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Department of Planning, Industry and Environment,
(Attention: Regional Planning Team)
PO Box 5475
WOLLONGONG NSW 2520

Email illawarra@planning.nsw.gov.au

Dear Sir/Madam

Draft Illawarra Shoalhaven Regional Plan 2041

Thank you for the opportunity to provide comment on the Draft Illawarra Shoalhaven Regional Plan 2041 that is on public exhibition and forwarded to the Environment Protection Authority (EPA) for comment on the 2 November 2020.

The EPA provides the attached comments (**Attachment A**) which includes key environmental principles and supporting information to help inform the development of the revised Regional Plan. These comments relate to:

- Water Quality
- Waste and Resource Recovery
- Managing Urban Hazards
- General Matters

The EPA would able to meet at a mutually convenient time to discuss any of the enclosed comments. Should you require any further information, please contact Mr Paul Wearne on (02) 4224 4100.

Yours sincerely

18/12/2020

JACINTA HANEMANN
Acting Director Regulatory Operations Metropolitan South

Att:

Attachment A

Water Quality

The *Draft Illawarra Shoalhaven Regional Plan 2041* (the Plan) should deliver the following environmental principles:

- *Promote development that protects, maintains or restores waterway health and the community's environmental values and uses of waterways.*
- *Promotes integrated water cycle management that includes sustainable water supply, wastewater and stormwater management and reuse initiatives where it is safe and practicable to do so and provides the best environmental outcome.*

Matters for Consideration

A healthy water environment includes elements of water quality and quantity, riparian values, and aesthetic and urban amenity considerations. Healthy rivers and catchments are integral to the economy and lifestyle of the people of NSW. They support the community's uses and values of waterways, such as swimming, fishing and boating.

The Illawarra Shoalhaven Region contains a range of waterways including freshwater creeks and rivers, coastal lakes, estuaries and beaches. The demands on these waterways to support a range of uses including tourism, water supply, agriculture and the pressures from land-use change from urban development mean these waterways are under continued pressure.

There have been a range of successful Government programs and initiatives to improve the health of these waterways. Substantial investment has significantly reduced the nutrient loads discharged from sewage treatment plants, recycled water initiatives have reduced wastewater discharges and potable water demand. As highlighted in the Plan, the Coastal Management Framework has also been introduced including the *Marine Estate Management Authority and Marine Estate Management Strategy* (2018-2028) which is also helping to respond to key water quality threats in these waterways.

However, waterway health still has a long way to go for these waterways before the community's desired uses and values of these waterways, also known as the *NSW Water Quality and River Flow Objectives* are met. While Objective 11 of the Plan seeks to "protect" important environmental assets", this objective would benefit expanding to include a direction that not only protects but also helps "maintain or restore" waterway health and the community's environmental values and uses of waterways. Such a setting is important with a range of waterways in urban and more natural catchments undergoing change.

The *Illawarra Shoalhaven Regional Plan 2036* (DPE 2015) provided an important milestone in helping to shape waterway health outcome in response to growth across the Region. This included actions to implement a risk-based decision-making framework to manage water quality and waterway health outcomes for Lake Illawarra and for all coastal lakes and estuaries in the region where development was planned. The previous Plan gave priority to sensitive lakes and estuaries in the Region.

Since this time, the *OEH/EPA Risk-based Framework for Considering Waterway Health Outcomes in Strategic Land-Use Planning Decisions* (Framework) was released. The purpose of the framework was to:

- ensure the community's environmental values and uses for our waterways are integrated into strategic land-use planning decisions.
- identify relevant objectives for the waterway that support the community's environmental values and uses, and can be used to set benchmarks for design and best practice.
- identify areas or zones in waterways that require protection.
- identify areas in the catchment where management responses cost-effectively reduce the impacts of land-use activities on our waterways; and
- support management of land-use developments to achieve reasonable environmental performance levels that are sustainable, practical, and socially and economically viable.

While the recognition of the Framework in the Plan is supported, it appears actions limit its application to only protect listed sensitive estuaries (Strategy 11.5). The Framework should be applied more broadly to all waterways to help guide development across the Region to protect the *NSW Water Quality and River Flow Objectives* where they are being achieved and inform management strategies to contribute to their restoration where they are not being achieved. This would also help build upon work that was delivered in the previous Regional Plan and provide a consistent approach that is embedded in the Greater Sydney Regional Plan *A Metropolis of Three Cities* and its supporting District Plans. In particular, the Framework is currently informing waterway health settings in relation to growth across Greater Sydney.

