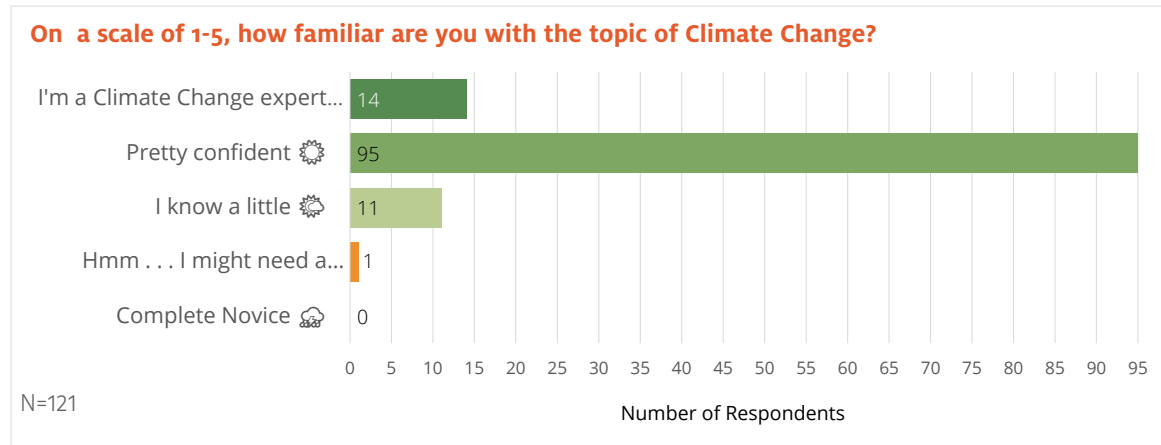
### Profile

- 92%** Local residents
- 3%** Identified as representing a local business
- 6.5%** Identified as representing a local community group
- 7%** Identified as a visitor to the area

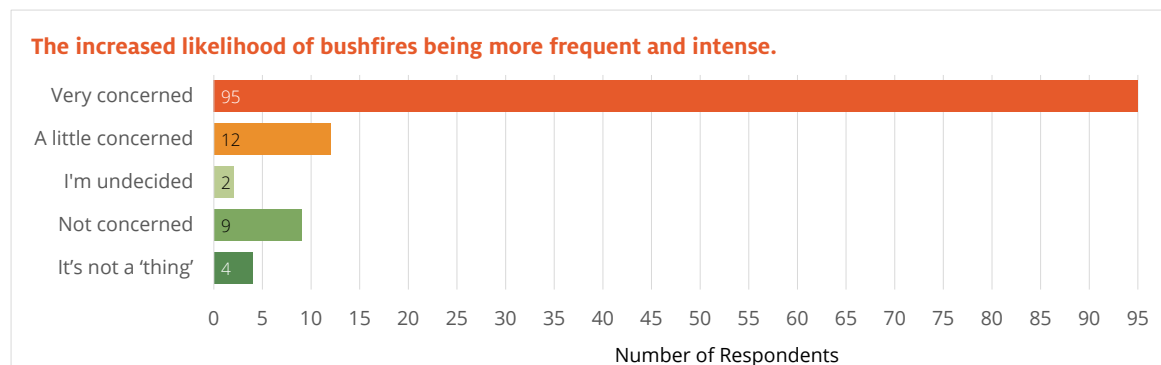
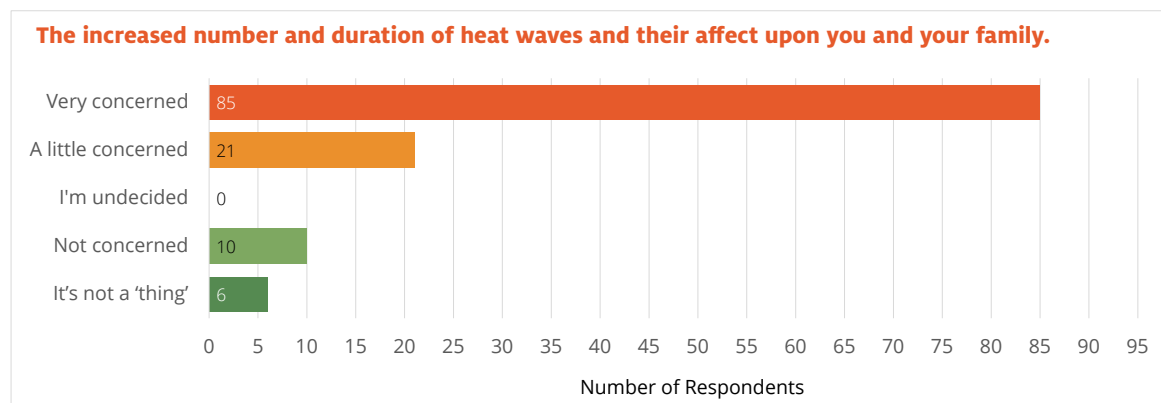


# What respondents' think and do in regards to Climate Change

## Familiarity and concern

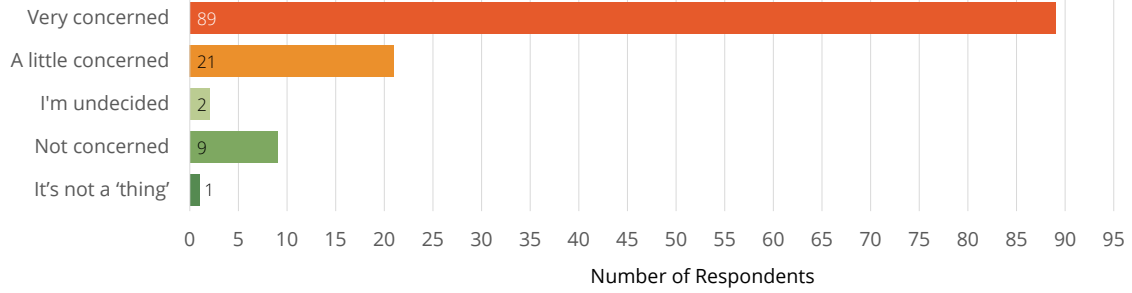


Thinking locally about climate change, how concerned are you about each of the following?

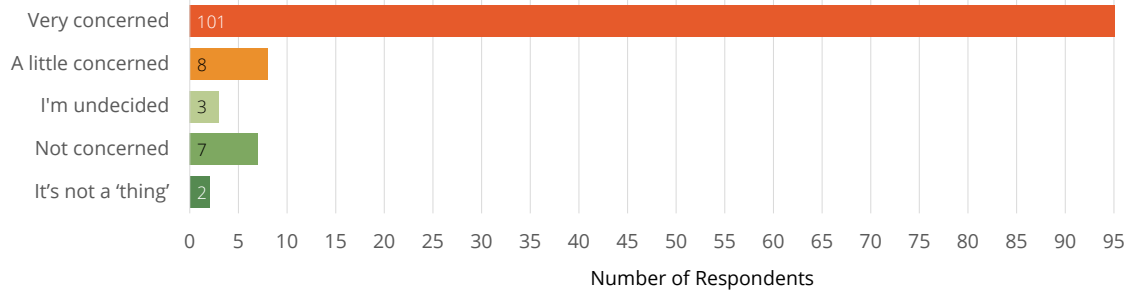


Familiarity and concern (continued)

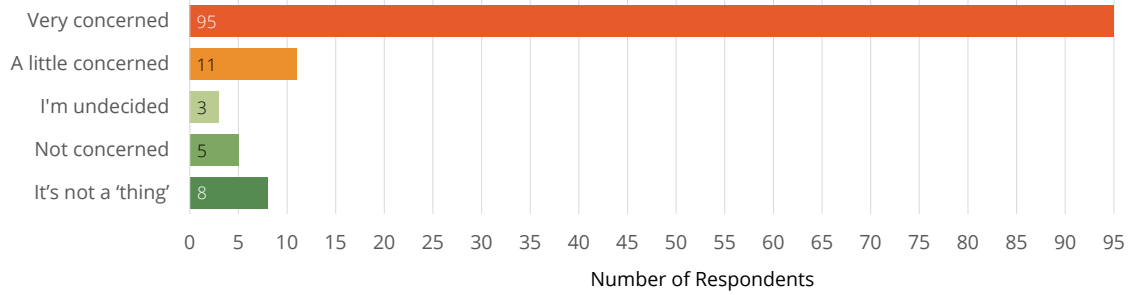
**Increasing the heat island effect in our developed areas.**



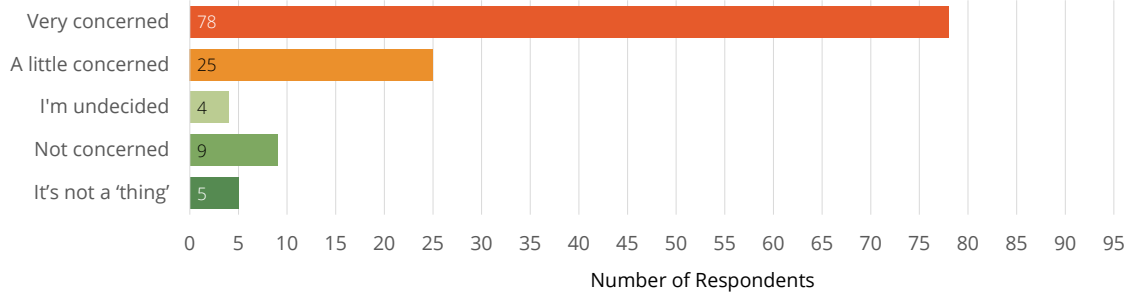
**The negative impacts upon our biodiversity.**



**Decreased rainfall impacting the replenishment of ground water sources.**

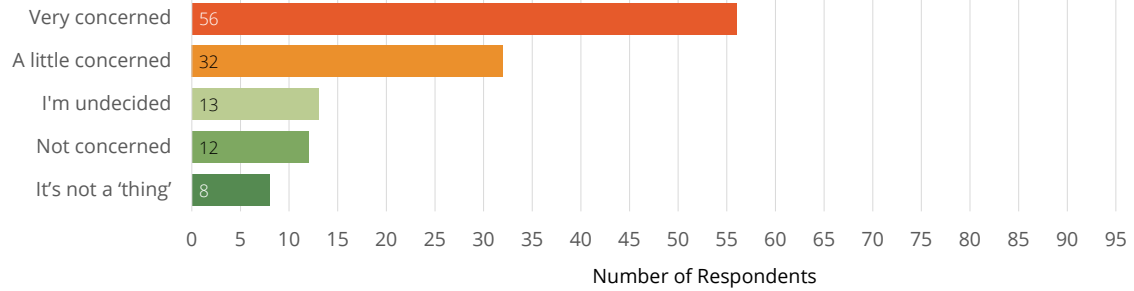


**Decreased rainfall impacting people who rely upon it for drinking water.**

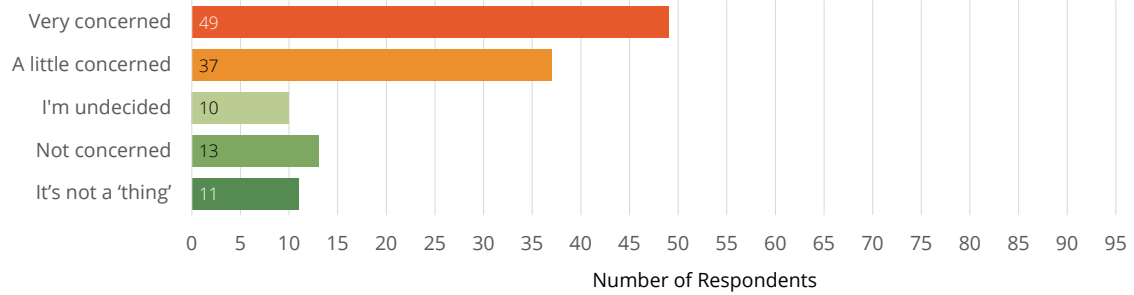


Familiarity and concern (continued)

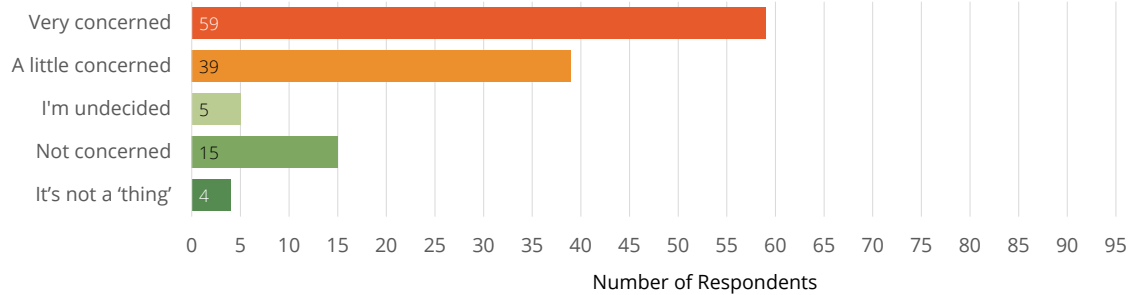
**Increased frequency and duration of droughts impacting your livelihood.**



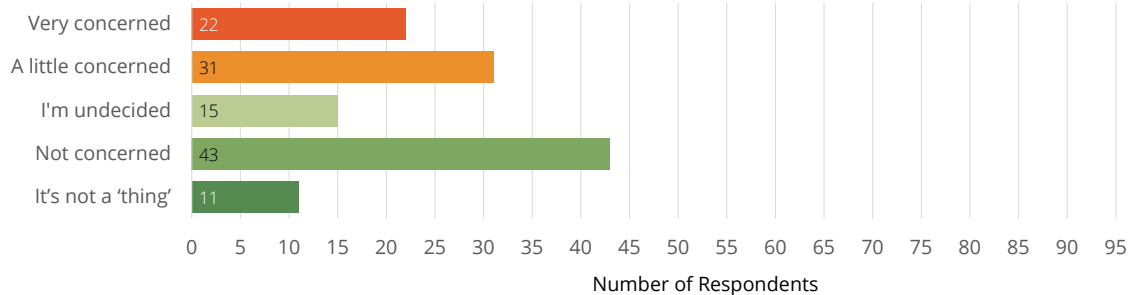
**More intense storms and localised flooding that impacts your livelihood.**



**More intense storms impacting how you get around (trees falling down, power cuts, roads flooded).**

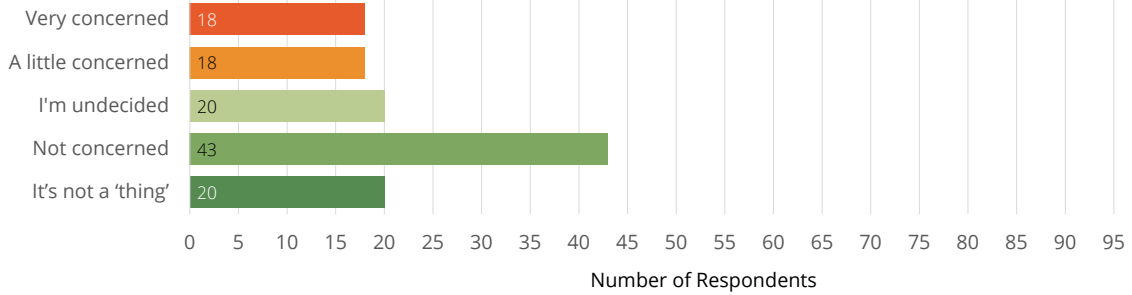


**Climate change adaption will be too hard upon me and my family to cope with.**

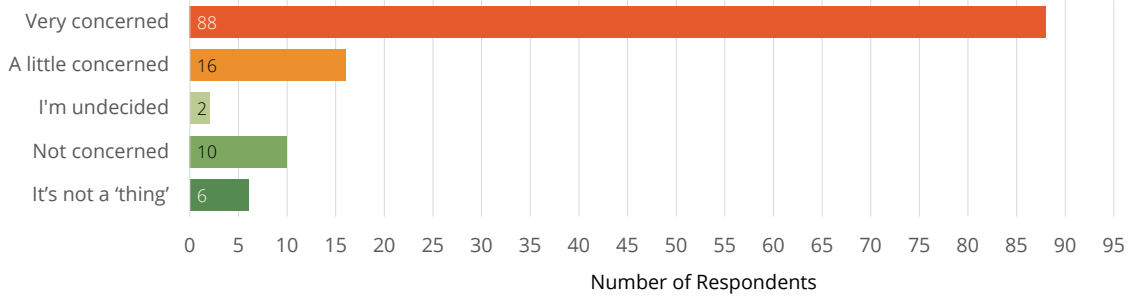


Familiarity and concern (continued)

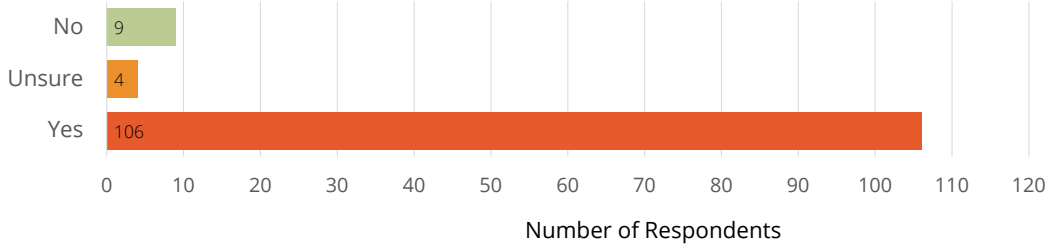
**Climate change adaption will be too costly.**



**Climate change will have a negative impact on the next generation during their lifetimes.**



**Do you believe climate change is caused by human activities?**



## Other impacts of concern

### Other impacts of Climate Change I am concerned about.

#### Overview of Responses

- » Humans - maintain a sustainable population.
- » The hypocrisy - Concern vs Actions.
- » Reaching the point of 'no return'.
- » Most vulnerable will be most affected.
- » Need for (better) well designed, energy efficient, affordable housing.
- » Health impacts - mental and physical.
- » Pollutants in the food chain.
- » Loss of viable agricultural land - impact on food production/security
- » Food supply chains not sustainable (packaging, transport, storage etc).
- » Urbanisation / removal of (all) existing vegetation.
- » Cost of living / affect on economic environment
- » Global instability (climate refugees, war over resources.)
- » Rising crime.
- » Concern for wildlife - extinction rate.
- » Concern for oceans - temp, levels, biodiversity.
- » Changes to extreme weather
- » Use of plastics
- » Use of poisons
- » Water wastage
- » Climate fear is a fashion fad/nonsense
- » A waste of ratepayers money
- » Inaction and/or time taken by government
- » Cost of inaction
- » Used as a political point scorer - not genuine.
- » Current prescribed burning methods not working
- » Increased smog and pollution affecting air quality
- » Slow adaption to all renewable energy
- » Over reliance on petrol vehicles (including for City)
- » Lack of understanding of how nature works.

