HOUSING, HEAVY INDUSTRY, POLLUTION & FUTURE DEVELOPMENT IN PORT ADELAIDE

Mark Parnell MLC
Select Committees

- Useful inquiry tool to investigate topical issues of concern
- Mostly established by non-Government MPs
- Submissions, witnesses, Final Report
- Government under no obligation to respond or to implement recommendations.
LeFevre Select Committee

• Moved by Greens, supported by Libs & X-bench MPs in Upper House
• Why? Adelaide Brighton Cement, Newport Quays, Incitec Pivot, clear problems with the Planning System.
• Submissions, witnesses, Final Report
• No response by Government
Select Committee Recommendations: Land Uses on Lefevre Peninsula

1. that the Government undertake a comprehensive review of all land uses and land zoning on Lefevre Peninsula and prepare a strategy to address historic land use decisions that result in conflict between industry and other uses. The review should identify options for moving the location of either industry or housing if conflicts cannot be resolved in any other way;
2. that the relocation of Incitec Pivot Fertilisers be made a priority;
3. that the EPA proceed with the development of an air quality strategy for the Lefevre Peninsula;
4. that investigations be carried out to identify and resolve noise pollution issues associated with the movement of rail freight through the Lefevre Peninsula;
5. that the EPA and other relevant state agencies conduct a hazard risk study of the Port Adelaide Enfield Council’s Restricted Residential Policy Area 14;
6. that consideration be given to modifying the standard form disclosure document (Form 1) under the Land and Business (Sale and Conveyancing) Regulations 2010 to include a reference to the availability of information about EPA licensed activities on the EPA public register. A link to the EPA “public register” web site would enable purchasers to make their own inquiries about potential impacts from nearby industrial facilities;
7. that the EPA continue to publish pollution monitoring data online including raw data as well as summarised data to enable interested parties to assess trends in air quality as well as identifying specific pollution incidents in the area;
8. that the present referral system for Development Applications under the Development Act & Regulations be reviewed to ensure that the EPA and other appropriate regulatory agencies are consulted and given appropriate powers of direction or advice in all matters where potential harm to the environment or public health could result;
9. that all advice or direction given by Government agencies or statutory authorities in relation to Development Applications be made publicly available on the internet;
10. that DPTI consult with the EPA at an early stage in relation to Ministerial DPAs so that important environmental issues are not overlooked in the preparation of the document that is put out for public consultation;
11. that current informal practices of consultation by planning authorities with the EPA be formalised through Regulations to ensure that the EPA is recognised as a key stakeholder with responsibility for environment protection;
12. that any advice or report by the EPA on proposed changes to Development Plans or Development Regulations be published on-line to ensure that the community is aware of the nature of expert environmental input into planning decisions;
13. that where there is disagreement between a local Council and the Planning Minister in relation to a DPA, that the matter be referred to the Environment, Resources and Development Committee of Parliament prior the Gazettal of the DPA. This would enable the ERD Committee to assist in brokering a solution between State and Local Government before the DPA comes into operation;
14. that where possible all submissions by Government Agencies (including the EPA) in relation to DPAs be forwarded to DPAC for its consideration and published on its website alongside other public submissions;
15. that DPAC advice to the Minister in relation to a DPA be published in a more timely manner and also provided directly to those stakeholders who made written or verbal submissions to DPAC.
Select Committee Recommendations: Land Uses on Lefevre Peninsular

1. Fix the planning system
2. Move Incitec Pivot
3. Develop an air quality strategy for the Lefevre Peninsula
4. Greater transparency and more info for residents about pollution hazards
## National Pollutant Inventory: Adelaide Brighton Cement Snapshot