Strategies under Objective 8 of the Plan aimed at strengthening the economic self-determination of Aboriginal communities would also benefit expanding to recognise the opportunities provided in the design of new places across the Region. Such an opportunity could include engaging with Local Aboriginal communities in shared knowledge on place to help guide design and improve health and wellbeing of Country. For example, waterways such as Lake Illawarra and the Shoalhaven River where both growth and activation are proposed have both rich histories of local story and spiritual connection to place which are also linked to waterway health values. In particular, the Plan provides an opportunity to recognise the NSW Architects *Connecting with Country Draft Framework and the Designing with Country* .

The Plan proposes strategies to utilise an integrated water management cycle (IWCM) approach supported by water sensitive urban design principles to encourage wastewater capture, stormwater harvesting and water reuse. While these strategies are supported, DPIE may wish to have a conversation with both Sydney Water and Shoalhaven Water more broadly regarding the role of treated wastewater and stormwater as part of an investigation into promoting IWCM. This should include opportunities to supply third pipe recycled water for range of uses including open space and buildings in key growth areas.

The role of water more generally in the landscape should be an important consideration in the Plan, with strategies that involve promoting the delivery of green infrastructure, open space and increasing tree canopy cover supported. This will only be exacerbated with climate change and urban heat. For example, the successful establishment of a street tree will be dependent on water and if appropriately designed, a street tree pit can also provide water quality improvement to stormwater. However, the current challenges with the delivery of such approaches requires careful urban design and an understanding of ownership including funding arrangements for their ongoing management.

The Plan provides an opportunity to explore the role of the proposed Special Infrastructure Contribution (SIC) scheme and other contribution approaches to help the delivery of green infrastructure, as it appears unclear in the Plan. Green Infrastructure should include stormwater infrastructure and associated water quality devices. This is because growth and associated development will result in greater pressure on aging infrastructure that may require replacement. Water quality devices will also require ongoing maintenance to ensure ongoing performance. This may only increase with new and more efficient contemporary WSUD controls, for example water gardens requiring maintenance every six months.

The Plan may want to include the requirement for the development of green plans especially for key centres that are underpinned by IWCM for key areas undergoing transformation in LGAs. An example of such a plan was recently done for Arncliffe and Banksia in Sydney, see attached link: https://www.planning.nsw.gov.au/-/media/Files/DPE/Plans-and-policies/Attachment-G---Arncliffe-and-Banksia-Green-Plan.pdf?la=en

Waste and Resource Recovery
The Plan should deliver the following environmental principles:

- *Supports a transition to a circular economy and encourage the development of circular economy industries and employment.*
- *Waste is valued as a resource and recognises the economic, social and environmental benefit from reusing, repairing, sharing and recycling its waste.*
- *Encourage the development of circular economy infrastructure close to where people live and work to enable the community to reuse, repair, remanufacture their waste at safe, clean and easily accessible facilities.*
- *Recognises essential waste and resource recovery infrastructure that is planned for and located so it aligns with key freight routes (road and/or rail) to minimise local transport impacts.*
- *Ensures existing waste and resource recovery facilities are recognised as essential infrastructure that are protected and suitable land for future waste and resource recovery businesses will be identified.*

Matters for Consideration
The *NSW Government's 20 Year Waste Strategy*, which is currently under development will be a roadmap for NSW to transition to a circular economy. It recognises that a range of State Government strategies, polices, strategic plans and planning instruments will help to enable a circular economy. A draft of the *20-Year Waste Strategy* is expected to be released in early 2021.

The Plan (Objective 16) would benefit from information that defines a circular economy (see below) and that recognises the key circular economy principles in the *NSW Circular Economy Policy*. This can then help frame the narrative on how the Region can best transition to a circular economy. The Plan also provides a further opportunity to introduce concepts such as the delivery of circular economy infrastructure and design that needs to be planned for in the Region, especially for those new places being designed in response to growth. The following definitions are provided to help support the narrative and actions in the Plan.