Respondent	Other Concerns
	<b>*Note:</b> Text has been included without edits as provided. Where no response, the entry has been deleted.
4	'Tipping points' which will not only cause humanity to lose control over climate change but can cause relatively sudden and catastrophic changes to our planet as we've come to know and depend on it for our survival. These are well documented by the IPCC, The Climate Council etc.
5	I believe those who are most vulnerable, ie the poor, disabled and elderly are the ones who will be most affected. We need to seriously consider well designed, affordable and accessible housing for this cohort. Kalamunda presently does not have housing for this group.....let alone when considering future needs. Society must consider these people when making decisions that affect them. I am also very concerned about our wildlife; we have the highest mammal extinction rate in the world.
6	Aging and heat
7	Forced migration, loss of coastal areas to rising oceans
10	Bushfires. Early detection and early action to extinguish. Don't wait for Hours. Get on top of them as early as possible!
11	Losing species and ecosystems, tipping our planet into a point of no return, catastrophic changes
13	Global instability: Climate refugees, wars over scarce resources such as clean water, food and productive land. Increase in global poverty. Health impacts: Increase in pandemics. Increase in many diseases such as malnutrition, malaria, dengue fever, Japanese encephalitis (JE), and tick-borne encephalitis, respiratory disease, heat stress. Increases in depression, suicide, anxiety. Sense of hopelessness among future generations.
14	Everyone is so concerned about climate change, but let's chop down another bunch of trees. New development, let's level everything, we don't need to see if we can retain existing vegetation. New road, let's make it as wide as we can and bulldoze every bit of green while we're at it. Let's squish as many houses on a tiny bit of land as we can, no need to leave room for vegetation because that doesn't bring in any money.
17	Melting of Arctic ice and therefore water levels rising. Temperature of oceans rising impacting on reefs and health of bio diversity in the oceans. And too many other concerns to mention
18	Loss of viable land for agriculture

Impacts of concern (continued)

Respondent	<b>Other Concerns</b> *Note: Text has been included without edits as provided. Where no response, the entry has been deleted.
20	Use of cheap plastic traffic bollards along side our roads in the Kalamunda shire, that brake, get scattered everywhere, then & brake down into our water table in a water catchment area! I sent emails to Shire and Janelle Sewell and heard nothing. They're still being used.
21	The rate trees are cut down and concrete buildings are put up
22	Climate "warmists" firing everyone to beleive in their "false religion"
23	Not just climate change but the related issue of pollutants in the environment and food chain
24	The climate is changing but please look at the facts from all sides before making statements like the first 8 questions above
26	With respect to Q4 below why is there no choice for "climate change is caused somewhat or to a degree by human activity". Why is it either all or nothing as a result of human activity? I believe human activity contributes but is not 100% driving climate change so cannot answer within the limits of choices
28	The climate fear is a fashionable world issue that's is nonsense. Kalamunda council should keep issues local and stop wasting good people's money.
29	Loss of tree cover, indiscriminate clearing, impact particularly on bird species.
30	The rate at which land is cleared in COK for more housing
31	Spending too much money on macro concerns that won't impact local issues like biodiversity in the forest due to springtime, excessive burning
33	Higher costs of electricity(for cooling and heating)
34	Local government should not be spending ratepayers money on issues like this.
35	I think there will be increased geopolitical unrest if we are not seen to be making big strides to lower greenhouse gases in the atmosphere - As a country we are one of the largest contributors to the problem so we need to do more to stabilise rising temperatures.
37	Too political - for actual impact, preparedness & mitigation it must be adopted by all sides and levels of government
39	Impacts on agriculture, and food production.
40	I am very concerned about our food systems and their lack of resilience. Our supply chains are not sustainable - how food is packaged, transported, stored and sold is very susceptible to climate change impacts.
43	Climate change is real and is happening however it's not an emergency . Besides I believe China and India will be still generating vast amounts of co2 for decades to come . Best learn to live with it but as I said I'm not overly concerned for me my children or grands children.
46	Impacts on mental health Disproportionate impacts on disadvantaged and low socioeconomic families Lack of action by government Unfair impact on young people and future generations Impacts on animal Lack of awareness/support - people thinking it's acceptable to pretend that climate change isn't a thing and won't impact us or that it's a hoax
49	Rising crime, social instability caused by hardship. Forced immigration.
50	More cyclones coming further south and the impact of larger, intense bushfires
53	Over reliance on petrol powered vehicles
54	Planning policy not aligned to scientifically based evidence - eg - developers are permitted to 'clean slate' areas of ALL vegetation to build tsunamis of roads and black roofed homes. Also, prescribed burning of our Hills' bush and forests now shown to be increasing fire risks (and weeds) by encouraging loss of cooling ground cover and naturally cool compost that would otherwise inhibit Bushfire fire spread.
57	Water becoming a negotiation tool.
58	That we arnt doing enough
62	
63	Rising sea levels, Species extinction
66	Much of Kalamunda is a virtual forest with medium to low density housing. It is fire-prone.
69	Food security
71	Increase in pandemics and the impact on our ability to manage this from a health, economic and human resource social capacity.



Impacts of concern (continued)

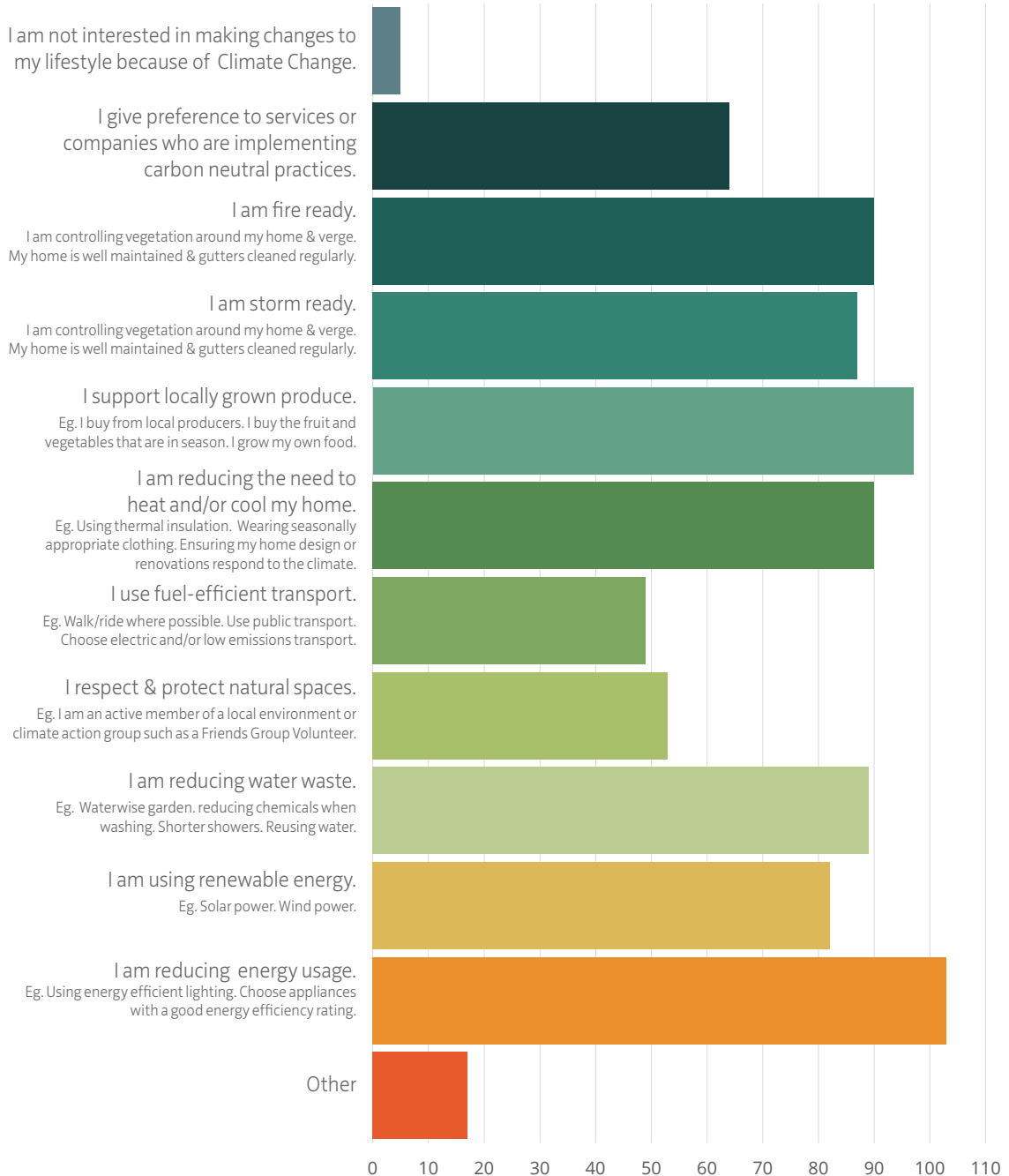
Respondent	Other Concerns <b>*Note:</b> Text has been included without edits as provided. Where no response, the entry has been deleted.
72	Humans are the biggest concern .. climate change is a result of the negative impact of human actions on the planet ..ie deforestation , human greed, increased population , increase human demands for food, human waste .. the list is never ending . We need to live respectfully & in sync with nature . Think before we build ! Look at more sustainable options , not quick fixes. We need to stop destroying mature trees & slow down our way of life.
73	I'm concerned the older generation do not think climate change is an issue, until they are personally affected by death and destruction; much like being bush fire compliant.
76	Loss of native bushland through wildfires and weeds
77	The planet not having the ability to house and feed the world's population.
78	COK is building new housing estates ( too small) and not leaving room for nature ( Trees, fauna, native species and quendas..
79	Increased smog and pollution affecting air quality
80	The local council should take guidance from state / federal government
82	Time it has taken to s tart doing something
83	- Australia's export market being negatively impacted by tariffs to countries with carbon pricing - Australian being way behind the rest of the world in embracing renewables and therefore we're missing a huge opportunity to set the country up for future profits and jobs - fossil fuel workers need to be retrained now, so they have a future in renewables
85	The green party and its over reaction
86	See following in answer to: What great ideas would you include in the City of Kalamunda's Climate Action Plan?
88	Cost of living
89	Governments are downplaying the climate crisis. Also no one in government is discussing the affect meat and dairy production is having on the climate. They still subsidise this production.
90	Slow adaption of solar panels. Add many batteries for residences use Add wind turbines in the easterly windy corridors. Excessive development and cutting down of trees. Too slow at implementing climate friendly system and financing assistance to residence to assist them doing the best they can to combat there effect. Where are the electric vehicles for the City? Encourage fruit and vegetables to be grown in street verges Removal of all poisons from use in the city. Buy local or Australia made ONLY.
93	I am concerned that CoK will spend huge amounts of money on something they can not change
94	Anxiety and mental health issues in community caused by extreme climatic events. Poverty and poor living conditions for those unable to afford to cope with living standard changes due to climate change.
97	Indifferent responses from our National government and the continual treatment of this vital matter as simply a means to score political points
98	Flow on effects from the impact of climate change on other areas of WA/Australia that impact food security, livelihoods, lives and mental health of people (and other life). Also particularly concerned about the levels of anxiety in young people as a direct or indirect result of climate change events. There is plenty of money to fund these things if they are valued enough.
99	It needs to linked to productivity growth. Eg. Solar and battery micro grids reduce infrastructure and energy costs while improvise reliability at the periphery of the grid in areas like the Hills. It can be linked with increasing the number of small mobile towers and wifi towers to improve telecoms reliability in emergency and business situations. Both reduce costs and improve performance in different ways. Solar linked to water pumping is both a way to store energy and reduce the highest cost of water networks. Rain water tanks can be adapted to do this for each house or linked to a central tank like a micro grid to generate energy at night and improve water pressure at low cost. And so on.
101	Removal of trees and over development. Please plant more trees, stop cutting them down. Also we need to maintain a sustainable human population

Impacts of concern (continued)

Respondent	<b>Other Concerns</b> *Note: Text has been included without edits as provided. Where no response, the entry has been deleted.
102	Climate Change issues are exposing all governments (Federal, State and Local including Town of Kalamunda) to challenges to which they are not suitably equipped to respond adequately.
103	Going down the path of only relying on renewables for our energy. It's short-sighted and a knee jerk reaction.
104	Lack of food production due to increasing heat and death of insects
105	Humans not understanding how to adapt to change. Need help to better educate themselves how native wildlife animals plants and birds have survived for millions of years through evolving an inherent capability to adapt
108	The impact of climate change on the macro economic environment in which City of Kalamunda and my business operate
110	Too many people talk about climate change but could take more action individually and at political levels. Similarly, too many people do not appreciate the accumulative negative effects that high population with associated demands and related business philosophies of continual expansion are putting on the planet or, that 'Mother Earth' is just a somewhat complicated lump of materials that react to the laws of physics without any sympathy for the organic population in and around its surface. Our scientists make judgements (sometimes conflicting) and our politicians make decisions based on their ambitions. Time passes and we hope that our actions will be enough to limit climate change to a level that.
111	I am concerned by the lack of intelligence by members of the Commonwealth Govt as far as Climate Change is concerned. The lack of action is obvious especially by the coalition side of national government The country's performance at at COP in Glasgow was disgraceful.
112	Lack of climate change/energy efficiency requirements in new developments & buildings. Having efficiencies built in as part of planning and approval can make significant impact on both cost to end users/households and overall energy consumption. Simple example - allowing dark roofing that does not have at least heat reflective properties (eg colourbond roofing can have coating that reflects rather than absorbs heat so can be any colour). Heat absorption contributes significantly to increased energy usage and livability of properties. Lighter roofing or roofs that are heat reflective treated can cool properties up to 33% quicker reducing need/amount of aircon in home. Reduced energy use, reduced noise pollution of aircon units and reduced energy bills for homeowner. Requiring passive energy efficiencies benefits not only homeowner but local micro-climate/heat island effect and promotes more ongoing and sustainable change.
113	Affect on other global communities. Health risks associated with climate change.
114	Affects on human health, directly through exposure and long term mental health impacts and indirectly through effects mediated through social and economic pathways
115	food scarcity. impact on low socioeconomic families due to lack of concerted effort by wealthier classes (e.g. water wastage, bore dependency depleting ground water supplies, failure to utilize power saving and implement domestic green power tech)
117	Inaction will cost more than taking action.
119	The international aspects in that climate change is posed to undo a lot of the humanitarian work that many of us have done in less well off countries, and together with the impacts on young people, undermine both national and global security. Climate change will trigger a scramble for clean water and air and encourage the evolution of new diseases globally. In the same way that the failure to achieve vaccine equity thus far is resulting in new variants of COVID19, the failure to adapt to climate change is an existential threat to all of us, including Australians.
121	food shortages
122	Migrating hoards of people struggling to survive.

## Actions taken by individuals

### What actions are you, as an individual, currently doing to reduce/prevent climate change and the effect of climate change?



Actions taken by individuals (continued)

**Other actions being performed to reduce/prevent climate change and the effect of climate change?**

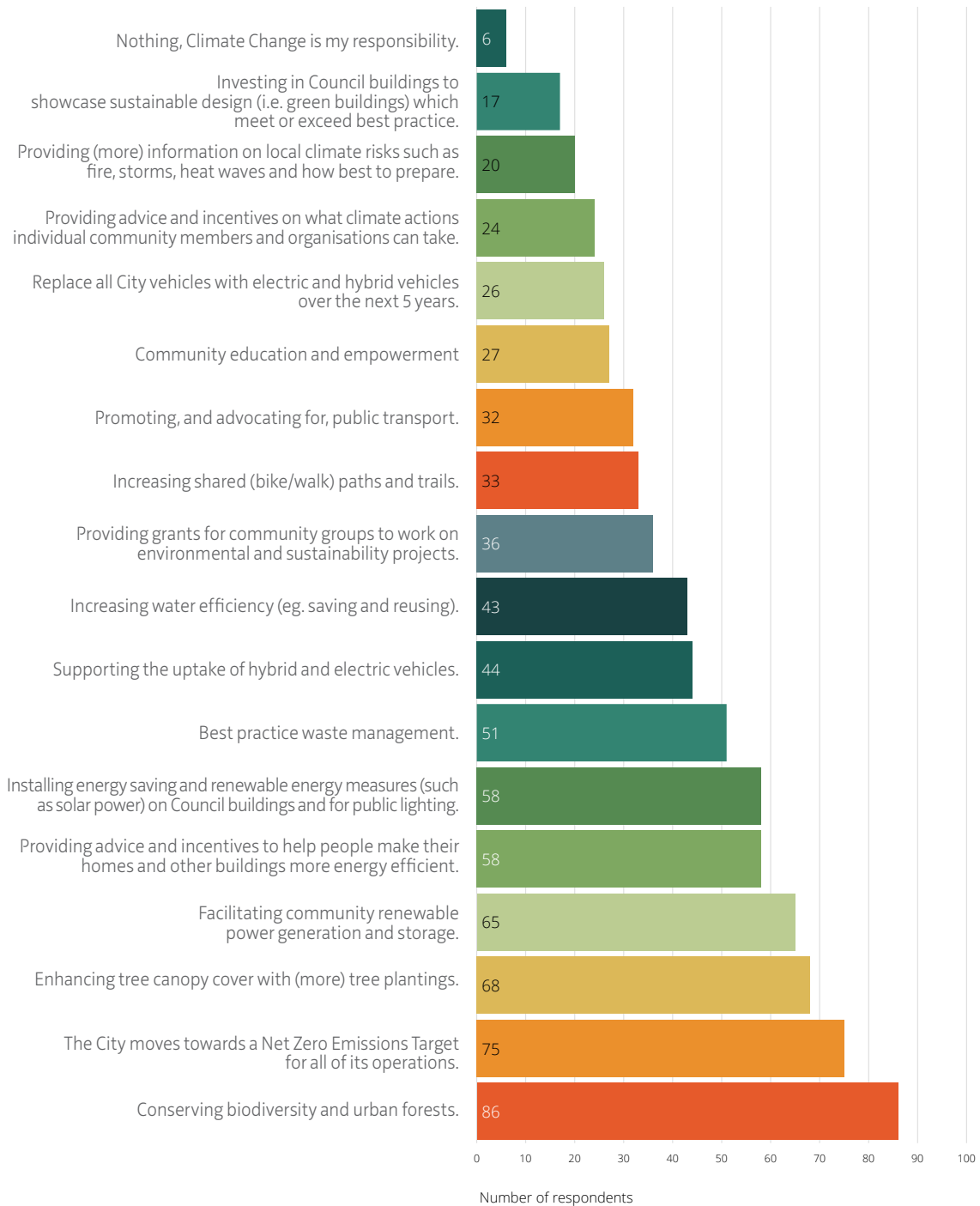
**Overview of Responses**

- » Want to install batteries, but too expensive. (Re solar)
- » Cost is an obstacle.
- » Recycle, repair, reduce.
- » Plastic free
- » Reducing food waste
- » Buying local
- » Reducing light pollution
- » Maintaining tree canopy
- » Maintaining a bush block
- » Providing water/food for wildlife.
- » Eating a plant based diet
- » Installing rainwater tanks
- » Working with/educating health professionals

Respondent	Other actions performed
	<b>*Note:</b> Text has been included without edits as provided. Where no response, the entry has been deleted.
10	Want to install a battery but are too expensive at the moment. Incentives and subsidies are non-existent. Solar credits are rapidly disappearing too.
13	I wish I could do more but cost is a big obstacle. eg. Want to install solar panels but can't afford it at the moment. Would love to see financial incentives from the shire.
17	Recycling
21	Plastic free household as much as possible
31	Many of the multiple choice answers are aligned to one ideology or another. This does not help.
33	Recycle, repair, reduce throwing away items which can be repaired,
35	I support digital action groups that lobby for more proactive moves on climate change. It frustrates me that the current Fed Gov has been involved in delaying tactics and minimising their responses. I have been hoping for change and leadership for some 50years.
46	It is not the responsibility of individuals to make changes. Though these are great and beneficial they CANNOT be used as an excuse for governments and businesses to not take action.
73	We are rebuilding; the new house is in BAL FZ. Our fire management plan; architecture and landscaping will deeply considers fire events (it's just a matter of time). The house will be as energy efficient as possible, with solar battery storage so we can contribute to peak electricity demand. Also we enjoy gardening, so we plan to compost and grow as many vegetables as possible. We also plan to have dark sky friendly lighting out side, which mitigates impacts on native wildlife (native owls etc).
73 Continued	Re green investing; it's a good idea as money is a major driver behind change. Picture a future version of "Scotty from marketing" defending Australia's green economy, maybe one that sells green energy to the rest of the world.
76	I support plastic free shopping to use less resources and mitigate the environmental impact of landfill.
86	Other things we are doing: Encouraging native/endangered birds and wildlife by making water (bird bath, water troughs) and food available. Maintaining tree canopy allowing natural nesting areas in branches and tree hollows.
89	I eat a plant based diet
95	Installation of rainwater tanks for harvesting and treatment for drinking water
106	Maintaining and replanting a full bush block 3.2ha to save carbon. A land for wildlife recognised property.
114	I am working with other Doctors and health professionals to educate peers, the public and politicians about the health impacts of climate change and adaptation as well as the benefits consequent of mitigation
115	actively seek to reduce food waste as food in landfill is a large CH4 gas producer.
120	Actively recycling, buying less packaging. Buying WA products where I can. Buying Australian made products when WA products not available. Being aware of where products come from and reducing product miles.