<table>
<thead>
<tr>
<th>Total kg over time</th>
<th>2009/10</th>
<th>2010/11</th>
<th>2011/12</th>
<th>2012/13</th>
<th>% increase over 4yrs</th>
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<tr>
<td>Oxides of Nitrogen</td>
<td>3,108,800</td>
<td>2,728,200</td>
<td>3,152,640</td>
<td>3,491,344</td>
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<td>Particulate Matter 10.0 um</td>
<td>93,000</td>
<td>90,400</td>
<td>102,783</td>
<td>147,450</td>
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<tr>
<td>Particulate Matter 2.5 um</td>
<td>10,590</td>
<td>9,870</td>
<td>15,614</td>
<td>29,126.2</td>
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<td>Sulphur dioxide</td>
<td>8407</td>
<td>16207</td>
<td>20068.4</td>
<td>32703.7</td>
<td>289</td>
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SA-born professor Ian Plimer says Port Adelaide should be considered as a site for a nuclear power plant

KURTIS EICHLER  PORTSIDE MESSENGER  FEBRUARY 12, 2015 4:49PM
Select Committee on Land Uses on the LeFevre Peninsula

18 February 2015

Dr Kevin Buckett
Director Public Health
Department for Health and Ageing Role

> Advisory/consultancy on health risk assessments
  • site contamination and air quality
  • provided to EPA, DPTI, Port Adelaide Enfield Council and community
> Engagement in epidemiological research in the region
> Standard setting (local/national)
> Evidence from national and international health research
> Health impact assessment
> Public Health Partnership and Public Health Planning
Health Studies

> **Social Health Atlas of South Australia** compares premature mortality, hospital admission data, chronic disease and risk factors of areas in SA with SA.

> **North West Adelaide Health Study**- is a cohort which aims to gather representative SA data on chronic disease and risk factors. It does not compare health outcomes to other areas in Adelaide/SA/Australia.

> **Pilotto et al study, 1999** examines respiratory health in Port Adelaide and Le Fevre P. in relation to national data, smoking, industry and household appliances.

> **Lung cancer study, Smith et al 2005** examines lung cancer incidence in the same area in relation to smoking, occupational and environmental factors.
Comparison of rates of mortality (premature 0-74, data from 2008-12) of local areas with Australian rates.

<table>
<thead>
<tr>
<th>Premature mortality &lt;75</th>
<th>2008-2012 data</th>
<th>2007-2008</th>
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<tbody>
<tr>
<td>areas</td>
<td>all cancers</td>
<td>Lung cancer</td>
</tr>
<tr>
<td>Australia</td>
<td></td>
<td></td>
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<tr>
<td>Standardised Rate =100</td>
<td></td>
<td></td>
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<tr>
<td>Port Adelaide Enfield-Coast (Le Fevre P)</td>
<td><strong>129</strong></td>
<td><strong>121</strong></td>
</tr>
<tr>
<td>Port Adelaide Enfield-Port</td>
<td>125</td>
<td>126</td>
</tr>
<tr>
<td>Port Adelaide Enfield-Park</td>
<td>120</td>
<td>165*</td>
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<td>Port Adelaide Enfield-Inner</td>
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<td>116</td>
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<tr>
<td>Port Adelaide Enfield East</td>
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<td>Charles Sturt Coastal</td>
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<tr>
<td>Playford Elizabeth</td>
<td>152**</td>
<td>202**</td>
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<tr>
<td>Onkaparinga North Coast</td>
<td>136**</td>
<td>186**</td>
</tr>
<tr>
<td>Onkaparinga South Coast</td>
<td>97</td>
<td>105</td>
</tr>
</tbody>
</table>
Air pollution and cigarettes

[Graph showing adjusted relative risk vs. estimated daily inhaled dose of PM$_{2.5}$ (mg)]
The risk of PM2.5 air pollution and smoking: integrated data from large population studies in the U.S.
Results

- We looked at rates from Port Adelaide Enfield Coast which represents the Le Fevre Peninsula (LFP).