Circular Economy Infrastructure *focuses on facilities that collect used resources, reuse, repurpose or remanufacture materials and goods, to retain their productive value and prevent their disposal to landfill. Examples of circular economy infrastructure includes reuse and repair facilities, sharing and leasing facilities, reverse vending machines, community recycling centres, collection points for producer responsibility schemes, material reprocessing and remanufacturing, anaerobic digestion, washing or pelletising facilities, reverse logistics facilities.*

Circular Economy Design *is a set of design principles applied to buildings, infrastructure and public domain precincts that maximise the circularity of the materials used in construction. This includes designing in a way where the materials can be easily identified for future recovery; designing buildings and infrastructure so they can be disassembled or demolished in a way that will maximise the value of the recovered materials; designing public spaces and precincts to allow for the separation of waste materials in a way that will maximise their value; designing to maximise the inclusion of recovered materials.*

Circular Economy *is a whole-of-system approach that requires accounting of the full cost and life-cycle of materials, which retains the value of materials in the economy for as long as possible, reducing the unsustainable depletion of natural resources and impacts on the environment.*

Circular Economy infrastructure can also include, in certain circumstances, the more 'traditional' waste and resource recovery facilities as defined in the Standard Instrument such as material bulking, storing, sorting, resource recovery facilities, transfer stations, and compost facilities. However, the role of these facilities needs to be clarified as a *supporting* role for facilities to promote higher order 'reuse'.

These concepts are currently informing the planning of the Western Sydney Aerotropolis and other new precincts across Greater Sydney. They also have important relationships with a range of

sustainability directions across Greater Sydney including those objectives in the Plan such as water, energy and supporting zero carbon directions.

The Plan appears to limit discussion on circular economy to managing wood panels, MDF, Particleboard and sawdust. The Plan would benefit from a more holistic view of waste within the Region and consider other key waste streams such as a stronger focus on the management of organics, paper, cardboard, and plastics. It could also commit to work with the Illawarra Shoalhaven Joint Organisation to undertake a review of waste flows within the Region including identifying existing and future end markets for waste materials and infrastructure needs, which could be used to inform strategic land use planning for future circular economy infrastructure.

The Plan proposes a strategy (Strategy 16.1) that supports the development of a circular economy including understanding opportunities for industrial symbiosis in local strategic planning and waste management strategies. This strategy would benefit reshaping to better align with work being undertaken as part of the 20 Year Waste Strategy on the establishment of circular economy hubs. A "circular economy hub" is a collection of businesses that come together on one site and designed to:

- maximise the opportunities for the by-products of business to be used as a resource (including material, energy or water) in other business(es) closing the loop on material use; and
- minimise inefficient transport of used resources.

With the Plan proposing new employment areas and recognising industrial transformation the Plan could include a further action to identify land for a circular economy hub. The Illawarra Shoalhaven Joint Organisation (IJOS) and government could work together to understand possible locations, feasibility and opportunities for the Region.

Managing Urban Hazards
The Plan should deliver the following environmental principle:

- *Exposure to Urban Hazards is reduced*

Matters for consideration
The Greater Sydney Regional Plan *A Metropolis of Three Cities* and supporting District Plan includes as an objective under a sustainable and resilient city, *"exposure to natural and urban hazards is reduced"*, and states that, *"effective planning can reduce the exposure to natural and urban hazards"*. Urban hazards are identified as including noise, air pollution and soil contamination. The District Plans also include a range of planning priorities and actions to help manage and respond to urban hazards.

The *Draft Illawarra Shoalhaven Regional Plan 2041* has an important role to help preserve amenity and protect the health of the community by managing exposure to urban hazards including air, noise and land pollution through using complementary planning approaches. In this regard the Plan would benefit strengthening by also recognising this approach under "*A Sustainable and Resilient Region*". Further justification and suggested amendment to text in the Plan are provided below.

Air Quality
The Plan does include a range of objectives and actions that will help contribute to clean air and help reduce the health impacts of pollution. However, the Plan does not specifically recognise nor discuss the current air quality challenges in the Region where complementary planning approaches are needed to help deliver sustainable and resilient communities.