## Top five (5) things the City should be doing

### What are the top FIVE (5) things the City should be implementing to address Climate Change?



## Impacts currently being experienced

### What climate change impacts are you already experiencing?

#### Overview of Responses

- » Increase risk of bush fires
- » Increased temperature
- » Intense storms
- » Hotter, dryer
- » Increased anxiety, fear
- » Anxiety for future generations
- » Weather patterns and seasons shifting
- » Reduced rainfall/ water supplies/ water table
- » Coastal erosion
- » Changes in plant cycles
- » Dry soil/weather causing difficulties keeping plants alive. Canopy deaths.
- » Difficult growing food supplies - less productive
- » Feel effect of heat islands/heat sinks
- » Heatwaves reduce family time outside
- » Loss of fauna
- » Climate propaganda / hot air

Respondent	Climate Change impacts currently experienced <b>*Note:</b> Text has been included without edits as provided. Where no response, the entry has been deleted.
1	Increase risk of bushfire and increased degree of damage due to more extreme conditions is a mental health concern.
2	Weather patterns and seasons shifting and changing. Increased anxiety due to more frequent and intense bushfires, over a longer bushfire season
3	Concern that inaction now will create a very different, more dangerous world for my grandchildren as well as having less bio-diversity and natural areas.
4	Reduced rainfall, later start to the rainy season, hotter summers with less rainfall events in the middle of summer. Our forests are experiencing die-offs in certain areas as the water table drops below certain minimums on occasion over longer dry periods.
5	I see it the Mundaring Weir which has not overflowed for decades; I see it in my friends' farms in the south west with their lack of available water; I see it in the coastal erosion at our beaches
6	Not much
7	Higher temperatures all year (on average), less rainfall, stronger storms
8	Increased temperature. Varying seasons
9	Hotter, dryer climate - reduced water table, creeks drying up earlier. Heat aspects exacerbated by the loss of tree canopy across the city, making it harder to be outdoors when it's hot (eg have to drive to shops instead of walk/cycle). More intense storm events - flash flooding, debris, road damage More intense, larger fires and the associated smoke impacts on health. Increased fear and risk awareness.
10	Plants are budding too early. There's a reason the season is called SPRING!
11	Hot, dry summers; using aircon on hot days; can feel heat island effects in some subdivisions (eg off Hale Road in Wattle Grove); worrying about the future of our planet, our ecosystems and current and future generations
13	Dry soil on our property - finding it extremely difficult to keep native plants alive through summer even with watering. Increased heatwave days reducing family time outside. Creek stays dry most of the year and flooded gums on creekline are suffering as a result. Finding it difficult to grow my own fruit and vegetables - fruit trees are scorched every year and vegetable growing time is short. Family farm less productive (in Southwest)
14	Frustration. Shires and government complaining about climate change whilst they bulldoze tree cover and buil ANOTHER road.
16	Heatwaves, reduced rainfall, increased anxiety about bushfires, anxiety about impacts on our biodiversity.
17	Change of weather and seasons
18	More threats of fire close by. More extreme weather.
19	Changes in weather patterns. Canopy deaths, reduced water in the environment. Increased burn offs.
21	Weather changes
22	More climate propergander from climate warriors
23	Increased fire risk, decreasing water table and impact on mature trees, increased duration of heat waves, earlier onset of summer

Impacts currently being experienced (continued)

Respondent	Climate Change impacts currently experienced *Note: Text has been included without edits as provided. Where no response, the entry has been deleted.
25	Reduced rainfall in South Western Australia over last 30 years. Prolonged fire season, including increase in hot days.
26	Perpetual watering restrictions.
27	None
28	Total rubbish from the council and lots of hot air
29	Increased & prolonged heatwaves. Noticeable severe loss of fauna in area as human density increases & flora decreases, lack of food & shelter makes it harder for fauna to survive weather extremes
31	Silly question
32	Better rainfall improved vegetation growth
35	Water supply constraints More use of air conditioner.
37	Deviations to typical weather patterns. Impacts of globalised economy under pressure - collapse?
38	Damage to natural environment from storms and drying climate
39	Uncertainty regarding weather patterns. Impact of hotter summer weather. Some anxiety regarding the maintenance of reliable water supplies _ reduced levels in reservoirs, and draw down of artesian water levels.
43	Nil
46	Heat waves, climate anxiety and more extreme weather
48	stronger and more frequent storms
49	Reduced rainfall, higher frequency of fires, more expensive animal feed.
51	Hotter summers. Much worse bushfires throughout Australia.
52	Heat, changing weather patterns
53	Extremes in weather
54	Increased bushfire threats each summer. Noticeably Hotter summers and last summer (20/21), relentless hot and severe gusty (90kmh) easterlies - 24/7 over several weeks - no sea breeze ( BOM noted unusual).
55	More fire events in our Perth Hills area where homes are lost
56	Increased heat waves and storms, increased bushfires
57	Bush fire; demise of frogs; bird life looking for water; weather extremes.
58	Heat waves, increased fire risk, increased storms and climate change anxiety
60	Changing weather, increased bushfire risk
63	More adverse weather.
65	really? more tax
68	Insurers reducing their exposure in fire risk areas by significantly increasing premiums or even refusing to give quotes. Has happened in Gooseberry Hill, Hovea, Stoneville and Parkerville already.
69	-degradation of places I love, natural areas, decline in the health of natural bushlands and biodiversity -loss of a family member due to extreme heat exposure, and all summer long bush fire -increased sedimentation and pollution of waterways -air pollution affecting the health of my lungs - bush fire smoke and increased fossil fuel emissions from cars and trucks -increase in the cost of fresh food
71	Hotter summers and more severe storms.
72	Extremes of summer heat . Increase in power bills . Less trees . More homes being build & therefore more concrete & damage to natural environment . Less gardens & more use of plastic lawns !!! (That needs to be banned). Less people connected to nature means a disconnect .. bad for mental well-being . ( big increase in mental illness) .. we need to reclaim our connection to nature & learn to respect it.
73	less rainfall; I have forest on my property so it's dryer than previous decades.
76	Increased storms and summer heat/bushfires. Decreased overall rainfall.
78	"Wattle Grove had nearly No trees as small blocks has no room to plant trees.."
79	environmental decline, tree lopping & land clearing (e.g -bushmead), decline in air quality (wood heaters should be banned)

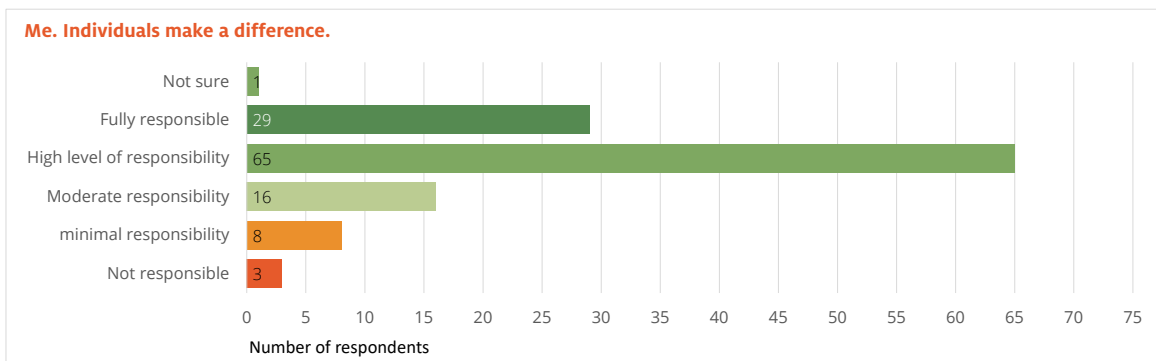
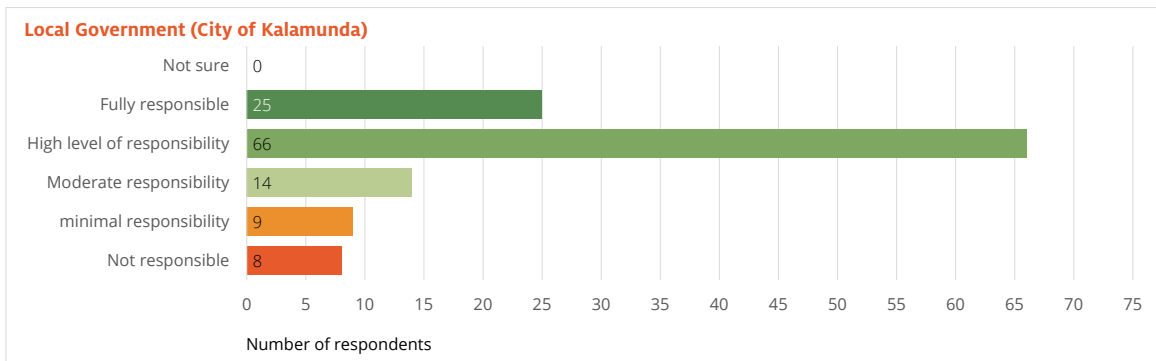
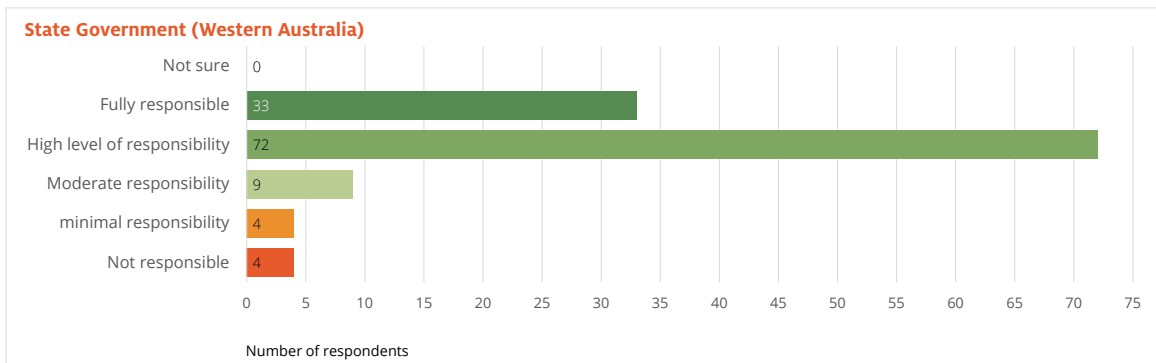
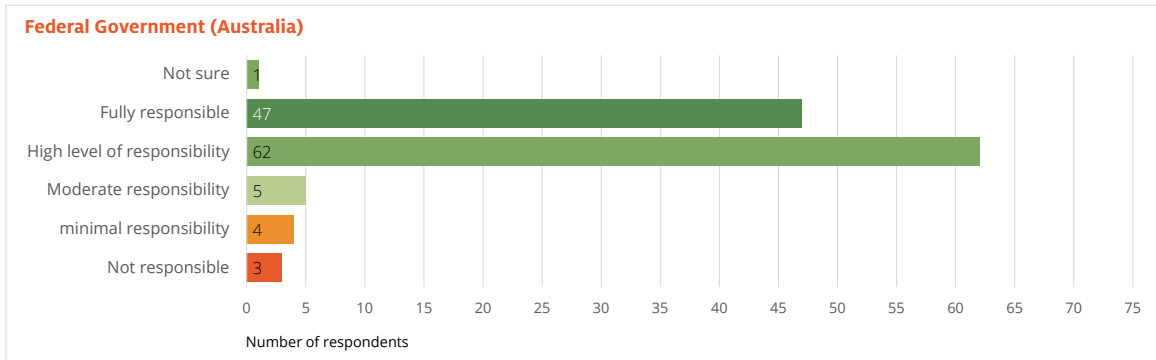
Impacts currently being experienced (continued)

Respondent	Climate Change impacts currently experienced *Note: Text has been included without edits as provided. Where no response, the entry has been deleted.
80	Nil.
83	Unpredictable weather
85	None
86	Water restrictions: Cost of water: Cost of Power for heating and cooling
87	The loss of trees because of the way housing has been developed the past few years.
89	Noticeable changes in weather patterns, native forests are visibly dryer
90	seasons are out of their cycle and fruit and vegies are stressed Never know when the water tank will fill Many potholes in the roads
92	Increased fire risk
93	Climate warriors are now religious zealots blindly following uncertain science
94	I'm witnessing a decline in biodiversity and habitat destruction of native birds and animals. I'm also experiencing the impacts of a drying climate with some trees and plants suffering from heat stress despite not having any issues in previous years.
95	Over the last few years having up to 4 days in a row of temperatures of over 44 degrees C.
97	Reduced rainfall. Increasing costs for water Increased bushfire risk Increased fuel costs Need to better insulate my home, and install renewable energy sources
98	Mental health impacts is the big one. I think for us here it is just the beginning.
99	Bushfire risk, high insurance costs, BAL linked clearing requirements destroying canopy increasing heat island and reducing rainfall
101	Hotter summers and more storms and clean up associated with it
102	All of the relevant impacts that climate science experts have been predicting and raising the alarm about for decades.
103	None.
104	Hotter summers, colder winters, water shortages
105	Obvious drying of climate in SW WA
106	Having maintained rainfall records over 30 year at our property a down trend in rainfall. totals and lowering of water table. Loss of mature Jarrah and Marri trees.
109	Difficulty keeping the home warm during what seem to be longer, colder winters.
110	Increased summer temperatures and bush fire potential.
111	I believe the warmer summers are happening.
112	Changing climate has meant more extremes are experienced. Have suffered property damage due to storms, seen increased fire risk, interruption to power grid, reduced diversity in waterways, higher levels of rubbish & waste visible over past 25+ years living in area.
114	Mental health effects - already seeing patients with climate anxiety / grief and people from agricultural communities experiencing greater uncertainty and adverse , changing condition
115	Increased temperatures in the later part of the day. Lack of seasonal definition.
116	Feeling of increased bushfire risk from climate change is a real worry particularly as live backing to Bush land
117	Lower rainfall and hotter summers.
118	More extreme weather events, reduced biodiversity
119	COVID19 (viruses evolution may be partly caused by climate change), bushfires and hot summers, negative mental health from watching hearing/reading about the Increasing extreme weather events, China moving to control water in mountainous regions in proximity to China, greenwashing, helping to fund more carbon intensive fuels via my taxes (federal gov is using taxpayer money to fund fossil fuel projects), continual efforts to promote consumerism and plastic goods, whilst feeling powerless to do anything about it.
120	Climate change.
121	trees dying, more heat and bushfires
122	Dry garden



Who is responsible? Federal Government? State Government? Local Government? Individuals?

**WHO is responsible for taking action to reduce the impact of Climate Change?**  
 Rate each of the following from (1) to (5), with (5) having the highest level of responsibility



## Great ideas to include in the City's Action Plan

### What great ideas would you include in the City of Kalamunda's Climate Change Action Plan?

#### Overview of Responses

- » Net Zero goal by 2030.
- » Build Climate Change Actions into all policies
- » Build into building by-laws (mandatory sustainable features such as passive solar design)
- » Keep it fun, positive
- » Encourage the use of renewable energy
- » Community battery and solar, car charging stations
- » Implement electric vehicles (provide charging stations, Electric/hybrid for all City vehicles.
- » Limit land clearing
- » Halt further urban spread
- » Stricter water policies - Promote water wise gardens.
- » More composting
- » Low emission waste disposal (reduce methane etc)
- » Reduce heat islands - increase vegetation
- » Increase wildlife corridors
- » Promoting, organising and facilitating community group actions.
- » Deliver on Kalamunda Clean & Green.
- » Sustainability education/workshops
- » Increase tree canopy and native vegetation
- » Road verge plantings - community vegetable patches
- » Consult with Noongar elders (esp re slow burns)
- » Review of fire zone regulations (esp. in re tree removal).
- » Ban on wood heating
- » Tender preference to low emissions companies.
- » Transfer station open 7 days a week - reduced dumping.
- » Reduced poisons.
- » Reduced rates for installing environmental features
- » Focus on providing local services.
- » Don't waste any money on this issue.
- » Solar panels as carpark shade
- » Reduce light pollution (incl. street lighting)
- » Waste - User pays
- » Stop of single use plastics
- » Better public transport - shuttle buses
- » Keep up the good work.
- » More nature based activities
- » Lead by example

Respondent	Great Ideas
	<b>*Note:</b> Text has been included without edits as provided. Where no response has been provided the entry has been deleted.
2	Community Batteries. More green waste bins. Consult with Saul Griffith on ways to boost the City's economy whilst embracing net zero emissions. Consult with Noongar elders on environmental management.
3	Impact of Climate Change to be considered with all City policies. Encourage information sharing, promote existing areas of best practice within the City and support hyper-local projects. Support micro-grids. Be proactive in creating a community where everything we do is designed to reduce greenhouse gases. Support and promote local businesses that are making a difference reducing greenhouse gases. Fill Haynes Street with businesses that don't sell junk but actively work to reduce, reuse and recycle in imaginative, creative and fun ways. Keep it fun. It's easy to become despondent and powerless.