**Compared to Australia:**
- Respiratory systems mortality is more than doubled
- All cancer mortality 29% higher
- Circulatory system mortality 27% higher

**Self-assessed chronic disease (NHS 2007-08):**
- Chronic asthma 5% higher
- Chronic respiratory 19% higher
- Smoking 9% higher for males and 1% lower for females
- Socio-Economic Indexes for Areas (SEIFA): LFP ranks 624 out of 1091 = mid to lower socio-economic area
Other studies

> **Pilotto et al** Males in particular have a high prevalence of self-reported asthma, bronchitis, emphysema and respiratory symptoms/compared to national data.
> High rates of asthma in children and adults
> Current smoking was significantly higher than national data and was associated with respiratory disease.
> **Smith et al** Smoking is the primary cause of elevated lung cancer. No obvious effect of cumulative residential exposure to 6 near-by industries.
> **In general, national and international environmental research** indicates that air pollution contributes to cardiovascular and respiratory mortality and morbidity.
> **Living near major roads (>10,000 cars/24 hours)** impacts on CV and respiratory health. Children and their growing respiratory systems are affected.
Summary of Findings

• Population is impacted by chronic disease, especially respiratory and cardiovascular health problems and cancer.
• Other SA areas with similar and worse health outcomes.
• Le Fevre Peninsula population ranks 624/1091; lower socio-economic status.
• Smoking is higher than the Australian average, but has been recently decreasing.
• Health assessment shows increased health problems and therefore the population is more vulnerable to extra environmental pressures.

> Challenges for health studies generally
• Chronic diseases occur after long term exposure to multiple plausible factors.
• There is no one study that can show a causal relationship with specific environmental or other risk factors.
• Studies of environmental exposures and health effects need large sample sizes to detect meaningful associations.
• There is no need to repeat health studies locally when systematic reviews indicate health issues as is the case with air pollution.
Responses to Issues Identified

SA Health
>
> advises agencies on health risks and potential impacts.
  > EPA Draft Consultancy ‘Air Quality Framework for SA’.
>
> gives advice on planning and urban development issues
>
> contributes to the development of national standards and state guidelines.
  > Review of air quality standards (NEPM) based on health studies. Recommendations of tightening the standards and for continual improvements of air quality to reduce respiratory and cardiovascular health effects.
  > Health effects of noise require noise guidelines (CV, sleep deprivation and cognitive effects)
  > Standards can minimise risk, but do not eliminate it.
>
> focuses on environmental and social determinants of health (walkability, cycling opportunities, public transport).
>
> Implications for the Le Fevre Peninsula
  > Air Quality is impacted by high PM10 (due to meteorological and local sources)
  > Many factors impact on health and it is difficult to attribute to causes. Risk factors (smoking, obesity, alcohol and physical inactivity) have larger effects on health than air pollution.
  > Air pollution reduction is important (industry, traffic and agricultural/landscape/building sources) due to impact on vulnerable population.
EPA Activity – LeFevre Peninsula

• Management of Licences under the Environment Protection Act
• Environment Improvement Programs (as part of licences)
• Assessment of new proposals
• Respond to Complaints
• Ambient Air quality monitoring stations at Birkenhead and North Haven
EPA licensees – LeFevre Peninsula

More than 80 industries on the Peninsula are licensed by the EPA for activities including:
• Petroleum storage
• Chemical works and storage
• Cement works
• Fuel burning
• Waste and recycling
• Marinas and boating facilities
• Bulk shipping facilities
147 COMPLAINTS IN 2014

- Licensed Premises: 54%
- Domestic: 20%
- Water pollution: 12%
- Construction & Asbestos: 8%
- Other: 6%
Monitoring Sites in Metropolitan Adelaide
Local Monitoring Sites

Lefevre 1 is located at Birkenhead.

LeFevre 2 is located at North Haven.
We recognise three categories of particulate matter (‘PM’):

Total Suspended Particulates (TSP) – full range of particle sizes, including those larger than 10 micrometres that cannot pass the nose and throat (ranging up to 50-100 micrometres*).