The Illawarra/Shoalhaven Region experiences episodes of poor air quality from ozone and particle pollution, which will likely increase in the future with growth and climate change. As highlighted in the "*Air Quality Trends in the Illawarra*" (OEH 2015) there are a range of air quality challenges in the Region which will only be exacerbated by growth. This includes transport emissions, non-road mobile emissions and residential emissions (including wood heaters; aerosols, solvent and surface coatings use). In particular, while metal manufacturing regulated by the EPA is the largest human-made

source of annual fine particle emissions, residential wood heating is the second highest and, in winter months, the highest emitter.

Actions in the Plan directed at creating an efficient, smart and connected region, served by electric vehicles and public transport, walking and cycling are supported, however heavy vehicles and locomotives in existing fleets will continue to impact air quality in the medium-term. While electric vehicles, which have air emission benefits due to zero exhaust emissions, will continue to generate significant particle pollution from road, brake and tyre wear. These are important considerations in planning for a sustainable and resilient Region.

Regional plans have an important role to play in recognising clean air as integral to sustainability and resilience and in providing a platform for addressing air quality in related plans, particularly local strategic planning statements (LSPS). Where regional plans do not consider air quality, integrating air quality into the lower-level plans becomes more difficult and less efficient and opportunities to promote clean air through planning processes may be missed.

The commitment to clean air in the previous *Illawarra Shoalhaven Regional Plan 2036* (DPE 2015) and actions for finalising and implementing an Illawarra Air Quality Action Plan was superseded by a Government decision to develop a "*NSW Clean Air Strategy*". Minister Kean announced in June 2020 that the NSW Government is aiming to release the *NSW Clean Air Strategy* in 2021. This Strategy will aim to achieve ongoing reductions in the impacts of air pollution on the people of New South Wales, while supporting liveable communities, healthy environments and the NSW economy. The priorities currently proposed for the strategy include better preparedness for pollution events, cleaner industry, cleaner transport, healthier households and better places. The Strategy will apply to all regions in NSW and integrate with other government policies and strategies, including for energy, transport and land use planning.

In this regard, the *Draft Illawarra Shoalhaven Regional Plan* 2041 has an important role to provide the planning settings to build upon work commenced in 2015 to help contribute to maintaining and improving air quality outcomes across the Region. It also provides an opportunity to build upon contemporary directions in the *NSW Clean Air Strategy* when released. In particular the Plan could help:

- capture planning opportunities to manage pollutant emissions from local and household sources;
- promote planning and design that protects health and amenity for sensitive land uses near major pollutant sources; and
- identify measures to increase community resilience to extreme smoke and dust events.

While the Illawarra Air Action Plan was not finalised, a range of technical work including the *Air Quality Trends in the Illawarra* (OEH 2015) was completed at the time to assist its development. This work and more recent air quality monitoring data and information (see *Air quality monitoring in the Illawarra*) should be consulted to assist the development of the Plan. Other air quality initiatives relevant for the Region that have occurred since 2015 include:

- The release in 2019 of the 2013 Calendar Year Air Emissions Inventory for the Greater Metropolitan Region in NSW, which covers Wollongong and other Illawarra local government areas.
- Expansion of the NSW air quality monitoring network and roll-out of emergency monitoring during the 2019-20 bushfire season, together with enhancements to air quality information and communication and development of smoke management and communication protocols
- Release of Government policies and plans that support improvements to air quality including, for example, the Electricity Infrastructure Roadmap, Net Zero Plan Stage 1 – 2020-2030 and Future Transport 2056
- Providing air quality guidance to assist Illawarra Shoalhaven Councils to assist in the development of their LSPS. A copy can be provided on request.

Noise

A review of the Plan reveals some references to hierarchal approaches to noise control, specifically related to spatial separation of conflicting land use. While these are supported, there are arrange of objectives and supporting strategies that would benefit more specific noise consideration. The management of noise has an important role in how we design new and transforming places to ensure high levels of amenity, liveability and public health outcomes.

For example, the Greater Sydney District Plans recognise noise as an urban hazard and identifies a key risk being noise impacts increasing arising from transport corridors and growth. This will require careful management as areas across Greater Sydney grows to manage noise-based land-use conflict, including managing noise impacts around infrastructure corridors and freight and logistics networks. The Plan would benefit a similar approach especially in relation to activating areas around ports, transforming new centres and planning for new employment/growth areas.