Great Ideas for Action Plan (continued)

Respondent	Great Ideas *Note: Text has been included without edits as provided. Where no response has been provided the entry has been deleted.
4	<p>Promote the benefits of fuel switching from gas to electric &amp; prohibit new developments (residential, commercial, industrial) from installing gas infrastructure:</p> <p>Switching from gas to electric for residential, commercial and industrial has many benefits: safety, reduced cost, better performance, much higher efficiency, elimination of gas infrastructure, greater flexibility and control, and can be completely run from renewable energy (with storage etc) with essentially no carbon emissions. As people discover that they can make and use all their own energy from rooftop solar and batteries, at lower overall cost, they will want to switch. Gas on the other hand, will always have the same fossil emissions and other drawbacks. Secondly, while gas is claimed to have low emissions at point of combustion, the leakage and fugitive emissions of gas are 86-100 times greater than carbon dioxide (in the most important 20-year timeframe), so a leakage as small as less than 1% through the supply chain from well to customer makes it worst than burning coal for electricity for example. Canberra and other cities globally are banning gas in new developments. Kalamunda should guide its residents to reap the benefits of going all-electric. Some references: <a href="https://reneweconomy.com.au/the-switch-is-on-consumers-are-turning-away-from-gas-98169/">https://reneweconomy.com.au/the-switch-is-on-consumers-are-turning-away-from-gas-98169/</a></p> <p>However, the gas industry will likely fight against this: <a href="https://reneweconomy.com.au/act-faces-tough-fight-to-shake-itself-free-of-gas-after-going-green-on-power-supply-88786/">https://reneweconomy.com.au/act-faces-tough-fight-to-shake-itself-free-of-gas-after-going-green-on-power-supply-88786/</a></p> <p>Electrified vehicles:</p> <p>Electric vehicles (EVs) can provide significant lifecycle cost savings over combustion vehicles, due to much lower maintenance and 'fuel' costs. They use about 1/5-1/4 of the energy of combustion vehicles because of their very high efficiency, and capture otherwise wasted braking energy to recharge the batteries when braking or descending hills. Even better, EVs can be charged for free (no marginal cost) with roof-top or other solar PV generation. The range of the latest EVs are typically 250-600km now, and fast charging can allow a top up to 80% in about 20 mins.</p> <p>So many cities and operators are converting to electric cars, buses, trucks and even short haul aviation. Some countries and cities globally are banning/plan to ban combustion vehicles in the next 5-20yrs. It would be good to see Kalamunda trial some of the prime transport applications for cost savings. Further, the installation of a few charge stations in Kalamunda would encourage it as a tourism destination. One locally-owned sustainability business I know would like to do this, but would need financial assistance, and the EV Assn of WA could provide guidance.</p> <p>Some references for EVs and commercial conversions of heavy vehicles are -</p> <p>Heavy vehicle conversions: <a href="https://reneweconomy.com.au/victorian-ev-conversion-company-secures-cefc-backing-46799/">https://reneweconomy.com.au/victorian-ev-conversion-company-secures-cefc-backing-46799/</a></p> <p>Latest EV updates: <a href="https://myelectriccar.com.au/">https://myelectriccar.com.au/</a> and <a href="https://thedriven.io/">https://thedriven.io/</a></p> <p>High density development improvements, Prevention of Land clearing, and replanting of trees and understorey in Kalamunda:</p> <p>There is a potential win-win for Kalamunda's locality in mitigating 'heat islands' by requiring high density developments have room for trees and vegetation, reducing the loss of vegetation in developments, and increasing revegetation efforts where it is lacking to provide shade, along with reducing asphalt and concrete areas. I've had some useful discussions with [REDACTED] on this opportunity. Recreating wildlife corridors have double benefits also. These simple measures can have major impacts on airconditioning demand, bringing cost savings and more pleasant surrounds while encouraging wildlife to remain.</p>

Great Ideas for Action Plan (continued)

Respondent	Great Ideas *Note: Text has been included without edits as provided. Where no response has been provided the entry has been deleted.
5	Building by laws need to include mandatory sustainability features for all public and private buildings. Limit land clearing for housing and industry. Stricter water saving policies. Composting facilities for those who are unable to compost their own waste. I presently compost for 3 families, surely the council can make it mandatory for all organic waste to be composted
7	Most are already listed above (great work). Promoting, organizing and facilitating community group actions. Halt any further urban spread and reduction of bushland.
8	Restrictions on cutting down trees
9	WALGA have a great set of resources and ideas from all the LGAs across WA.
10	Delivering on Kalamunda Clean & Green.
11	How homeowners can invest in green energy (solar passive design, solar & wind power, shared community batteries, better insulation) How to install waterwise gardens, verges and public spaces Workshops on the above topics How to get involved and contribute in your local patch - eg join a Friends group, get to know your local environment (what are the local native plants and how you can help protect them) Reduce native veg clearing on private property (eg incentives on retaining native veg, increasing how people value native veg) Encourage planting of local native plants Turn off street lighting at nighttime to save power and reduce disruption to animal populations (eg the new research coming out on the impact of light pollution on insects and other species)
12	Educating and creating a sustainable culture in City. Remind people and encourage them to reuse and recycle as much as they can.
13	-Preservation of existing trees and protection of any trees affected by traffic, vandals, dry weather, disease etc. -Tree planting and reforestation. -Low emission waste disposal (reduce methane etc) -Review of fire zone regulations where fire services have easy access to put out fires. Fire ratings for building approval should not be the same for a bush block in the middle of town as a bush block bordering a state forest. Many home owners are cutting/removing trees they would prefer to keep, but the actual fire risk is sometimes low because their home is easy to defend or in a location where only one or two homes are close to a tree-line (ie less homes for emergency services to defend). -Implement a building code that requires homes to be positioned for best solar orientation. -Modern efficient design of new council buildings particularly solar orientation, heating/cooling. -Review of vehicles (electric) and use of vehicles (engine off instead of idling, keep tyres inflated etc.) -Tenders and contracts go to low emissions companies
14	Plant more forests and trees, green every street. Reduce concrete and vast expanses of grass, use mulch and vegetation. Insist on developments improving and retaining vegetation. Don't build a swimming pool, imagine how much you can improve the environment with those millions.
16	The City should endorse the Citizens Climate Lobby (Australia) plan for a fee and dividend system on greenhouse gas emissions (the Australian Climate Dividend).
17	Reduce fuel loads in public native spaces as well as bush near residential areas taking increased danger of bush fires seriously.
18	Promote retention of trees. Keep native plants over non native species. Promote water wise gardens.

Great Ideas for Action Plan (continued)

Respondent	Great Ideas *Note: Text has been included without edits as provided. Where no response has been provided the entry has been deleted.
19	Stop canopy and biodiversity loss. Better waste management. Greening community spaces in the town on empty land. People who own lands and building are responsible to do something with them or it should be returned to the community. More to hybrid, vehicles and rewable power.
20	<p>1. Keep the transfer station open 7 days a week. Dumping rubbish is a big issue around Bickley. People that come to the transfer station and find it closed, then dump rubbish in the bush, such as dangerous materials and non native organic matter in the bush. I've seen many non native plant species growing in the bush due to dumping.</p> <p>2. Well promoted Ranger Rubbish Litter Dropping Hotline, so fines can be issued to offenders quickly. Put up lot's of signs to promote it.</p> <p>3. Regular police patrols to deter antisocial behaviour, that result in additional litter, e.g. verge side drinking and drug taking that result in additional litter.</p>
21	Plant more trees, stop cutting down trees for buildings, including housing! More free rubbish collection so people don't dump in bush, (not everyone had a trailer), solar power lighting etc. spraying weeds with toxic substances needs to stop, grants for water tanks, less money wasted in council and spent on what is vital changes.
22	Increase tree canopy . Reduced rates for installing solar panels and harvesting rainwater
23	Increase recycling facilities and education, community battery and solar, car charging stations, stop rezoning rural areas fir high density housing like wattle grove. Increase education in younger generation, promote more recycling and green policies
26	Can you please employ someone to practically critique Council projects and practices. I'll give you an example I saw today between Hale Rd and Tonkin Hwy along Welshpool Rd. There have been many trees planted on the verge with a line planted directly under powerlines. So the ratepayers have just been given an ongoing liability to have them pruned. The people that live there have been given an increased fire risk which is not acceptable if they were to have the trees on there property but because the council did it over the fence on the verge it is all fine.
27	No comment
28	Reduce rates and minimise the council staffing levels
29	Grow trees. Increase green space. Stop residents chopping down mature trees.
31	Focus on providing local services. The Kalamunda council should not waste any money on this issue.
33	<p>Keep trees. Trees are our lungs. Stop more and more clearing. Sure progress happens but think outside the box. Developers have the power.</p> <p>You (council) are going to destroy 106 hectares of unique canopy and environment for what- more rates. Traitors to the trees.</p>
35	<p>Place footpaths (shared) beneath shade trees</p> <p>Add solar panels as carpark shade</p> <p>Invest in local batteries to reduce powerline losses.</p> <p>Start switching to electric plant and equipment.</p> <p>Encourage Nungar Elders to practice slow burns in our local bushland.</p>
36	Make renewable energy the only option for future buildings and houses. Encourage everyone else to convert.
37	Implementing a rapid net zero action plan and with elevated RAP could provide Kalamunda with a unique position of reinventing itself. Providing point of difference and economic opportunities.

Great Ideas for Action Plan (continued)

Respondent	Great Ideas *Note: Text has been included without edits as provided. Where no response has been provided the entry has been deleted.
40	<p>Programs to help community reduce food waste and plastic waste - active and genuine participation. It would be great if waste removal was a user pays system with regards to rates ( I put my bins out once a month but pay the same waste surcharge as my neighbours who get full bins collected every week).</p> <p>I would like to see the Council actively encouraging small scale community battery storage and independence from the grid. Encouraging use and uptake of electric vehicles by providing charging stations. Improving Public Transport connectivity so more people are encouraged to use public transport rather than private vehicles - especially addressing the 'last mile home' (connection between hubs and homes).</p> <p>Be ambitious reach for Net Zero goal by 2030.</p>
43	<p>Audit street lights . They use huges amounts of power ! Year ago they used to turn off at 1am . Are we that scared of the dark ? Do we even need them ? There aren't any coming up Welshpool rd so why do we need them in quiet streets ? Bickley doesn't have many and we survive</p>
46	<p>Zero carbon by 2030 anything less will mean irreversible impacts. General waste reduction, promoting the stop of single use plastics, renewable energy, better public transport, better bike paths</p>
47	<p>Reduce amount of trees allowed to be cleared for developments. Better water management and reuse. Better waterways management, natural filter of rain water run off.</p>
48	<p>EV charging points powered by hydrogen cell/solar power/batteries</p>
49	<p>Funding / payment plans for household and Community batteries (lead-carbon not lithium. It's half the price for the same number of cycles with better heat tolerance).</p> <p>Large scale solar generation (not just rooftop - megawatt scale). Community owned if funding is hard to come by. Potentially designed to run dehumidifiers from excess generation to produce water in Summer.</p> <p>fire management with high level of indigenous community involvement, absolute protection for remaining nature reserves, facilitating a shift from large animal agriculture (esp. Ruminants due to their higher contribution to climate change) by providing training and incentives for more sustainable agricultural pursuits including agrovoltaics. Agriculture contributes more to climate change than transport according to the IPCC, with ruminants as well as rice farming being the biggest contributors.</p>
51	<p>We are all responsible.</p>
53	<p>Changes to new developments requiring large green areas.</p>
56	<p>Improved waste management- expand ease of access to the public regarding methods for recycling and reducing waste sent to landfill</p>
57	<p>Tree planting, effective weed control so native species can flourish; incentives for water wise gardens, water tanks, stricter building requirements eg solar panels, establish power recharging units for electric vehicles.</p>
58	<p>Incentives for individual households to become more energy efficient and to move to hybrid/electric cars. Also smart waste disposal with FOGO</p>
60	<p>Ensuring minimal clearing of trees, protection groups our waterways and forrests. Stopping the application of pesticides.</p>
62	<p>FOGO bins</p> <p>Have more plants available for residents in the free plant program so that everyone can access them, encourage verge planting</p> <p>Improve greenspaces within Kalamunda town centre</p> <p>Footpaths need to be improved. With a large percentage of elderly and children, the footpaths are not safe to use, therefore people are not wanting to walk or ride. I won't allow my children to ride their bikes to school because of the footpaths near us (Lesmurdie Rd) - they are too narrow, too close to the road and covered in honkynuts waiting for kids to slip and fall onto the road.</p>

Great Ideas for Action Plan (continued)

Respondent	Great Ideas
	<b>*Note:</b> Text has been included without edits as provided. Where no response has been provided the entry has been deleted.
63	Solar on all schools, incentives for home batteries and incentives for Ev's.
65	Don't mandate for things like solar panels when subdividing property
66	Trees close to houses are fire hazards which also inhibit efficient rooftop solar devices. serious pruning (e.g. to roof levels) should be allowed providing that, for every tree so pruned, two young trees (or equivalent) will be planted and nurtured at strategic point within the property.
68	I am impressed by what Council is doing already (Climate Change actions in train 2021), more of the same and keep up the good work.
69	Some key ideas are as follows: <ol style="list-style-type: none"> <li>1. Increase operational net zero targets and efforts to mitigate climate change through emissions reduction activities.</li> <li>2. Work with local communities and businesses to support broader efforts to cut emissions, beyond council operations and infrastructure.</li> <li>3. Undertake a climate risk assessment and implement plans for adapting those risks.</li> <li>4. Seek out opportunities for collaboration across multiple councils to reduce emissions and adapt to climate impacts.</li> <li>5. Encourage economic development units to explore how climate action can boost the economy.</li> <li>6. Upskills all council staff to ensure they are confident about the impact of climate change on their day-to-day work, including options for adaptation and mitigation.</li> <li>7. Ensure that all planning and development activity at a local level considers climate risks and opportunities to cut emissions.</li> <li>8. Advocate for other tiers of government to embrace stronger climate policies, emissions reduction targets and frameworks for mitigation and adaption.</li> </ol>
71	More efficient waste management.
72	Plant more trees & stop uti g down mature trees as we know the importance of mature trees to survival of other trees & reducing salinity. Continue to Educate future generations on respecting the planet . Provide more nature based community activities . Eg walking groups, education on local area, links to past so we stay connected ,increase awareness of volunteer groups ..more visibility . Offer community busy bee days all year round . Connect groups . Celebrate wins & achievements with the community. Get local schools to contribute to a sustainability community newsletter. Provide incentives for locals to grow bee living plants & fruits on verges . Stop using roundup in parks & plant native flowers/ herbs instead . Offer busy bees for locals to weed local park as way of community connection .
73	Add a night sky's policy for all street lamps and public facilities ( NB this can save energy and therefore money, and increase security). This is good for the environment, and therefore will assist with climate change.  Assume that humans will fail to mitigate the cause of climate change, and prepare for the impacts; protect us from fire, and from a lack of water. Get some aboriginal cultural burning learning's integrated into policy.
74	Green waste household bins
77	Ensure, significant trees are noted and preserved (it takes a long time for our native trees to mature) Developments should be planned around significant trees. Plant more trees when any need to be removed. Vacant unvegetated land should be revegetated with appropriate native plants to minimise weed species.

Great Ideas for Action Plan (continued)

Respondent	Great Ideas
	<b>*Note:</b> Text has been included without edits as provided. Where no response has been provided the entry has been deleted.
78	Bigger block sizes to stop the Warming footprint from to Much concrete...room to have gardens...
79	Solar energy systems widely used, LED lighting widely used including street lighting, hybrid & electric vehicles widely used, mitigation of land clearing & tree destruction throughout the city. A total ban on wood heaters and associated equipment to mitigate decline in air quality
80	They should follow guidance from state and federal government. Not just do whatever they want.
85	Better cleaning of weeds and vegetation management
86	<p>2. Thinking locally about climate change:</p> <p>a. The increased number and duration of heat waves..... A little concerned, although being country born and bred, also believe this is a natural part of the weather/ climate cycle/pattern.</p> <p>b. The increased likelihood of bushfires being more frequent and intense. As at (a) as well as the fact that this has more impact where higher density housing is allowed in fire prone areas.</p> <p>c. Increasing the heat island effect in our developed areas. Very, Very concerned about the 'heat island' effect in our developed, urban, concrete jungle areas, where mature natural Aussie trees have been decimated by developers. (allowed by local and state government planning)</p> <p>d. The negative impacts upon our diversity. Development, the 'heat island' effect as above, negatively impacts upon our diversity. Our unique flora and fauna have been pushed to the edge, to the point where many are now severely endangered, albeit near extinct. Many scientists have written papers warning of such issues, not to mention doctors' and medical specialists warning of the impact also on the physical and mental health of we mere humans.</p> <p>e. Decreased rainfall impacting the replenishment of ground water sources. This year, 2021 has been the wettest for some time. Once again, we feel the cycle of weather/climate. Our dams should be at capacity really. Run off should have been maximized. Thoughts here are that loss of tree canopy, increased infrastructure etc, effects runoff, with precious rainwater flowing down roads and drains, rather than into waterways, dams etc.</p> <p>f. Decreased rainfall impacting people who rely upon it for drinking water. e above. Mention does need to be made here also, of the increase in population, either naturally, or through immigration etc, etc, which increases the need for more water consumption, but NO NEW DAMS in years, have been built!!</p> <p>g. Increased frequency and duration of droughts impacting your livelihood.</p> <p>h. More intense storms and localized flooding that impacts your livelihood.</p> <p>i. More intense storms impacting on how you get around. (trees falling, power cuts, flooded roads) g,h and i above: At this stage not really concerned, maybe should be a little. If such happens at some point in the future, then we deal with it.</p> <p>j. Climate change adaption will be too hard upon me and my family to cope with. If necessary, climate change adaption will not be too hard. People will adapt.</p>



Great Ideas for Action Plan (continued)

Respondent	Great Ideas *Note: Text has been included without edits as provided. Where no response has been provided the entry has been deleted.
86 Continued	<p>k. Climate change adaption will be too costly. Am sure there will be costs involved, but not too costly if done gradually over time and not at the expense of available job opportunities/employment etc.</p> <p>l. Climate change will have a negative impact on the next generation during their lifetime (eg your children or grandchildren) As above climate change, should it continue to occur as predicted, will have an effect on future generations, but not necessarily a negative impact. They are our adults of the future. They will adapt and no doubt come up with clever responses, initiatives etc. Young people are already speaking out against the loss of native forests, tree canopy, biodiversity etc.</p>
87	Try not to let commercialism take over the ambience the the area.
89	Education on the impact of meat and dairy production on climate, the use of reusable materials, reducing household waste and introducing a green waste collection.
90	see [previous] concerns
91	Plant more trees
92	Permeable paving solutions to recharge ground water instead of hard paving causing it to disappear into storm water drains
93	More tree canopy. solar on shire buildings incentives for rainwater harvesting ( reduced rates)
94	Community tree planting events and increasing tree canopy throughout the city. More Community composting stations and recycling stations. Incentives for stores and businesses that reduce packaging and offer sustainable solutions - perhaps provide free advertising/ promotion for these businesses?
95	In the interests of encouraging bicycle tourism and reducing fire danger close the Zig Zag road to all motor vehicles (except emergency responders).
96	CofK to be leading by example by replacing vehicles, where possible, with small, hybrid vehicles. Put in place a good number of charging stations ready for fully-electric cars.
97	A quick move to electrical vehicles
99	See above. Make climate mitigation investments that improve the bottom line and they fund the next round of investments.
100	Although I didn't mark it above, I would like to see more done about waste - not so much 'management' but reduction of waste. There's no incentive for anyone not to fill their bins every week, and I know a lot of people who work to reduce their waste, but we are charged the same rates as anyone who fills their bins to the brim.
101	Solar panels on all shops/council buildings. Stop big developments that tear down trees and ruin green areas
102	Establish an in-house tree and other vegetation planting (and associated maintenance) capacity to increase the canopy over all publicly owned or maintained street verges and other land.
103	Stop the clearing of trees, and vegetation. Allow land owners to grow trees around their houses. Stop the wholesale urban development in the hills and foothills - we are the lungs of Perth City.
104	Central/community batteries and accessible waste management
105	enhanced community education