**PM$_{10}$** – all particles less than or equal to 10 micrometres, which can enter the lungs

**PM$_{2.5}$** – all particles less than or equal to 2.5 micrometres. Penetrate into the deepest areas of the lungs. (A subset of the PM$_{10}$ fraction)
Number of exceedences for PM$_{10}$ at Le Fevre 1 Station

- Days with NEPM exceedences
- Maximum allowable NEPM exceedences
Number of Exceedences for PM$_{10}$

- Le Fevre 1: 3 days with NEPM exceedences
- Le Fevre 2: 5 days with NEPM exceedences

Days with NEPM exceedences
Maximum allowable NEPM exceedences

South Australia's Environment Protection Authority
Monitoring at Le Fevre 2 commenced in April 2013

*Monitoring at Le Fevre 2 commenced in April 2013*
Annual NEPM PM$_{2.5}$ Standard = 8 µg/m$^3$

Annual Average PM$_{2.5}$ at Netley and Le Fevre 2 stations

*Monitoring at Le Fevre 2 commenced in April 2013*
PM$_{2.5}$ Daily Average Values (µg/m$^3$) at Netley and Le Fevre 2 Stations

*Monitoring at Le Fevre 2 commenced in April 2013*
Monitoring at CBD commenced from May 2014

NO₂ 1-hour Standard = 0.12 µg/m³

Max 1 hour NO₂ observed (in ppm) at different metropolitan stations (2014)

*Monitoring at CBD commenced from May 2014*
Monitoring at CBD commenced from May 2014

Annual average NO₂ concentrations (in ppm) at different metropolitan station (2014)

NO₂ Annual Standard = 0.03 µg/m³

*Monitoring at CBD commenced from May 2014*
Max 1 hour SO$_2$ observed (in ppm) at two metropolitan stations (2014)

SO$_2$ 1-hour Standard = 0.2 µg/m$^3$
In April 2014, Australia’s Environment Ministers agreed to work towards a National Clean Air Agreement.

Discussions are ongoing with the Commonwealth about what matters may be covered. Some issues, such as fuel quality, are already regulated at the national level.

Possible issues covered may include:
- Domestic solid fuel heaters
- Non-road engines
- Shipping emissions
Air Quality Framework

Key Principles:

• Broad ownership of air quality, working through partnerships with communities
• Effective policies and instruments that minimise and reduce adverse impacts on air quality
• Clear and effective regulation of industrial and commercial activities that emit substances to the air
• Decisions firmly grounded in science

It is intended that the first collaborative partnership be established in the Port Adelaide / Lefevre area.
Land Uses on Lefevre Peninsula

Stuart Moseley
General Manager, Information and Strategy
Department of Planning, Transport and Infrastructure

18 February 2015
Lefevre Peninsula – Land Use

- residents: 29,270 and growing (0.8% pa)
- jobs: 8,013 and growing (up 41% 2001 - 2011)
- 30% of jobs are in manufacturing (up 60% 2001 - 2011)
- 34% of jobs are at Outer Harbor and Osborne
- 34% of Peninsula workers live locally
- 192.3ha of vacant industrial land
Overview

- land use conflict is a longstanding and complex challenge
- requires coordinated action by Council and Government:
  - environmental management (EPA, Council)
  - public health and safety (SA Health, Safework SA, Council)
  - land use planning (DPTI, Council)
  - infrastructure investment (DPTI, Council)
  - land dealings (Renewal SA)
- the planning system is only one tool in the toolbox
Department of Planning, Transport and Infrastructure

• lead role in land use and transport planning and delivery
• working across government with local councils and communities to implement:
  • The 30-Year Plan for Greater Adelaide
  • draft Integrated Transport and Land Use Plan (ITLUP) and supporting network plans
Strategic Directions – Land Use