It is important that adequate planning controls are in place to identify and manage noise-based land use conflict issues. The potential to address noise issues retrospectively following development can be challenging and expensive and lead to community complaints, especially near new highway extensions, industrial/commercial areas and where there are proposals for an extensive night-time economy.

The EPA considers that implementing noise control at a strategic planning level provides the most effective means of minimising noise impacts on communities. This is best achieved by applying the following hierarchical approach to noise control.

1. Spatial separation of incompatible land use through appropriate zoning and placement of activities to minimise noise-related land use conflicts.
2. Minimising noise emissions at source through best practice selection, design, siting, construction and operation as appropriate.
3. Reducing noise impacts at receivers through best practice design, siting and construction.

Sustainable land use planning and careful design and location of development offers the greatest opportunity to manage noise. Noise generating activities and noise sensitive areas should be separated where practicable. For example, separating incompatible land uses with commercial buildings (including those with night-time operations) or recreation space or similar will provide a physical barrier and / or spatial separation. Retrospective control options are usually limited and more expensive.

Guidelines including the *NSW Road Noise Policy* (DECCW, 2011) and the *Rail Infrastructure Noise Guideline* (EPA, 2013) provide guidance in relation to land use planning to manage road and rail noise respectively. These complement planning guidance provided in the *Development Near Rail Corridors and Busy Roads—Interim Guideline* (Department of Planning, 2008) which recognises the need for judicious land use planning, architectural design, building orientation and good internal layout to achieve acceptable acoustic amenity for residential development in proximity of busy transport corridors.

This type of approach has been applied successfully to provide an early indication to potential developers of expected noise emission requirements, and to preserve the noise amenity in adjacent areas.

With the Plan proposing mixed use development to help activate key centres, it is important that the design of these areas include the management of noise, as vehicles and plant have the potential to cause significant disturbance to adjacent residential developments. Due care should be given to planning for these land uses and noise sources using the above advice.

The Plan also provides an opportunity to introduce concepts in the development of vibrant and flexible soundscapes in the designing of public spaces and making improvements to Public Domain especially in an urban setting. Developing the soundscape of public spaces make them more inviting to the local community. Public spaces within the Illawarra Shoalhaven can have their soundscape

managed by planting trees which encourage bird life and foliage sounds, as well as adequately separating busy roadways from public spaces where possible. Other aspects of effective soundscape development include the incorporation of water features, using landforms to control unwanted noise and ensuring surrounding industrial noise is kept to a minimum through effective zoning.

Contaminated Land

It is important to consider management of contaminated land in how we plan and design the new and transforming places proposed in the Plan, especially due to the Illawarra's current and past industrial history. Soil and groundwater contamination are urban hazards which will require careful management as the Region grows, and as land uses change. Consideration of contaminated land is particularly important when planning for more sensitive land-uses such as primary schools and low-density residential neighbourhoods in or around areas with the potential for pre-existing contamination.

It appears that contaminated land management issues were not discussed within the Plan and supporting studies nor Contribution Plans. It would be beneficial to have holistic understanding of potential environmental issues and consider contaminated land management within the context of a sustainable and resilient Region.

Contaminated land can have major economic, legal and planning implications for the community and can limit land use potential or increase costs for developers and the Government. Investigation and clean-up of contaminated land are important to protect human health and the environment. It is also important to recognise contamination as one of the factors that can affect the environmental, social and economic values of important coastal lakes and lagoons, significant coastal wetlands, sensitive estuaries and the protected waters. Any potential risks of contaminated land including groundwater and ground gas contamination need to be understood and appropriately managed where required as land uses change.

It is beneficial to recognise contamination as an urban hazard which needs to be considered to achieve the following objectives of the draft Plan:

- Objective 1 which aims to "strengthen Metro Wollongong as a connected, innovative and progressive city".
- Objective 2 which aims to "grow the region's regional cities" and recognises growth and transformation within Nowra City Centre and Shellharbour City Centre.
- Objective 3 which aims to "grow the Port of Port Kembla as an international trade hub"
- Objective 12 which aims to "build resilient places and communities."