Great Ideas for Action Plan (continued)

Respondent	<p><b>Great Ideas</b>                      *Note: Text has been included without edits as provided. Where no response has been provided the entry has been deleted.</p>
106	Stop/greatly reduce the clearance of vegetation within the City boundaries. This reduces heat islands and protects the whole ecosystem biodiversity. Increased water harvesting of runoff from built areas. City encouraging incentives greater use of natives gardens/reduced lawn areas. Promote planting - More plants for Residents and promote water tanks for garden use.
108	Introduce public EV charging stations within the City Provide discounts on rates to ratepayers who implement sustainability initiatives
110	Recycling water. Looking at ways of reducing fire danger on properties by reducing trees near houses and increasing tree planting in other Areas. Urgently considering a halt to housing construction in forested areas but looking at alternatives.
112	Energy efficiency as core to strategic goals and planning. Requirement for environmental factors such as water efficient gardens/planting in public/corporate spaces. Discounted/subsidised local native planting (ie endemic species to Darling scarp). Community energy banking infrastructure.
114	Making sure that there is good engagement, acknowledgement of affected communities and reduce potential inequality of actions and promote and shared benefits of actions
115	"food waste red bin program. Increased recycling stations for e waste/ lights/ batteries. solar power incentives (rates)"
116	Green waste bin Energy efficient requirements strengthened for planning and support for upgrades to existing homes Lead by example in City of Kalamunda buildings
117	A specific plan to transition the City operations from fossil fuels to renewables.
118	Tree canopy increase, shuttle buses within the city, electric charging stations, encourage banks back to Kalamunda to reduce need to travel to banks in midland or Cannington. Industry to use waste from orchards, green bin collections, neighbourhood batteries, stop hot box urban development in areas down the hill, ensure vegetation is not mass cleared when building, encourage grey water schemes,
119	The city could lead the way by committing to a Net Zero target for the city by 20xx.
120	Recycling. Cutting down on wrapping, waste. City to only buy WA/Australia made where possible.
121	preserving trees.

## Who funds the initiatives?

### How do you think Climate Change initiatives should be funded?

#### Overview of Responses

- » 49% Support Federal Government funding
- » 42% Support State Government funding
- » 38% Support funding via Rates
- » 2% Said the City should provide grants
- » 12% Support a Levy
- » 23% Said cost efficient changes / working smarter will cover costs
- » 10% Support Community/sponsorship funding/fundraising
- » 28% Support user pays eg Developers and business producing high carbon emissions

Respondent	How do you think Climate Change initiatives should be funded? <b>*Note:</b> Text has been included without edits as provided. Where no response has been provided the entry has been deleted.
1	State Govt Taxes
2	Rates
3	Grants from State and federal governments. Consider a special levy where money's are solely to be used for action on Climate Change. Explore low cost changes that can make a big difference but aren't expensive. Use our community as a workforce for meaningful local projects.
4	There are likely to be federal and state sources, however, I believe that a levy which can be justified on many grounds as a net benefit to the community and ratepayers is also an option.
5	Local rates on a sliding scale according to income. Fund raising community initiatives; this is an ethical issue and should be treated as such.
7	Rates, special levies as required. Note that with forward planning, many climate change initiatives don't need to cost more. Old patterns just need to be updated.
8	Government level (federal, state and local)
9	From existing resources. It is part of the risk management the City needs to implement anyway. There are long-term cost savings from the initial outlay - eg switching lighting to LEDs, installing solar panels and other renewable energy. In addition, a greater responsibility should be put on developers who at present get away with totally clearing land, not re-vegetating the verges and open spaces, and building housing with little environmental advantages (eg dark roofs, minimal insulation, no eaves for shading, no consideration of solar-passive design principles). Why should the City have had to fund and maintain that wonderful verge design on the corner of Kalamunda and Stirling Crescent, when the developer cleared it and took all the profit?
10	Tax Australian coal.
11	A portion of our rates, and/or introducing a climate change levy Increased funding from state and federal governments Higher rates from local businesses that produce higher carbon emissions (carbon tax)
13	A combination. I would be prepared to accept some rates increase. Increase charges to businesses who emit greenhouse gasses, discount for those who don't. Federal govt should be supporting shires to make changes - an easy way for Feds to reach net zero.
14	Work smarter, look and change the way things are done, scrutinise every bill.

Funding (continued)

Respondent	How do you think Climate Change initiatives should be funded? *Note: Text has been included without edits as provided. Where no response has been provided the entry has been deleted.
16	By charging the emitters of greenhouse gases (on a per tonne carbon equivalent) and topping it up with federal and state government funds.
18	Unsure
19	Through taxes
20	Better budget decision making at shire level. Shire to reduce spending in less important areas. Not increased rates.
21	Taxes and rates, they are high enough
22	Not from increased rates....keep within the budget
23	Rates and sponsorship, Forest would be a good source
24	Not by the taxpayer.
25	Carbon tax. Increase State and Federal Govt funding, partially through reducing inefficient financial spending. Tighten tax exemptions and increase accountability for all Religious organisations. I could go on.
26	Should definitely not spend ratepayer funds to be on the "bleeding edge" and to make councilors feel good. We should get the low hanging fruit with a minimum of directly funded actions or be involved in federally or state funded schemes.
27	By the chinese government
28	From your own pockets, not the people
29	Tax loopholes removed for large corporations & carbon polluters.
31	Not by council rates
33	Grants from feds and state govt
34	Funding should not come from rate payers
35	The Federal Govt can provide incentives starting with people on the lowest incomes. Then State and Local Govt can part fund appropriate industries and activities.
36	By the government.
37	Funding is everyone's responsibility but all levels of government need to lead by example
39	May require some raise in taxes, council rates, etc.
40	There will be some cost borne by the rate payers but there are also grants available through the State Government particularly to do with energy efficiency etc. With some ideas its just a matter of being smarter about how things are currently being done.
43	They should be cost neutral or cost beneficial . As above . Switch off half the street lights save emmissions save money .
45	By the polluters - the companies emitting co2
46	Tax/rate payers money
47	From taxes. Less money to stadiums, and entertainment.
48	Through a tax on carbon and other greenhouse gases coupled with incentives for transitioning to newer technologies
49	Renewable energy has a short payback period (often around 2 years for rooftop solar). The council should allocate space for and facilitate community owned solar / battery projects. This way energy can be sold back to the grid at higher prices, the local grid can become more stable and resistant to blackouts, and people who cannot afford a system on their own home can still get a slice of the pie.

Funding (continued)

Respondent	<b>How do you think Climate Change initiatives should be funded?</b> *Note: Text has been included without edits as provided. Where no response has been provided the entry has been deleted.
51	Defund gas and coal and support renewable energy initiatives. The rest will take care of itself.
53	Taxes
55	Through government support - same as the fossil fuel industry is supported
57	Corporate investment; 1% tax increase for business and private.
58	Government
60	Through rates - additional fee each year
62	Whilst there are many great suggestions, I wouldn't be happy with the city spending excessive amounts of money to change their buildings to be eco friendly, or changing to electric cars. I would rather see those funds put into encouraging residents to improve and alter their footprint.
63	Not an expert here but at least 20% taxpayer funds.
65	By donation from people who want to contribute
66	Through taxes since we are all a part of it (excess world population is a major negative factor in reducing global warming).
67	Should be factored into the budget as an essential element of all decision making, not optional or a bolt on. It should be business as usual
68	Federal and State funding, and Council reinvesting savings from climate change initiatives
69	State and Federal governments should be cost sharing with local government for the asset upgrades to strengthen the resilience and carbon neutrality of local infrastructure, and to ensure that all planning and development takes into account climate change risks. They should also make funding available for all disaster destroyed local government assets. And increase funding to local government for responding to climate impacts, and cutting greenhouse emissions. Local government could provide grants and/or other incentives to kick start local business and community climate carbon neutral and sustainability initiatives.
71	From local, state and federal budgets.
72	From federal & state government & a % of council rates .
73	I'm happy to pay more taxes
76	Taxes on polluting businesses; taxes on overpackaged good manufacturers.
77	Everybody should be contributing.
78	Rate decrease for people planting trees etc..
79	Smarter use of available funds for spending on projects, plus there will be significant cost savings from 100% renewable energy use and changeover to hybrid & electric vehicles etc
80	Through federal and state governments.
83	Through rate payers or apply for federal grants
85	Yer
86	Climate Change initiatives should be funded by all levels of Government. 1. Local 2. State 3. Federal
89	Local, state and federal government, individuals have a responsibility also.
90	Start with the Federal Government when you make them stop giving money to fossil fuel companies. Use that money == \$Billions
92	Government funding, redistribution of already the world's highest tax and local government rates

Funding (continued)

Respondent	<p><b>How do you think Climate Change initiatives should be funded?</b></p> <p><b>*Note:</b> Text has been included without edits as provided. Where no response has been provided the entry has been deleted.</p>
93	State grants. Do not increase our rates
94	Efficient use of rates payments.
95	From Federal GST receipts and maybe a levy on city rates.
96	Grants, savings from energy efficient moves. Do not let perceived short-term costs be prohibitive, please.
97	Through grants, rates, and input from State and Federal governments
98	Funding decisions reflect values so get the value of things aligned and funding will be less of an issue.
99	Out of general revenue and where user pays where demand is inelastic.
100	Through all levels of government, and through industry. Private individuals who could be taxed at higher levels could also be part of the funding.
101	Through rates and any profit the council receives should be reinvested into renewables
102	By public monies obtained from taxpayers and ratepayers, and from loans taken out by all levels of government - Federal, State and Local.
103	From the individual - they have to be competitive in the market.
104	Mixture of federal, state, local funding plus fundraising
105	shared across industry and community
106	Federally thru a carbon pricing scheme but also State and Local (rate) provisions levies for appropriate high cost actions.
108	All tiers of government should cooperate and co-fund elements
109	GST revenue at State Level. A rate increase at the local government level.
110	It should be funded by everyone including businesses and institutions.
112	Local initiatives can be funded via state and federal funding but also transition in local govt methodologies towards energy efficiency can mean in relatively short time at minimised cost to rate payers full move to nett zero operations. Developers to comply with local energy efficient requirements for building etc. Initial spikes in costs will be recouped in both savings to householder and higher value of dwellings as this will be increasingly important to homebuyers. Increased desirability of housing and maintained environment will equate in medium to long term of increased rates linked to property values.
114	The costs of climate change should be borne primarily by those that are responsible - Polluter pays. There should be a carbon price on fossil fuels
115	federally, commercially and at state level...consumers should not be bearing the offset costs to industry
116	Allocation of budget should be prioritised if we are to achieve net zero in allotted time - it is not a choice. Without being an expert in the City's budget I don't think it is for me to say from where the money should come. However, based on the states recent budget surplus as reported, I think that groups of councils should be fighting for an allocation of surpluses to be provided into city allocation to use for climate change initiatives.
117	All the money that was supposed to flow into the council once it became a Cityu.
119	Nationally via a carbon pricing system. Locally via city funds. For more ideas, look to cities internationally who have already committed to Net Zero (Or nationally, if there are any).
120	We are all responsible so the community a a whole.

## Submissions

Text has been included without edits as provided.

### Submission 1: Nature Reserves Preservation Group Inc - 'Bushcarers'

Ref [REDACTED]

From [REDACTED]

Date Thu Dec 02 11:32:46 AM AWST 2021

Subject NRPg submission on the Kalamunda Climate Change Action Plan Dec 2021



P.O. Box 656  
Kalamunda  
W.A. 6926  
<http://nrpg.org.au/>  
<https://www.facebook.com/KalamundaNRPg>  
<https://www.facebook.com/nrpg.bushcare>

**Nature Reserves Preservation Group of Kalamunda, Inc.**

2 Dec 2021

**TO: Rhonda Hardy, CEO**  
**CC: All Councillors**  
[enquiries@kalamunda.wa.gov.au](mailto:enquiries@kalamunda.wa.gov.au)

**SUBJECT: CITY OF KALAMUNDA CLIMATE CHANGE ACTION PLAN 2021 – NRPg SUBMISSION**

Dear Rhonda,

The NRPg welcomes the City of Kalamunda's acknowledgement of the critical issue of climate change and initiation of the "Climate Change Action Plan" (CCAP), following the Council's adoption of a "Climate Emergency Declaration", as Moved and voted overwhelmingly in favour by the ratepayers at the City's Feb 2020 AGM.

However, considering the urgency, the Kalamunda "Climate Declaration" (which we assume is a guiding document for developing the CCAP) is seriously deficient in not expressing the dire urgency (emergency) of the situation.

It is also a concern that it has taken since Feb 2020 to reach this very early stage in a process to develop a CCAP to meet what needs to be an ambitious trajectory of emissions reductions, although we acknowledge and commend the "Climate Change: Actions and Initiatives commenced by the City of Kalamunda" (25 May 2021).

NRPg believes the CCAP (<https://engage.kalamunda.wa.gov.au/climatechangeaction>) must:

- Acknowledge the situation as an 'emergency' given that:
  - The United Nations International Panel on Climate Change (IPCC) stated the situation is so dire that the IPCC 2021 report is a "Code Red for humanity".
  - The recent COP26 reinforced this urgency by designating the next international meeting to finalise emissions reduction and other commitments, not in the usual 5 years, but as soon as next year.
  - The International Energy Agency (IEA) states that no new fossil fuel developments can be allowed if Global Warming is to be limited to 1.5 degrees C.
  - The ratepayers of Kalamunda voted specifically on the term "Climate Emergency" Declaration.
- Specifically include at least:
  - Audit of the City's Greenhouse Gas emissions in all sectors, as a starting point
  - Analysis of the emissions of each sector and options to avoid, reduce and offset with associated costs to enable decisions on actions to be taken
  - Detailed schedule of actions with timeline
  - Detailed methodology of monitoring and reporting with transparency of all reports

The risks associated with not acting strongly and urgently are not only the consequences of changes in our climate patterns, but of even more concern are 'tipping points' which can cause relatively sudden, catastrophic and irreversible changes to our planet as we've come to know and depend on it for our survival. These are well documented by the IPCC, The Climate Council etc., and it is likely that we may have already crossed some tipping points such as ice and glacier melts, which have major flow-on effects.

Kalamunda is already experiencing the effects of Climate Change, and the NRPG is very concerned about the topics as noted in the City's "Climate Change Action Survey":

- Negative impacts upon our biodiversity
- Increased number and duration of heat waves
- Increased likelihood of bushfires being more frequent and intense
- Increasing the heat island effect in our developed areas
- Decreased rainfall impacting the replenishment of ground water sources
- Increased frequency and duration of droughts
- More intense storms and localised flooding and erosion of waterways and infrastructure
- Climate change will have a negative (and potentially catastrophic) impact on the next generation during their lifetimes

In this submission, the NRPG generally agrees with the statements and commitments made in the Kalamunda "Climate Declaration" in guiding the CCAP, except for the lack of acknowledgement of an 'emergency', as noted above.

We add the following comments, which are not exhaustive but we hope are helpful at this early stage in developing a CCAP. (Note: Climate Declaration statements are in bold with NRPG comments below each).

***The City of Kalamunda supports the:***

***Environmental, social and economic benefits of addressing climate change immediately.***

NRPG agrees, and all City and Council decisions must include the Global Warming/Climate Change impact as a priority consideration. For example, it would be useful to know the 'Carbon footprint' of the new Community Centre, given the large amount of concrete used, and compare this to other methods of building the centre. NRPG urges that the carbon emissions of development and other significant proposals be reported transparently, and considered by Council and Staff against alternative methods, as part of the decision and approval process.

It must be emphasised that there is a need to change our 'mindset' to accept that actions to address the issue may cost more in the short term but often result in benefits in the medium to longer-term.

In order to understand and appreciate the true benefits or costs, Triple Bottom Line (TBL) Life-Cycle Accounting (LCA) methods must be used. Commonly, only up-front (capital costs) are considered in decisions, and the overall longer term benefits can therefore be lost.

***Opportunity for Local Government to demonstrate leadership in climate change management at a community level.***

The City has prided itself in being a leader on environmental matters, and Climate Change has, and, will have a major impact on our Environment, which the vast majority of residents value highly, and one of the main reasons for choosing to live here.

***The City of Kalamunda commits from date of signing to:***

***Set an appropriate, individual Local Government emissions reduction target and work toward its achievement.***

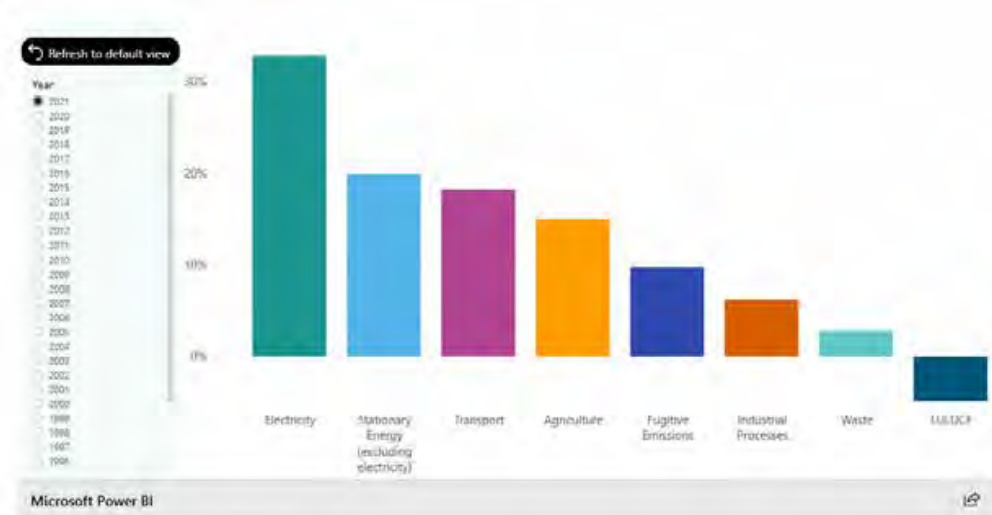
To show leadership, the City should adopt targets which at least beat the minimum trajectories suggested by the IPCC, such as 50% reduction by 2030 and net zero by 2050. Options for Australia are discussed at: <https://www.climateworksaustralia.org/resource/corporate-action-for-1-5-degrees-best-practice-for-australian-company-net-zero-commitments/>

***Develop an internal Climate Change Action Plan (CCAP) for climate change actions across all Local Government functions, with a focus on the two, five and ten year future.***

Initial steps are to understand the City's Greenhouse Gas (GHG) emissions, primarily from CO<sub>2</sub> and Methane/'natural gas', but also from refrigerants and others. GHG emissions result from almost all human activities including: combustion of fossil fuels, waste (including landfill), agriculture/animals, land clearing, loss of vegetation, wetlands and soil carbon. (The latter losses may exacerbate the problem by 'feeding itself' as reduced rainfall causes further losses from die-offs).