- key industrial area (transport / defence)
- passenger rail line key transit corridor (housing/renewal opportunities)
- major renewal at Port Adelaide
- planning policies (Council role) to:
  - minimise risk to people from hazards
  - improve and expand Outer Harbor and protect from encroachment
Strategic Directions – Infrastructure / Transport

• protect key freight corridors – Outer Harbor and access to the port
• PortLINK light rail to reduce car dependency and support urban renewal
• promote walking and cycling
• complete the Outer Harbor Greenway from Semaphore Road to North Haven (partner with Council)
Land Use – Role of the Planning System

• set long term spatial directions, targets (housing, jobs, services, connections)
• establish zoning that regulates land use and built form change (in response to development applications)
• establish building rules
• assess and determine development applications
• help provide / fund open space
Key DPTI Planning Initiatives

• update *30 Year Plan for Greater Adelaide*
• new planning legislation (response to Expert Panel on Planning Reform)
• finalise new zoning for Port Adelaide Centre (with EPA)
• collaborate with Council on implementing their rezoning program (including review of interface between residential and industrial)
• administer building rules to protect sensitive development from external noise and air emissions (main roads / mixed use environments)
• seek EPA advice on proposals for zoning change
• prepare new site contamination framework (joint with EPA)
Planning Reform

• many of the Select Committee’s recommendations relate to general planning matters and will be considered in the drafting of new planning legislation:
  • Charter of citizen participation – clear framework for public participation in planning processes (reform 3)
  • Parliament role – more meaningful and effective (reform 4)
  • changing development plans – transparent and consistent (reform 9)
  • development assessment – clear, consistent processes (reform 10)
  • reviewing referral system – efficient processing of advice (reform 19)
  • new online planning system – transparent information sharing (reform 20)
Land Information Disclosure

- Select Committee recommendation 6 – disclose EPA licensed premises on Form 1 notice
- Form 1 only sighted at contract execution
- A more effective option could be to provide Registrar General note on titles (being investigated)
- Allows for quicker search of potential impacts prior to purchase of land
Fast facts

- minor infill sites account for around 24% of new dwellings built on the Peninsula between 2008 and 2014
- the number of persons employed on the Peninsula increased by 41% (2,323 persons) between 2001 and 2011
- 8% of persons travelling to the Peninsula for work travel from adjacent areas including Port Adelaide and West Lakes
- 91% of the persons who travelled to the Lefevre Peninsula for work stated their mode of travel was by car
Residential Code Area – Lefevre Peninsula

- introduced in the *Development Act 1993* in March 2009
- applies in areas that are zoned residential
- applies to residential development
Port Adelaide Enfield Development Plan – interface provisions

- **Industrial Development**
  - PDC 7: industrial, warehouse, storage, commercial and transport distribution development should minimise significant adverse impact on adjoining uses due to hours of operation, traffic, noise, fumes, smell, dust, paint or other chemical over-spray, vibration, glare or light spill, electronic interference, ash or other harmful or nuisance-creating impacts.

- **Interface between Land Uses**
  - PDC 5: sensitive uses likely to conflict with the continuation of lawfully existing developments and land uses considered appropriate for the zone should not be developed or should be designed to minimise negative impacts.

- **Residential Development**
  - PDC 44: residential development on land located within 100m of an industry zone that is likely to be affected by industrial noise should be designed to minimise the effects of noise.

- **Industry Zone**
  - PDC 6: any plant or equipment with potential to cause an environmental nuisance should be sited as far as possible from adjoining non-industrially zoned allotments, and should be designed to minimise its effect on the amenity of the locality.

- **Light Industry Zone**
  - PDC 17: industrial development, not in association with railway activities, should be set back a minimum of 100m from existing residential land.
  - PDC 18: industrial development in association with railway activities should incorporate suitable noise attenuation measures and be of a high architectural quality in a contemporary or modern style using high quality materials.
Restricted Residential Policy Area

- includes 511 allotments
- covers 35 hectares (0.35 square km)
- restricts new residential development in close proximity to industrial activities