The Plan would also benefit referencing *State Environmental Planning Policy (SEPP) 55* (SEPP 55) and associated guidelines '*Managing Land Contamination Planning Guidelines SEPP 55–Remediation of Land*' (Managing Land Contamination Planning Guidelines). In particular, that land cannot be rezoned until the requirements of SEPP 55 are satisfied.

It is important to ensure adherence to SEPP55 and part 2.6 (*Remediation of Contaminated Land*) of Minister's section 9.1 Direction. The objective of this Direction is to reduce the risk of harm to human health and the environment by ensuring that contamination and remediation are considered by planning proposal authorities.

Section 4 of this Direction states:

(4) A planning proposal authority must not include in a particular zone (within the meaning of the local environmental plan) any land specified in paragraph (2) if the inclusion of the land in that zone would permit a change of use of the land, unless:

(a) the planning proposal authority has considered whether the land is contaminated, and

(b) if the land is contaminated, the planning proposal authority is satisfied that the land is suitable in its contaminated state (or will be suitable, after remediation) for all the purposes for which land in the zone concerned is permitted to be used, and

(c) if the land requires remediation to be made suitable for any purpose for which land in that zone is permitted to be used, the planning proposal authority is satisfied that the land will be so remediated before the land is used for that purpose.

In order to satisfy itself as to paragraph (4)(c), the planning proposal authority may need to include certain provisions in the Local Environmental Plan.

Suggested Amendments and Additional Text to Address Urban Hazards
The following are suggested amendments and additional matters for consideration by DPIE in relation to addressing urban hazards in the *Draft Illawarra Shoalhaven Regional Plan 2041.*

a) Include the following amendment (in italic font, underlined and crossed out) to introduction under "*A sustainable and resilient region*" (page 44) second paragraph. "The safety and wellbeing of people and the coastal and rural lifestyles on offer will be maximised by integrating land use planning with planning for natural *and urban* hazards, resilience, open space and waterway health ~~processes~~."

b) Include the following amendment (in italic font and underlined) to introduction under "*A sustainable and resilient region*" (page 45) sixth paragraph. "The Illawarra Shoalhaven will be a leading region in sustainability through collaborative approaches that reduce emissions, promote a circular economy and low emissions transport, position the region as a hub for clean energy, *support clean air*, use water resources efficiently and increase tree canopy cover.

c) Include the following additional paragraph (in italic font and underlined) to narrative in Objective 12: Build resilient places and communities (page 51)

A resilient region reduces its exposure and vulnerability to natural and urban hazards and is more able to withstand shocks and stresses. Urban hazards such as air pollution, noise and soil contamination need to be managed to protect the region's liveability and sustainability.

d) Include the following text (in italic font and underlined) to narrative in Objective 12: Build resilient places and communities (page 51) third paragraph "Hazards can disrupt road and transport networks and interrupt access to essential services including water, sewerage, power, telecommunications and digital connectivity, as was seen on the south coast in the 201920 bushfires. Residents, tourists, towns and communities can become isolated for extended periods. Visiting tourists may not be aware of the dangers and emergency procedures. *Increased heat, drought and bushfire events associated with climate change are expected to result in more frequent and severe air pollution episodes and increased health risks.*

e) Include the following amendment (in italic font and underlined) to Strategy 12.1 first dot point (page 51) "encourage sustainable and resilient building design and materials *that are energy-efficient, use clean* and* renewable energy and *help provide protection against risks such as elevated heat and pollution.*
** wood for heating is a renewable fuel but a major source of pollution in centres*

f) Include the following amendment and additional dot point (in italic font and underlined) to Strategy 12.2 (page 52).
Reduce exposure to natural *and urban* hazards in local strategic planning and local plans by….