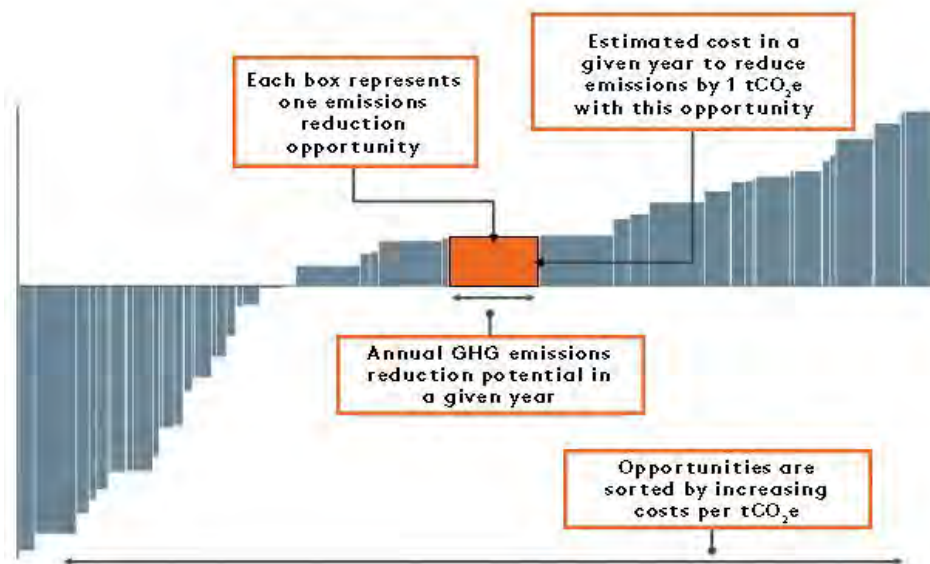


All activities causing GHG emissions will need to be audited by either calculation or measured to establish the 'baseline emissions' of each sector, per the example of the Australia's GHG emissions illustrated below. The City must engage an entity with expertise and experience in this area to ensure a thorough and credible understanding of the situation, and to explore various GHG abatement trajectory options to meet the targets, as it is a complex topic.



Source: Department of Industry, Science, Energy and Resources

The use of a 'GHG abatement cost' curve (generic illustration below) shows where the biggest reductions can be achieved at the lowest cost. This can be provided as outcome of the GHG Audit. It is beneficial to note that large GHG reductions can be made while also saving costs, in areas such as reductions in waste of energy and improvements in efficiency, shown as 'negative' costs on the 'curve'. Furthermore, avoidance of activities which may be achieved in other ways, are also cost savers.



***Ensure that, at appropriate review intervals, the strategic plan and policies for the Local Government are reviewed and amended to reflect climate change management priorities and emissions reduction targets.***

It is important that the GHG emissions are monitored and reported clearly and transparently against the milestones in the trajectory. Reporting must be frequent enough to provide warning if the milestones are not likely to be met, to allow time to take corrective action/s so the milestones are achieved.

***Encourage and empower the local community and local businesses to adapt to the impacts of climate change and to reduce their greenhouse gas emissions.***

Following include just a few opportunities, and more will become apparent after a GHG emissions Audit and mitigation action plan are developed:

- Promote the benefits of preserving our biodiversity and natural areas, trees and vegetation to mitigate emissions as well as reduce the 'heat island' effect, and stop allowing developments which counter this.
- Increase the very-popular plants-to-residents program.
- There is a potential win-win for Kalamunda's locality in mitigating 'heat islands' by requiring high density developments have room for trees and vegetation, reducing the loss of vegetation, and increasing revegetation efforts where it is lacking to provide shade, along with reducing asphalt and concrete areas. Prior discussion at CESAC was around clustered and other types of housing which eliminates the 1.5m house to property boundary setback to allow almost common-walls in a 'quadrant/hex cluster', which then allows a 3m surround of the cluster and space for useful trees and vegetation. Re-creating wildlife corridors/greenbelts offer double benefits also. These simple measures can have major impacts on airconditioning demand, providing cost savings and more pleasant surrounds while encouraging wildlife to remain.
- Expand recycling efforts to encourage re-use of resources, such as the Walliston Community Reuse Shop, the Armadale 'Drop'n'Shop Reuse Centre' and the EMRC Hazelmere Resource Recovery Park.
- Promote the benefits of fuel-switching from gas (Methane/'natural gas') to all-electric residential, commercial and industrial facilities, and excluding/phasing out gas infrastructure. Benefits of all-electric facilities and appliances include:
  - improved safety and health
  - reduced cost
  - better performance
  - much higher efficiency
  - elimination of gas infrastructure
  - greater flexibility and control
  - can be completely powered by renewable energy (including storage as applicable) with no carbon emissions

As the community and business/industry discover that they can generate and use all their own energy from rooftop solar and batteries, at competitive or lower overall amortised costs, they will want to switch. The City can facilitate this with education and by setting examples. (Ref: [https://bze.org.au/research\\_release/electrifying-industry/](https://bze.org.au/research_release/electrifying-industry/) and <https://reneweconomy.com.au/the-switch-is-on-consumers-are-turning-away-from-gas-98169/>)

Gas/Methane on the other hand, will always have the same fossil combustion emissions and is not as 'clean' as the industry claims. While it may have low emissions at point of combustion, the leakage and fugitive emissions of gas/Methane are 86-100 times greater than CO<sub>2</sub> (in the most important 12-20-year timeframe). Therefore, a leakage of as small as just a few percent through the supply chain from well to customer can make it as bad, or worse than burning coal for electricity for example.

The Australian Capital Territory no longer requires gas utilities in new suburbs (Ref: [https://www.cmtedd.act.gov.au/open\\_government/inform/act\\_government\\_media\\_releases/rattenbury/2020/now-were-cooking-with-electricity!-gas-no-longer-a-requirement-in-canberra-suburbs](https://www.cmtedd.act.gov.au/open_government/inform/act_government_media_releases/rattenbury/2020/now-were-cooking-with-electricity!-gas-no-longer-a-requirement-in-canberra-suburbs) and <https://reneweconomy.com.au/canberra-households-reject-gas-as-act-moves-to-end-mandatory-connections-47346/>)

Other cities globally are banning gas in new developments. (Ref: <https://reneweconomy.com.au/another-first-city-of-berkeley-bans-natural-gas-in-new-buildings-88169> and <https://www.spglobal.com/marketintelligence/en/news-insights/latest-news-headlines/banning-natural-gas-is-out-electrifying-buildings-is-in-59285807> )

The City should consider prohibiting new developments (residential, commercial, industrial) from installing gas infrastructure, and encourage existing gas users to transition to all-electric facilities. Elimination of gas infrastructure will provide savings which can be passed onto the ratepayers of those areas. The NRPG commends a Move by a Councillor at a recent Kalamunda Council meeting, that a new development referral be conditional on not having gas infrastructure.

It is expected that the gas industry will likely fight against this: <https://reneweconomy.com.au/act-faces-tough-fight-to-shake-itself-free-of-gas-after-going-green-on-power-supply-88786/> and <https://onestepoffthegrid.com.au/gas-is-neither-natural-nor-cheap-but-the-industry-spin-is-working-on-households/>

- Phase out and ban wood-burning heaters, which largely use unsustainable native forest logging as a fuel source. (While this is technically a 'renewable energy' the timber is typically from native trees which may be 100 years or so old, so it is a net addition to atmospheric carbon unless and until new trees planted can re-absorb the same amount of CO<sub>2</sub>, and this 'time lag' causes further global warming). Reducing smoke from wood heaters also has health and amenity benefits. As an option for those who desire that source of heating, it should be mandated that they meet high efficiency standards such as those of European combustion heaters.
- Encourage/incentivise the use of solar-passive design principles in all new buildings, with heat pump/reverse-cycle air conditioning systems which are several times more efficient than gas, wood or electric resistance types. Educate the community/business of the cost benefits of these.
- Use and promote electric vehicles (EVs) which can provide significant lifecycle cost savings over combustion vehicles, due to much lower maintenance and 'fuel' costs. (<https://thedriven.io/2021/11/29/tesla-model-3-costs-14000-less-to-own-than-average-petrol-car/> and see RAC WA Oct/Nov 2021 article appended)

EV's typically use about 1/5-1/4 of the energy of combustion vehicles because of their very high efficiency, and capture otherwise wasted braking energy to recharge the batteries when braking or descending hills. Furthermore, EVs can be charged for free (no marginal cost) with roof-top or other solar PV generation. The range of the latest EVs are now typically 250-600km, and fast charging can allow a top up to 80% in about 20 mins. Many cities and operators are converting to electric cars, buses, trucks and even short haul aviation. Numerous countries and cities globally are banning combustion vehicles in the next 5-15 years. Kalamunda should trial EV transport applications (passenger, delivery and utility vehicles such as rubbish trucks) for cost savings. Further, the installation of a few charge stations in Kalamunda would encourage it as a tourism destination. Some references for EVs and commercial heavy vehicles are – Heavy vehicle conversions: <https://reneweconomy.com.au/victorian-ev-conversion-company-secures-cefc-backing-46799/> Latest EV updates: <https://myelectriccar.com.au/> and <https://thedriven.io/>

- Use best-practice waste management to minimize landfill GHG emissions and encourage the use of resource recovery centres to maximize recycling of materials.
- A number of other opportunities exist as demonstrated by the analysis and reports by "Beyond Zero Emissions" <https://bze.org.au/research-releases/all-research-releases/>

***Monitor the progress of climate change initiatives and ensure full communication of achievements for Council and Community.***

NRPG strongly supports the City providing updated feedback on the 'progress to plan' to the Community through meaningful graphics shared on social media, live displays at locations such as shopping areas, and other media and methods.

Showing progress and examples of what is working, helps inspire the Community to make changes to their ways, because as the saying goes 'good examples are contagious'.

The NRPG urges the City to treat Climate action as an 'emergency' and act rapidly because our collective future depends on it.

Kind regards,  
 Steve Gates  
 President, NRPG Inc.

Attachment: "11 of WA's cheapest cars to own and run", RAC WA Magazine, Oct/Nov 2021 (Note the MG electric vehicle costs).

**11 of WA's cheapest cars to own and run**

We assessed more than 80 cars across a range of categories to uncover which were the least expensive to buy and keep on the road.

During a year in which vehicle prices have risen through the roof, what makes a car the most affordable? It's not just the purchase price, but the running costs, including fuel, insurance, and depreciation.

Our top 11 cars are: MG ZS EV, Kia Cerato, Toyota Camry Ascent Hybrid, Hyundai Venue, Toyota RAV4 EXL Hybrid, Subaru Outback, Mitsubishi Triton GLX 4x4, Honda Odyssey VL, Mitsubishi Triton GLX 4x4, and MG ZS EV.

The RAC Vehicle Operating Costs Survey is based on typical vehicles on WA roads and provides an indication of the likely areas of regular out-of-pocket expenses.

Category	Model	Annual Cost
Cheapest Light Car	MG ZS EV	\$10,750.30
Cheapest Small Car	Kia Cerato	\$9,481.81
Cheapest Medium Car	Toyota Camry Ascent Hybrid	\$11,898.98
Cheapest Small SUV	Hyundai Venue	\$11,544.31
Cheapest Medium SUV	Toyota RAV4 EXL Hybrid	\$13,014.84
Cheapest Large SUV	Subaru Outback	\$14,918.88
Cheapest AD Terrain SUV	Mitsubishi Triton GLX 4x4	\$16,631.92
Cheapest People Mover	Honda Odyssey VL	\$15,881.88
Cheapest 2WD Ute	Mitsubishi Triton GLX 4x4	\$15,198.77
Cheapest 4WD Ute	Mitsubishi Triton GLX 4x4	\$16,194.33
Cheapest Electric	MG ZS EV	\$14,014.98

## Submission 2: Perth Hills Climate Change Interest Group

Ref [REDACTED]  
 From [REDACTED]  
 Date Sun Nov 14 01:48:57 PM AWST 2021  
 Subject PHCCIG submission to City of Kalamunda Climate Action Plan

Perth Hills Climate Change Interest Group Inc.

### Submission to the City of Kalamunda Climate Change Action Plan

14<sup>th</sup> November 2021 Email: [PHCCIG@gmail.com](mailto:PHCCIG@gmail.com)

#### 1. Background

The City of Kalamunda (the 'City') is actively pursuing a Climate Change Action Plan to address risk to the environment, economy, infrastructure, community health, safety and wellbeing in the City of Kalamunda, brought on by Climate Change.

In preparation for its Action Plan, the City has called for submissions so it can better understand the community's position on climate change, and to identify actions that are needed.

This submission is the Perth Hills Climate Change Interest Group's response to that call.

#### 2. Executive summary of recommendations

It is recommended that:

1. The City promotes its current Climate Action narrative, and communicates initiatives already in place
2. That the City's Climate Action Plan is embedded into Council governance and policy framework, service planning and delivery, and community engagement.
3. The dimensions of a climate action plan proposed by the Climate Council inform the action areas in the City's Climate Action Plan, and those action areas are populated by projects already in train, and with further projects/programmes discerned in community consultations and planning processes.
4. That a scoping study of relevant climate action programmes and projects undertaken elsewhere are considered in the development and roll out of the City's climate action plan, as well as locally designed projects arising from the City's community consultation processes.
5. That a committee or working group of community and other key stakeholders be established to provide guidance and advice with respect to the design, roll out and evaluation of the City's climate action plan.

Perth Hills Climate Change Interest Group Inc.  
 Submission to the City of Kalamunda Climate Action Plan  
 November 2021

1

### 3. About the Perth Hills Climate Change Interest Group (PHCCIG)

The Perth Hills Climate Change Interest Group is a non-aligned, not-for-profit organisation that works toward a sustainable, carbon-neutral and positive future in a way that is positive, respectful, hopeful and collaborative.

Our members live across the Perth Hills, in the Shire of Mundaring, and in the Cities of Kalamunda and Armadale.

We aim to identify positive actions that Hills communities can take and then work collaboratively with local governments, community groups and other like-minded interest groups to help make those things happen.

What we do involves listening to people, drawing on established science, promoting local action research projects, advocating to politicians and officers at all levels of government and collaborating with leaders and organisations with similar aims to add value and help bring about change.

What we have heard, by listening, is that that young people and children are calling to us, as adults, to do something, and that people want action.

### 4. PHCCIG's concerns about climate change and why we want action

Our understanding of the global threat of climate change is consistent with the threats recognised by governments, including the City of Kalamunda<sup>1</sup>, communities and scientists across the world, and we will therefore not repeat those in this paper.

We, like most Australians<sup>2</sup>, rate climate change as a personal, local and global problem and we want action.

In this submission we wish to raise concerns about climate risks and opportunities that, in addition to global threats, we see as *particular* to the City of Kalamunda, and the whole of the Perth Hills.

The Perth Hills is a high climate risk area, particularly with respect to bush fires and biodiversity loss.

<sup>1</sup> 'Climate Change is a global threat. Local Government is committed to meeting international obligations through Australia's participation in protocols and agreements established under the United Nations Framework Convention on Climate Change (UNFCCC), including but not limited to the Paris Agreement and successive international treaties'. City of Kalamunda <https://engage.kalamunda.wa.gov.au/climatechangeaction>

<sup>2</sup> *What Australians really think about climate action.* ABC news, February 2020, updated August 2020 <https://www.abc.net.au/news/2020-02-05/australia-attitudes-climate-change-action-morrison-government/11878510>

Perth Hills Climate Change Interest Group Inc.

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## 5. Suggestions for the City of Kalamunda Climate Action Plan

### 5.1 Promote the City's current climate narrative

Firstly – congratulations! The City already has a commendable suite of climate adaptation and mitigation strategies<sup>6789</sup>. An articulation of these into a cohesive and logical climate action narrative is needed, so that their goals, strategies and results are readily understood by laypeople. This needs to be within an overarching Climate Action Plan which will no doubt be the end result of the consultation process for an action plan currently being undertaken by the City.

**Recommendation 1.** Promote the City's Climate Action narrative, communicate initiatives already in place

### 5.2 Embed climate change action plan

The City's Climate Action Plan must be integrated into its governance (particularly the risk management) and strategic community planning and reporting framework. The financial plan and asset management plans should include a consideration of the climate risks that affect finances and assets. The risk of litigation, where council may have approved a development in a high risk area for example, also needs to be considered.

Strategies in the City's plans need to be reflected in service planning.

The Climate Action Plan needs to be understood by all stakeholders, and integrated across all levels and departments within Council, not just delegated as a responsibility of environment and bush fire teams.

Partnerships with neighbouring Councils to encourage a coordinated approach to risk management, adaptation and mitigation will increase the impact of the actions taken, as climate risk across the Perth Hills is not limited to any one local government authority. Likewise, climate actions across the Hills will allow for synergies and greater impact.

<sup>6</sup> City of Kalamunda Climate Change actions in train 202. [https://kalblob.blob.core.windows.net/kallibrary/docs/default-source/agenda-and-minutes/2021/attachments/ocm-25-may-attachments/10-2-5-6-climate-change-actions-in-train.pdf?sfvrsn=d0308786\\_2](https://kalblob.blob.core.windows.net/kallibrary/docs/default-source/agenda-and-minutes/2021/attachments/ocm-25-may-attachments/10-2-5-6-climate-change-actions-in-train.pdf?sfvrsn=d0308786_2)

<sup>7</sup> Environmental Land Use Planning Strategy 2019. <https://kalamunda.wa.gov.au/building-development/planning/strategies/environmental-land-use-planning-strategy>

<sup>8</sup> Local Environment Strategy 2019-2029 [https://kalblob.blob.core.windows.net/kallibrary/docs/default-source/strategies-plans/les.pdf?sfvrsn=9c9c3432\\_11](https://kalblob.blob.core.windows.net/kallibrary/docs/default-source/strategies-plans/les.pdf?sfvrsn=9c9c3432_11)

<sup>9</sup> Proposed solar park in Kalamunda <https://engage.kalamunda.wa.gov.au/pioneer-park>

The climate action tools and templates provided by the WA Local Government Authority<sup>10</sup> are an excellent resource, and if the City is not already doing so, we suggest that these tools and resources are considered for adoption.

Community engagement, to ensure people living in the City have opportunities to be informed, educated, consulted, involved and empowered, is key to the success of strategies to reduce climate change risk in the City of Kalamunda, and should be incorporated into the Climate Action Plan.

The Climate Action Plan should include a compelling case for action, and in doing so, include a cost benefits analysis, so that Council and the community are aware of the benefits of acting, and what investment is needed to optimise results. And the Plan must include measurable performance indicators, so that progress towards net zero can be counted and celebrated.

**Recommendation 2.** That the climate change action plan is embedded into the Council governance and policy framework, service planning and delivery, partnerships, and community engagement.

### 5.3 Climate Council's dimensions into the City's Climate Action Plan

This section includes a summary of the Climate Council's suggested dimensions<sup>11</sup> to a local government Climate Action Plan. What this section does not do, is articulate particular City projects and activities. It is suggested that existing and proposed (ideas proposed through this and future consultation initiatives), populate a framework like this one:

- Increase operational net zero targets and efforts to mitigate climate change through emissions reduction activities.
- Work with local communities and businesses to support broader efforts to cut emissions, beyond council operations and infrastructure.
- Undertake a climate risk assessment and implement plans for adapting those risks.
- Seek out opportunities for collaboration across multiple councils to reduce emissions and adapt to climate impacts.
- Encourage economic development units to explore how climate action can boost the economy.
- Upskill all council staff to ensure they are confident about the impact of climate change on their day-to-day work, including options for adaptation and mitigation.
- Ensure that all planning and development activity at a local level considers climate risks and opportunities to cut emissions.

<sup>10</sup>WALGA's Climate Change Action Framework <https://walga.asn.au/Policy-Advice-and-Advocacy/Environment/Climate-Change/Templates-and-Tools>

<sup>11</sup> This section is drawn from the Climate Council Cities Power Partnership's paper *Neighbourhood Issue: Climate costs and risks to Councils*. 2021.  
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- Advocate for other tiers of government to embrace stronger climate policies, emissions reduction targets and frameworks for mitigation and adaption (see below).

Suggested City (and community) advocacy to the Western Australian and Federal Government

- Call on the Federal government to lead the country in responding to accelerating climate change at the pace and scale required; with a science-based approach.
- Increase funding to councils to enable responses to climate impacts and cutting greenhouse emissions.
- Invest in preparing before climate disasters, rather than responding afterwards, i.e., be proactive rather than reactive.
- Ensure all disaster response funding incorporates the principle of 'betterment'.
- Make funding available post disaster for all damaged and destroyed council assets.
- Support residents and businesses exposed to extreme weather events and climate fires to build resilience.
- Look to cost sharing opportunities between local and state governments for asset upgrades.
- Encourage and resource regional collaboration between councils to address climate change.
- Ensure all planning and development activity in WA adequately accounts for accelerating climate risks.
- Improve energy efficiency standards and invest in building upgrades to ensure houses are safe and comfortable.
- Establish a national body, or expand the remit of an existing one, to support and research adaptation and act as a centralised hub for up-to-date climate change information.
- Take responsibility for coordination of climate impact responses to ensure consistency and clearly delineated responsibilities between different levels of government.
- State and federal government should urgently implement the findings for the Royal Commission into National Natural Disaster arrangements.
- Support councils to undertake and regularly review climate change risk assessments.

**Recommendation 3.** That the dimensions of a climate action plan proposed by the Climate Council inform the action areas in the City's Climate Action Plan, and those action areas are populated by projects already in train, and with further projects/programmes discerned during community consultations and planning processes.

#### 5.4 Scoping study of relevant projects

It would be useful if relevant climate actions currently being undertaken by local government in the not-for-profit community sector, in the business community and by families and individuals, and their resources, projects, community engagement approaches and activities are considered in the design of the City's Climate Action Plan.

An analysis of climate action plans already in place by local government authorities would also be useful.

The PHCCIG already has a data base of these resources under development and would be happy to share this resource with the City.

The City's Big Ideas Climate Change Forum is an excellent community engagement initiative, and it has the potential to lead to local solutions, which would also be very useful with respect to the design of the Climate Action Plan.

**Recommendation 4.** That a scoping study of relevant climate action programmes and projects undertaken elsewhere are considered in the development and roll out of the City's climate action plan, as well as locally designed projects arising from the City's community consultation processes.

#### 5.5 Establish Climate Action Plan committee or working group

As climate action has whole of City, and whole of community implications, a community engagement and partnership, approach has a proven potential to be very constructive.

A range of informed and constructive stakeholders, such as the PHCCIG, could assist the City in the design, roll out, and formative and summative, evaluations of its Climate Action Plan.

**Recommendation 5.** That a committee or working group of community and other key stakeholders be established to assist the City and to provide guidance and advice with respect to the design, roll out and evaluation of the City's climate action plan.

### Submission 3: Community member

From [Redacted]  
 Date Friday, 10 December 2021 7:43 PM  
 Subject Big Ideas Climate Change Forum  
 This was written some four years ago. Since then, technologies have progressed, but the principles within the concept remain valid.

**K.C.R.E.W.**  
 ( Kalamunda Community Renewable Energy Works )  
**A concept for a Kalamunda community renewable energy farm**  
*The WIN-SOL-STOR trilogy*



**BACKGROUND**

Electricity from large scale renewable energy sources, such as solar and wind, is now cheaper than electricity generated by coal, gas, diesel and nuclear.

There are several islands around the world that were dependent on importing diesel to generate electricity. They have transitioned, so that all their electricity now comes from renewable resources.

Climate change is now generally recognised as the greatest threat facing humanity.

Science demonstrates that human activities are contributing to the changing climate. Historic records show that humans have never experienced the earth's current record high temperatures nor over 410 ( and rising ) parts of carbon per million in the atmosphere.

Our energy use and the way that we generate it from fossil fuels is one of the greatest contributors to global warming. Globally, the last six years have been the hottest on record, with 2016 being the record highest.

The use of clean, renewable power sources that are cost competitive now makes both financial and environmental sense.

The transition is gathering momentum, with increasing examples of community energy farms.



**PROJECT # 1. " WIN "**  
**AN IDEA FLOATING IN THE WIND**



Wind generated energy produces no emissions, is good for the climate, and it's " fuel " is renewable.

The optimum areas for wind turbines are oceans and hills.

In Western Australia, the top of the Darling Range escarpment offers great potential for wind generation.

Running roughly North from the centre of Kalamunda township, close to the ridge line high point, is an old railway track, bounded, in part, by Railway road, Gooseberry Hill road, Williams road, and Elizabeth street. ( See aerial photo ). It is well vegetated public land that contains a valued walking track, but otherwise is unsuitable for most developments.



**OUTLINE OF A RADICAL IDEA**

Prevailing winds in this area in the summer are the afternoon ' sea breeze ', usually South West to West South Westerlies, and the usually nocturnal ' Easterlies '.

Great quantities of otherwise wasted energy could be harnessed by a string of wind powered generators ( turbines ) set out along the old railway line referred to above.

There are many types of commercial wind turbines currently available, and ongoing research offers new types with greater capacity and / or greater efficiency.

Basically, wind turbines can be divided into two types -

**1. Horizontal axis wind turbines (HAWTs)**

The vast majority of current commercial wind 'farms' are of this type.


They can range from the small, as sometimes seen on the back of yachts, to plans for ones that will be as high as the Eiffel Tower.

One on Rottnest Island now provides up to one third of the island's electricity.


The Albany wind farm has proven so successful in providing up to 80% of the town's power, that further turbines are under consideration.

Some people see these turbines as visually intrusive, even " ugly ". Some claim adverse health effects from being near them. However, there is no scientific evidence to support this, indicating that problems may be psycho-somatic.

There are other, smaller types in development -



The Liam F1 is an adaptation of the Archimedes screw. It is claimed to be considerably more efficient than conventional turbines of the same swept area.




The Saphonian wind turbine has no blades. It operates by oscillating.





This unusual concept emulates a bird's wings to generate electricity.

**2. Vertical axis wind turbines (VAWTs)**



A small example of these can be seen on the Busselton foreshore powering the esplanade lighting. This example is a hybrid of two different principles.



This is a design of a larger turbine. The braced upper hub ( bearing) reduces the strain that is placed on designs with a single, lower bearing hub, such as the example above.




The UGE ( Urban Green Energy ) company's VisionAIR3 is an example of their turbines of various sizes / capacities, that are in commercial use today. In some cases ( as in remote locations ) these are ' paired ' with solar panels and battery storage.

Iceland, which experiences a lot of wind, is currently experimenting with VAWTs such as the one shown here.

Given French flair, VAWTs can be both practical and quirky, stimulating the landscape.



Some advantages of VAWTs are that they -


- \* are visually less intrusive
- \* they have a smaller ' footprint '
- \* they are more efficient in turbulent wind conditions, such as are likely to be encountered in the proposed location
- \* they do not generate the ' whoosh whoosh ' noise of HAWTs

\* whilst the largest ones currently available do not generate as much power as the largest HAWTs available, they would have a lower capital cost, and thus would be more readily scalable.

\* because of their higher rotation speed, at moderate to high wind speeds, the blades of some types are harder to see, like an aircraft's propellers, and are therefore less visually obtrusive.

**PROJECT # 2. " SOL "**

**SOLAR PHOTO-VOLTAIC**





... and there is ...

... it's the sun.

Let's get the most out of it.

Many households in Australia have been enjoying the benefits of roof-top solar PV, some for several years.

Now, commercial, large scale solar PV ' farms ' are proving economically viable, and are increasing in numbers. Shown below are just a few examples.


Solar panels power lettuce business




Kalamunda does not have large cleared areas suitable for the construction of a ground based solar farm. However, the built environment offers plenty of alternative potential.

The centre of Kalamunda, bounded by Stirk Street, Railway Road, Mead Street, and Canning Road covers an area of around eight hectares.

The aerial photo below reveals three businesses that currently enjoy the benefits of roof-top solar -

1. Walkers Mire 10 hardware - 20 kW installed
2. Kalamunda News Agency - 10 kW installed
3. Auto One automotive parts - 20 kW installed



The aerial photo below shows the theoretical potential if solar PV panels are applied to about 90% of the area. The colour representation is shown below.

1. Red - existing roof-top solar
2. Yellow - potential roof tops ( assuming they are structurally suitable )
3. Blue - car parks
4. Green - project boundaries of this concept



The Kalamunda Central shopping centre alone has a total roof area of around 8,000 sq.m.

The Kalamunda hotel and the Town Square Theatre have been excluded in recognition of their historic value. However, add-ons to the original chapel building of the Town Square Theatre, the 'Green Room' and the recent verandah, could potentially accommodate solar panels.

One of the challenges of such a concept is the multiplicity of ownership / title holders involved. Power that could be cheaper than the ever-rising cost of grid power would be one attraction. A lesser, but none the less real factor, would be the resultant shade on their roofs, leading to less heat transfer into the building, hence requiring less air-conditioning in the summer.

Car parks shaded and sheltered by panels would be sought after by vehicle owners / shoppers. This is not a new idea, as many car parks in Europe and U.S.A. are shaded by panels. Tesla electric vehicle 'Super Charge' stations are often shaded by panels that generate the charge. In W.A., a Northam shopping centre has installed solar panels over its car park and significantly reduced its power costs.



In the Kalamunda example, significant trees remain, for their streetscape and environmental value. The panels could be planned so as to avoid trees.

Whilst this concept restricts itself to the boundaries shown ( for simplicity ), owners of buildings outside the area would be encouraged to participate. One such community project involves solar panels placed on local council buildings, including sports and recreational buildings, with costs funded by the local community, where participants reap the benefits.

### PROJECT # 3, " STOR " ENERGY STORAGE

It has been stated that " If the sun don't shine, and the wind don't blow, then the electricity don't flow ". However, current electricity storage technology makes such a statement obsolete.

Prime Minister Malcolm Turnbull and Western Australia's last Energy Minister, Mike Nahan, have highlighted the importance of 'energy security'. In view of potential interruptions to the grid, as

occurred in South Australia when 22 high voltage power towers were blown down, the most secure energy is local.

Since neither the wind nor solar power are constant, a means of storing surplus electricity generated by wind and solar would enhance the economics of such an energy farm, and could provide energy security.

Power storage could potentially be achieved through -

1. export to the S.W.I.S. ( South West Integrated System ) grid
2. bulk electrical storage units
3. pumped hydro energy storage ( PHES )
4. homes with battery storage
5. electric vehicles

To clarify the above -

**1. export to the grid** - this is commonly employed by owners of roof-top solar. However, the current domestic rate of being paid 7 c per kWh exported, and buying back at 26 c per kWh ( as at May 2017 ) would not be economically viable in this instance. If the system was registered with Western Power as a power generator, it would be hoped that more favourable terms could be negotiated.

**2. bulk electrical storage units** - these usually take the form of batteries, of various technologies. Lithium and 'flow' batteries are frequently used. Domestic examples include the Tesla Powerwall and Redflow's Z-cell. There are larger commercial versions of these. Flywheels in vacuums are also used to store energy. Another potential storage technology is molten silicone, where energy is stored as heat, for later conversion to electricity.



**3. pumped hydro energy storage ( PHES )** - where excess power pumps water from one reservoir uphill to a higher reservoir. This can then be discharged downhill to (re)generate power, when required. Not suitable for flat areas, Kalamunda, being between 800 ft and 1,000 ft above mean sea level, is well placed to take advantage of this technology. Indeed, in the Eastern States, the Snowy Mountains hydro scheme currently releases stored water energy to assist the grid during periods of peak demand. There is a current proposal in Queensland to use an abandoned mine, with

two large 'holes' at different levels, to store and regenerate power from renewables.

**4. homes with battery storage** - these could be considered micro power stations, with potential power reserves, that could import excess power for later export. Indeed, it has been postulated that the South Australian power blackout might have been avoided if more homes had had battery storage.

**5. electric vehicles** - current electric vehicle batteries can store energy similar to the daily consumption of some homes. Vehicle battery capacity will increase exponentially in the future, offering greater storage 'exchange' potential.



### FINANCE

International financial experts are recognising that investments in oil, gas, and coal are in danger of becoming stranded assets. This means that the returns will diminish and become unreliable, such that more investors will be looking for stable, reliable long term returns. Worldwide, many millions of dollars have already been divested from fossil fuels.

This creates a great opportunity for renewable energy projects.

Many community energy projects in Australia have been successfully funded using a community energy project funding model.

Where better to invest some of your funds than locally in a project that could offer significantly better rates than offered by your bank ?

### RESEARCH

To assess the viability of such a project, considerable information would need to be gathered in progressive stages :-

#### Initial paper-based research

1. The dimensions, production capacities, costs and sources of a variety of wind turbines.
2. Spacing between towers
3. Surface footprint of the towers and solar panels
4. Mapping
5. Other established community energy projects
6. Finance options / crowd funding, economic viability
7. The potential market, and hence the business case
8. Hydro options - close by, or further away such as utilising Mundaring Weir.

- 9. Public consultation and education
- 10. Regulatory issues
- 11. The theoretical potential wind, solar, and storage resources

In the event that such research indicates potential viability, the project could proceed to the next stage.

Wind potential research

A temporary sampling tower, of similar height to the proposed towers, would need to be erected. This would be topped by an anemometer to transmit continuous wind speed data to a ground receiving station. It is not envisaged that information on wind direction would be necessary.

Whilst it might seem that a full twelve months of data could be needed, it may be feasible to establish an average differential between the sampling tower anemometer and various wind recording stations and extrapolate this difference over several past year's data to obtain average potential.

Updating initial research

Since renewable technologies are constantly developing and improving, developments in the field and current costings would need to be incorporated into the project's modelling. The observed wind data could then be applied to the model.

Expert over-view

Initially, it could be expected that the proposal would have limited funds. This would constrain access to expert consultants in the early stages.

However, once information and data is collated into a prospective viable project model, funds would have to be sourced to enable expert consultation for final viability assessment.

**POTENTIAL OBJECTIONS**

Considerable opposition could be expected.

Some objections, and their responses, might be -

- \* Ugly - compared to an open pit coal mine ?
- \* Visual pollution - compared to a coal fired power station ?
- \* Destruction of native vegetation - the towers have a relatively small 'foot print' and the majority, if not all, of the vegetation along the old railway line is re-growth
- \* Ultra-sound - no scientific evidence of any harmful effects
- \* Health hazard - a considerable body of research papers has failed to find any such link.
- \* Wind turbine syndrome - shown to be psychosomatic in that the syndrome is claimed even when nearby turbines are not operating.
- \* Not In My Backyard - a very natural reaction that must be weighed against the greater good of pollution free, renewable energy that could be cheaper than the Grid.

- 2. Local generation that avoids remote power stations
- 3. Community involvement in where their power comes from
- 4. Energy security, avoiding South Australian-type black-outs
- 5. Local employment opportunities, both in construction and on-going maintenance
- 6. Opportunities for investors to invest close to home
- 7. Tapping sources of abundant, endless free energy
- 8. Environmental bonuses in reduction of CO2 and other pollutants
- 9. Future-proofing electricity supplies against rising fuel costs, fuel shortage, and an inevitable price on carbon

**CONCLUSION**

Federal Government leadership on renewable energy is totally lacking, and is likely to remain so for the foreseeable future.

So it is up to local communities to take the initiative, as several communities in Australia are already doing. Some States and Territories are taking various steps towards renewables. The most notable of these is the ACT, with ambitious plans to become 100% renewable powered by 2020.

In Western Australia, the volunteer group Sustainable Energy Now has developed an interactive program ( Siren ) that can demonstrate how Western Australia could be 100% renewable powered today, using existing technology.

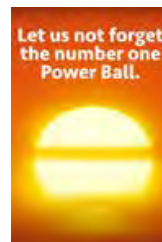
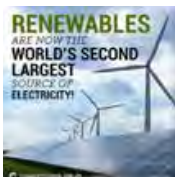
Rottnest Island has long been dependent on diesel generators for power. The diesel is both expensive and polluting. Rottnest is now transitioning to renewables with it's large wind turbine and recently constructed large solar PV farm.

Western Australia is beginning to use more large scale renewable energy resources. These include Albany and Colgar wind farms, and solar farms near Carnarvon and Geraldton, amongst others. A large commercial solar farm will shortly start construction near Cunderdin.

So the movement towards sustainability through renewable energy is gathering momentum, driven by ever improving economics, and environmental considerations.

**So,  
LET'S JUST DO IT**

And finally, on a lighter note -



Brian Mollan

- Redrafted - 9 October 2016
- 22 May 2017
- 18 June 2017
- 6 July 2017

About the author -

*The author claims no technical expertise in wind turbines, commercial power generation or storage. However, as a user of solar PV power for home and vehicles over several years, the author is a renewable energy enthusiast, and believes that the local community could reap the benefits of renewable energy, as he has.*

- \* The Commissioner for Wind Turbines - is bound to object... on principle. However, it is hoped that this aberration of dinosaur government will have been abolished.
- \* The incumbent utility Synergy - likely to object that it's non-smart grid could not cope with such energy input. But, technically, a solution could be found
- \* The walk track will be destroyed - the small footprint of the towers should mean that they can co-exist with a walk track that might need only minor modification, if any.

**SUPPORT**

It is hoped that in-principle support would be forthcoming from the local community, the City of Kalamunda, the State and Federal governments.