- *Ensure any risk of urban hazards are understood and managed early for new development*
- *Avoid locating new urban development in areas exposed to urban hazards and consider options to limit the intensification of development in existing urban areas most exposed to hazards.*

Note: the last point is also an action in the Greater Sydney District Plans.

g) Recommend an additional objective and supporting strategy under "A sustainable and resilient Region" to address air quality issues in the Illawarra Shoalhaven Region (in italics)

Objective XX: Minimise impacts of air pollution as an urban and natural hazard
The Illawarra/Shoalhaven region experiences episodes of poor air quality from ozone and particle pollution, which will likely increase in the future with population and economic growth and the effects of climate change. Key concerns are potential community exposure to air pollution from domestic wood heating and from major industrial and freight sources and the potential impacts from future pollution events associated with expected increase in episodes of heat, bushfire and drought. The objectives in this plan to build resilient places and communities, increase urban canopy, plan for a Net Zero region, avoid land use conflicts and sustainably improve connectivity will all contribute to clean air and healthy communities. Local land use planning processes can help create communities that are sustainable and resilient in terms of air quality by directly considering air quality and promoting:

- *Energy-efficient homes powered by renewable and clean energy, recognising that wood heaters are a major source of human-made fine particle pollution in Illawarra/Shoalhaven local government areas*
- *Connectivity solutions that minimise air pollution, noting that even zero exhaust vehicles generate significant particle pollution from road, brake and tyre wear*
- *Best practice planning to separate or transition incompatible land uses, existing and proposed, (such as industry, ports, major transport corridors vs residential and child-care) and appropriate design to minimise any remaining air impacts on sensitive uses, in order to facilitate growth while avoiding adverse impacts on community health and amenity*
- *Increased vegetation, to help adsorb pollutants across regions and enhance buffers between incompatible land uses*
- *Buildings and spaces with air conditioning and filtration that provide potential shelter from elevated pollution levels, including during extreme pollution events.*

Strategy xx: *Reduce air pollutant emissions and impacts through local strategic planning and local plans by:*

- *Capturing planning opportunities to minimise pollutant emissions including from local and household sources*
- *Promoting planning and design that protects health and amenity for sensitive land uses near major pollutant sources, such as industry and freight hubs and corridors*
- *Incorporating measures to increase community resilience to extreme smoke and dust events.*

Lead*: Councils*

h) Include the following text (in italic font and underlined) to narrative in paragraph 5 Objective 27: Protect major freight networks (page 78)
Future planning should protect the freight network from potential encroachment by the expansion of residential areas and other sensitive land uses and encourage off-road freight or create connections between heavy vehicle routes that do not involve local roads. *Where sensitive development is proposed in proximity to freight hubs or corridors, planning, siting and design of the development needs to take account of potential air and noise impacts and apply relevant guidance and best practice approaches. This includes the Development near rail corridors and busy roads – interim guideline, under the Infrastructure State Environmental Planning Policy, which the Department of Planning, Industry and Environment is currently updating.*

i) Include the following amendment and additional dot point (in italic and underlined) to Strategy 27.1 (page 78) to optimise the efficiency and effectiveness of the freight handling and logistics network in local strategic planning and local plans by:

- *minimising potential air and noise impacts on sensitive developments close to freight activity by following relevant planning and design guidance and applying best practice approaches.*

General Matters

Strategies that encourage energy efficient building design for residential, commercial and industrial areas in local strategic planning and local plans (Strategy 15.2) would benefit broadening to help drive higher sustainability outcomes for both built form and precinct design. While energy is an important consideration, a range of other key efficiency measures including water and waste management are also important considerations to help inform sustainability outcomes. In this regard the Plan could promote the use of green building ratings tools, for example NABERS, Green Star Communities and programs such as Sustainability Advantage to help drive high sustainability outcomes as part of design excellence. In addition, the Plan also provides an opportunity for Councils to investigate the use of incentives to drive higher sustainability standards especially in key strategic centres undergoing transformation and new growth areas. This could also include precinct-based sustainability standards, to ensure new development contributes to improved environmental performance.

The Plan recognises the importance of Hydrogen production, utilisation and export to help transition to a low carbon economy. It further highlights the opportunities provided in the proposed Hydrogen production facility at Port Kembla which could be complemented with smaller scale Hydrogen plants that are coupled with industrial and agricultural processes that use Hydrogen to become a hub. The Plan also recognises the role of waste to energy with the recognition of approaches such as Biogas recovery.

While these facilities are important to help transition to a low carbon economy and deliver circular economy, the planning for these approaches such as new Hydrogen hubs is in its infancy. In this regard, the Plan would benefit a further action that helps to better understand these approaches including potential locations, feasibility/risks and planning frameworks needed to help transition the Region to a low carbon economy.