This would be a real opportunity for Council to demonstrate leadership, at little or no cost, in moving towards a 'Sustainable City'.

**SOME CONSIDERATIONS**

This sensationalist West Australian newspaper headline re-states what has been happening over recent years, with electricity prices continuing to rise well in excess of C.P.I..



In the past, the only means that individuals had to reduce their electricity bills was to install rooftop solar PV panels - for those who could.

However, the economies of scale represented by a Community energy 'farm' could ensure lower-than-grid prices at the meter box for the foreseeable future.

Against the background of the threat posed to humanity by climate change, it is submitted that the potential benefits of such sources of pollution free, cost effective, renewable energy would far outweigh any objections.

The projects could be modular and eminently scalable. From a small beginning, further wind turbines, solar panels and storage could be added progressively. Indeed, the concept could be initiated with either Project # 1 WIN, or Project # 2 SOL. Obviously, Project # 3 STOR would be dependent on either # 1 or # 2.

This document is outlining a concept, and is not a technical paper, nor is it intended to provide even the beginnings of a 'scope of works'.

**POTENTIAL BENEFITS**

- 1. Cheaper electricity with real savings to local consumers - private, commercial and possibly Council

## Submission 4: Community members

Ref: [REDACTED]  
 From: [REDACTED]  
 Date: Tue Oct 19 09:14:12 AM AWST 2021  
 Subject: Feedback re Climate Change Action Plan

### Submission re the Climate Change Action Plan

[REDACTED]  
 [REDACTED]

We downloaded the Climate Change Action Survey and were sadly reminded of the definition of 'busy work' when unnecessary tasks are issued for no valid reason, including when there is already sufficient known information about what is possible to achieve and what is not, at a local government level regarding climate change strategies.

Through this survey, the City appears to be asking a number of statistically incalculable and motherhood style questions of community participants to give the illusion that the City actually takes climate change seriously when the reality is starkly different.

The point of declaring a climate emergency and having an action plan is to start the ball rolling by demonstrating successful climate emergency initiatives at the local level.

That is, positive action by those in a position to effect across-City change- that is, by councillors, drawing upon scientific expertise - in order to reduce the negative impact of climate change.

Unfortunately, history has shown that the majority of Kalamunda councillors have consciously chosen to turn a blind eye to the significant connection between climate change and biodiversity loss. The United Nations Environment Programme states and we quote,

*Climate change and biodiversity loss are twin crises that should be tackled together ... In addition to the direct impacts on the economy, societies and people's health, rapidly advancing climate change negatively impacts many of the world's species and ecosystems, driving biodiversity loss. **At the same time, protecting and restoring biodiversity is crucial to addressing climate change.***


The city's own review of its biodiversity strategy states that the single greatest opportunity to protect what little biodiversity remains in the city is the retention of its existing rural zoned lands, and yet the majority of councillors are virtually falling over themselves to curry favours with developers, recently showing a disastrous disregard of the Wattle Grove South's underlying hydrology, tree canopy and biodiversity by voting to facilitate the rezoning of this rural area to urban.

Ironically, councillors took this decision despite apparent Councillor enthusiasm to address climate change and despite Councillors being consciously aware of the City's shocking environmental record, all for the private profit of a developer and to presumably, gain the approval of a CEO who announced with misplaced pride in the last Annual Report that 'We have driven the rezoning of key areas of rural land within the city ...' (p. 5) .

The City's review of the draft Local Biodiversity Strategy showed that damage to the environment within the City has reached crisis proportions, with local government mismanagement wholly to blame.

Since 2005 over 730 hectares of tree canopy and biodiversity in the City have been wiped out for wall to wall housing and more rates for the City... the City now has less than 10% of its originally mapped vegetation remaining. Further, the draft review follows a recent report that the City of Kalamunda has one of the largest reductions in tree canopy cover of all local government authorities in Australia over the past 4 years (Royal Melbourne Institute of Technology, 2020, *Where will all the trees be*).

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It is possible to conclude from the draft that the biggest single impact in the environmental disaster that is unfolding is the city's failure to adopt any local planning policies focusing on biodiversity (draft, p. 3).

We would go further than the authors of the review and recommend that councillors should not only not permit the rezoning- as distinct from subdivision- of the current rural zoned lands of the City but ought also, to encourage and incentivise landowners to rehabilitate and restore degraded rural lands through such means as free planting and rate reductions based on restoration progress.

The proposed Climate Action Plan should not be allowed to join the myriad of other City policies that exist to give the appearance that the City is proactive and forward looking but which have been specifically designed to be legally unenforceable by not incorporating them into the Local Planning Scheme. Unless actions are incorporated in the Scheme they can be easily pushed aside when a developer comes calling demanding as a condition of their investment that the City places no enforceable environmental constraints upon them.

Any actions adopted by the Climate Change Action Plan must be incorporated in the Local Planning Scheme in order to have legal effect. Anything less will serve to highlight the disingenuous nature of City intent re this Action Plan.

Thank you for considering this feedback.



## Example of Communications

### Communications included:

- » Media Release: <https://www.kalamunda.wa.gov.au/news-details/2021/11/04/have-your-say-on-climate-change>
- » Community Surveys
- » Social Media Awareness Campaign
- » Websites: Linking to contributing nodes <https://engage.kalamunda.wa.gov.au/climatechangeaction>
- » eNewsletters
  - » 4 x City of Kalamunda eNewsletters
  - » WALGA EnviroNews Issue 11 - November 2021
- » Newspaper advertisement (KalaView)- 5 November 2021 (See below)
- » Posters/flyers
- » Letters to Stakeholders, including community members
- » FAQs
- » Face-to-Face - including a Live Ice Carving Event, and 2 x Pop-up Pop-in Booths.

Content was posted across the City's buildings and shared with Stakeholders.

### Website

- » <https://www.kalamunda.wa.gov.au>
- » 1 October - 2 December 2021
- » 115 page views directly relating to Climate Change (0.07% of 160,610 total views)



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### eNewsletters

Four City of Kalamunda eNewsletters promoting the Forum and the project were sent to City subscribers.

#### eNews Climate Change Forum invite

Audience - Community members who completed a survey and indicated they wanted to be kept informed.

- » Sent Mon, 22 Nov 2021 4:07 pm
- » 55 Recipients
- » 30 (55.6%) Opens
- » 9 (16.7%) Clicks

#### eNews Climate Change Forum attendees

Audience - Community members who registered to attend.

- » Sent Wed, 01 Dec 2021 4:50 pm
- » 27 Recipients
- » 16 (61.5%) Opens
- » 1 Click

#### eNews and Happenings in the City of Kalamunda - November 2021

Audience - City of Kalamunda Newsletter

- » Sent Tue, 02 Nov 2021 4:00 pm
- » 1693 Recipients
- » 724 (42.9%) Opens
- » 5 Clicks to the Project page

#### Kambarang Friends Group Newsletter 2021

Audience - Environment

Sent Wed, 10 Nov 2021 4:00 pm

- » 168 Recipients
- » 108 (65.5%) Opens
- » 2 Clicks to the Project page
- »

#### WALGA EnviroNews

- » Issue 11 - November 2021
- » WALGA's Environment and Climate Change Newsletter shared the project to their subscribers
- » <https://walga.asn.au/getattachment/News-Events/What-s-happening-News/Publications/EnviroNews/November-EnviroNews.html>

## In the Media

Two articles relating to Climate Change appeared in the Echo Newspaper during the engagement period.

Echo Newspaper "Your thoughts" (letter to the editor) section.

15 October 2022 Page 2

### Candidates on climate change

Dear Echo,

Candidates for the Shire of Mundaring and City of Kalamunda local government elections were asked to respond to six climate change questions.

The short survey was conducted by the Perth Hills Climate Change Interest Group (PHCCIG) just after nominations closed.

The responses showed candidates viewed climate change seriously, and while some had detailed technical knowledge of the issues, others focused on home-based actions or building on the existing work being done by the two councils.

PHCCIG collated the responses and made them public via Facebook and emails to let residents know how the candidates viewed climate change.

Candidates were asked what local governments should be doing to address climate change, particularly in relation to planning, transport, the health of the environment, support for local business, and whether they would support the creation of a Hills Act for WA.

The PHCCIG has

grown from a small group set up by Mundaring in Transition, and earlier this year became an incorporated not-for-profit organisation.

We value positivity, respect, hope and collaboration and focus on listening to people, making use of research, collaborating with others and advocating for sound climate change policies.

Full survey responses can be found on our Facebook page or email us at [phccig@gmail.com](mailto:phccig@gmail.com)

**Stephen Millett  
Perth Hills Climate Change Interest Group**

[www.echonepaper.com.au](http://www.echonepaper.com.au) December 3, 2021 3

### Waste centres to be powered by wind energy

THE Shire of Mundaring, City of Swan and the City of Kalamunda are all part of a groundbreaking agreement that will set them on a path to 100 per cent renewable energy.

The agreement, the largest of its kind undertaken in Australia, was negotiated by the WA Local Government Association (WALGA) with over 50 local governments in a bid to reduce waste emissions to zero.

From December 1, 2022, all EMRC sites, including the Red Hill Waste Management Facility and Hazelmere Resource Recovery Park, will be supplied with electricity from wind farms in Albany, Badgingarra and Merredin.

Currently, the annual emission reduction at Hazelmere is 62 per cent with the aim is to have below zero emissions by 2040.

The move is also expected to pocket the local governments a combined total of \$5 million a year.

"The enthusiasm for this project in the sector and the terms that have been achieved for the community are outstanding," WALGA president and Wanneroo mayor Tracey Roberts said.

"There is a genuine appetite in the local government sector to lead the way on zero emissions and the shift to renewable energy is a giant step in the right direction."

The WA Local Government initiative is the first renewables and carbon offset aggregation project granted authorisation by the Australian Competition and Consumer Commission.

"The Shire has already committed to reducing the greenhouse gas emissions emitted from its operations," Shire of Mundaring president James Martin said.

"We are committed to reducing our corporate emissions by 30 per cent by 2030, from its 2016/17 levels.

"This agreement is another step towards achieving that target."

# Face-to-Face Events

## Ice Carving Event

A live ice-carving of a cockatoo was held at the Artisan Markets, providing opportunities for locals and visitors alike to participate in face-to-face conversations, provide feedback (including for surveys), create a general awareness of Climate Change and create a sense of place in the City of Kalamunda.

Footpath stickers and posters with QR codes were placed in the market zone to further promote the project and lead attendees to the live ice carving to engage in conversations.

The event was filmed for additional (and future) Climate Change promotion/engagement.



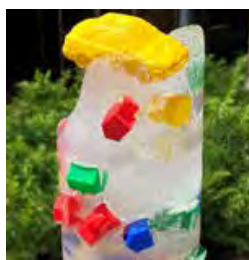
## Pop-up Pop-in Booths

Opportunities to engage in Face-to-face discussion on the project were provided at Pop-up Pop-in Booths:

- » 10 November 2021 - Outside the Kalamunda Library
- » 22 November 2021 - Hawaiian's Forrestfield

Bubble blowing and 'Ice Melts\*' were used at the Pop-up Pop-in Booths as conversation starters, and engage with youth.

*\*Ice Melts: Small items representing some of the things in our lives that will be affected by climate change were embedded in ice and allowed to melt throughout the engagement period. Eg. toy cars, gum nuts and flowers, toy animals, insects, and coins.*



These events were also promoted on the City's Facebook page.













# Social Media | Campaign post insights



An integrated social media campaign was run across the City's LinkedIn, Facebook (City, Influence/Youth, Kalamunda Performing Arts Centre pages), Twitter and Instagram accounts, with Facebook receiving the largest proportion of engagement. The campaign achieved over 47,703 Post Impressions.



## Top social media posts:

	<p><b>November 28, 2021 07:58pm</b></p> <p>Feeling motivated for a pre-Christmas clean up! It's a good time to be bushfire ready! 🌿🗑️🧹🧻 Skip the Trip and order in 🍷🍷 For all the info or to order your bin check out <a href="https://www.kalamunda.wa.gov.au/residents/waste-recycling/skip-bins">https://www.kalamunda.wa.gov.au/residents/waste-recycling/skip-bins</a></p>											
<table border="1"> <thead> <tr> <th>Impressions</th> <th>Reactions</th> <th>Shares</th> <th>Link Clicks</th> <th>Engagement Rate</th> </tr> </thead> <tbody> <tr> <td>5,498</td> <td>1</td> <td>8</td> <td>497</td> <td>9.20%</td> </tr> </tbody> </table> <p><a href="https://www.facebook.com/114178051977993/posts/265609015606327">https://www.facebook.com/114178051977993/posts/265609015606327</a></p>	Impressions	Reactions	Shares	Link Clicks	Engagement Rate	5,498	1	8	497	9.20%		
Impressions	Reactions	Shares	Link Clicks	Engagement Rate								
5,498	1	8	497	9.20%								
	<p><b>November 6, 2021 07:58pm</b></p> <p>FREE Worm Farm Workshop! Learn all about the art of worm farming with an informative presentation and a hands-on demonstration by The Worm Shed. 🗓️ Saturday 13 November 2021 🕒 10am - 12 noon 📍 Jack Healey Centre   Cnr Mead St &amp; Canning Rd 📍 <a href="http://trybooking.com/BSEEE">http://trybooking.com/BSEEE</a></p>											
<table border="1"> <thead> <tr> <th>Impressions</th> <th>Reactions</th> <th>Shares</th> <th>Link Clicks</th> <th>Engagement Rate</th> </tr> </thead> <tbody> <tr> <td>5,206</td> <td>3</td> <td>4</td> <td>389</td> <td>7.61%</td> </tr> </tbody> </table> <p><a href="https://www.facebook.com/114178051977993/posts/251596883674207">https://www.facebook.com/114178051977993/posts/251596883674207</a></p>	Impressions	Reactions	Shares	Link Clicks	Engagement Rate	5,206	3	4	389	7.61%		
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5,206	3	4	389	7.61%								
	<p><b>October 23, 2021 07:59pm</b></p> <p>📸 What a great capture! 🥰 A baby tawny frogmouth @ Jorgensen Park, captured by local resident Penny Maddison - thanks for sharing, Penny!</p>											
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4,577	32	5	494	11.60%								
	<p><b>November 14, 2021 07:58pm</b></p> <p>🗑️👍 NATIONAL RECYCLING WEEK 🗑️🗑️🗑️ Thank you for being a Recycling Super Hero! It can be confusing, and inconvenient, and it can take extra effort... but every little effort you make counts.</p>											
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Impressions	Reactions	Shares	Link Clicks	Engagement Rate								
3,947	1	1	327	8.36%								
	<p><b>November 9, 2021 08:01pm</b></p> <p>🗑️👍 NATIONAL RECYCLING WEEK 🗑️👍 Are you recycling right? How is your source separation set up at home Saucy</p>											
<table border="1"> <thead> <tr> <th>Impressions</th> <th>Reactions</th> <th>Shares</th> <th>Link Clicks</th> <th>Engagement Rate</th> </tr> </thead> <tbody> <tr> <td>3,662</td> <td>2</td> <td>1</td> <td>220</td> <td>6.09%</td> </tr> </tbody> </table> <p><a href="https://www.facebook.com/114178051977993/posts/253589213474974">https://www.facebook.com/114178051977993/posts/253589213474974</a></p>	Impressions	Reactions	Shares	Link Clicks	Engagement Rate	3,662	2	1	220	6.09%		
Impressions	Reactions	Shares	Link Clicks	Engagement Rate								
3,662	2	1	220	6.09%								

Social Media | Campaign post insights (continued)



October 19, 2021 08:01pm

🌱👍 NATIONAL RECYCLING WEEK 🌱👍 Are you recycling right How is your source separation set up at home Saucy



Impressions	Reactions	Shares	Link Clicks	Engagement Rate
2,955	0	4	130	4.60%

<https://www.facebook.com/114178051977993/posts/240201611480401>



November 22, 2021 07:58pm

★☆☆ Pop-in. Pop-up Pop in and say hi to our Engagement Team at Hawaiian's Forrestfield, 20 Strelitzia Ave, Forrestfield WA 6058 on Tuesday 23 November 2021, from 10.30am – 2.00pm Talk to us about our Youth Plan, Climate Change Action Plan and more. Or just check out the "Embedded in ice" 🧊🧊🧊 sculptures as they change throughout the morning. 🌊 This is an opportunity to 'Have your say' and learn more about our open projects at: <http://engage.kalamunda.wa.gov.au>



Impressions	Reactions	Shares	Link Clicks	Engagement Rate
2,482	3	2	77	3.34%

<https://www.facebook.com/114178051977993/posts/261916909308871>



November 8, 2021 08:01pm

November is National Asbestos Awareness Month which aims to reduce asbestos-related diseases by urging renovators and tradies to 'Stop playing renovation roulette because it's not worth the risk' and start respecting the dangers of asbestos just as they respect the dangers of electricity. With 1-in-3 homes containing asbestos, it's not worth the risk! Visit <http://www.asbestosawareness.com.au> to learn what you need to know to manage asbestos safely. #StopPlayingRenovationRoulette #RespectAsbestos #AsbestosAwareness #AsbestosAwarenessMonth



Impressions	Reactions	Shares	Link Clicks	Engagement Rate
2,440	1	2	49	2.13%

<https://www.facebook.com/114178051977993/posts/240201611480401>



October 26, 2021 04:39pm

🔥 Too hot 🥶 Too cold Not sure which way up ... Climate change will do that to you. Unpack more at: <http://engage.kalamunda.wa.gov.au/ClimateChangeAction> Survey closing 15 November 2021. Perth Hills Climate Change Interest Group -CCIG



Impressions	Reactions	Shares	Link Clicks	Engagement Rate
1,821	0	0	19	1.26%

<https://www.facebook.com/114178051977993/posts/244494067717822>



October 29, 2021 04:54pm

🎃🎃🎃 Halloween is coming and there's nothing spookier than Climate Change. Climate change is affecting our growing seasons and cost of our food. We may need to find new and different ways to produce our food – and our Halloween pumpkins. Do you grow your own food? Are you interested in growing your own food? Don't be a pumpkin have your say and help us plan for our food in the future. Learn more at: <http://engage.kalamunda.wa.gov.au/ClimateChangeAction> Perth Hills Climate Change Interest Group -CCIG



Impressions	Reactions	Shares	Link Clicks	Engagement Rate
1,030	1	1	2	.39%

<https://www.facebook.com/114178051977993/posts/246543837512845>



October 22, 2021 04:31pm

Don't come to us with the problems. Come to us with your solutions! 🤔 The City of Kalamunda has several Strategies in place to address Climate Change. What other innovative actions do we need to think about, and how will you help us make them happen Tell us your big ideas! Learn more about the Strategies we have in place and have your say on further actions and big ideas at: <http://engage.kalamunda.wa.gov.au/ClimateChangeAction> Survey closing 15 November 2021. Perth Hills Climate Change Interest Group -CCIG



Impressions	Reactions	Shares	Link Clicks	Engagement Rate
997	2	1	7	1.00%

<https://www.facebook.com/114178051977993/posts/241994137967815>