

PEEL REGIONAL LEADERS FORUM

AGENDA ITEM: 3 - CHAIR'S REPORT 2016

AUTHOR: MARINA VERGONE

This has been a very full year for the PRLF and we have achieved some great outcomes.

The Peel Region has been through a lot this year, starting with the devastating bush fires through the Murray, Waroona and Harvey Shires.

It was during these bush fires that Wheeler's airstrip become such an important piece of infrastructure to facilitate the landing, water collection and take off for the water bombers used to tackle the fires. The Shire of Murray presented with Mr Raalan Wheeler to the PRLF requesting our help in funding the upgrade to the existing runway strip. With our support, they were able to fund nearly the entire amount, with only \$20,000 still being needed. Mr Wheeler was a finalist and received a special recognition plaque at the Alcoa Peel Volunteers awards breakfast on the 5th December this year for the tireless work he has done for the past 20 years in ensuring his private runway is available for any emergency.

The City of Mandurah hosted a State Cabinet meeting in March where the Shire of Murray and the City jointly shared our concerns, on behalf of the PRLF, to the Ministers.

On top of the list was the discussion around the Perth & Peel 3.5 planning document. We were extremely disappointed in the lack of Government engagement with the PRLF when it came to our input into the Plan.

High unemployment together with the lack of Government departments being located in the Peel region were also on our list of concerns.

The main reason we come together as a Leaders Forum is to lobby and advocate for change in our region. This year we have met with the following Federal and State Members and Ministers:

- Senator the Hon. Michaelia Cash, Senator the Hon. Mathias Cormann, Senator Linda Reynolds, and our Federal Member for Canning Andrew Hastie.
- Hon. Greg Hunt, Hon. Steven Ciobo and Hon Fiona Nash's Policy Advisors on our recent trip to Canberra.
- State members including Hon. Liza Harvey, Hon. Peter Collier, Hon. John Day, Hon. Michael Mischin, Hon. Terry Redman, Hon Donna Faragher, Hon. Andrea Mitchell, Hon. Dr Kim Hames and David Templeman.

One message we are strongly advocating is that the Peel Region is in fact a region and not to be lumped in as South Metropolitan. This message is being said but not heard, and this has truly frustrated us.

This was demonstrated this week when we were zoned as Non-Regional for the Building Better Regions Funding. Once again the Peel Region has been short-changed by the Federal Government and treated differently to other similar regions in Australia.

We need to start being a lot stronger in our message to both the State and Federal Governments. Better education and training facilities, encouraging more Business diversification to come to our region for job creation, health care and transport are the main key issues. The equestrian centre is also an important economic and employment driver for the region.

We had some fantastic presentations during the year;

- Presentations on Southern Transport Link;
- Planned developments at Murray field airport;
- Anne Sinclair "Peel says no to violence" project; and
- Regional Estuaries Initiative.

I would like to thank John Lynch for the tremendous work he has done over the past year, in organising meetings with the PRLF members and various Members of Parliament, and looking after our media statements, correspondence and minutes.

It will be very sad to see John finish his time with the PRLF on Friday the 24th March 2017. He has brought a lot of knowledge and expertise to the role, and kept us on track. We wish John all the best for his "real" retirement.

I have thoroughly enjoyed holding the position of chairman of this Forum and feel that, although we haven't achieved everything we wanted to this year, we have certainly made enough noise to make the politicians start to take notice of the Peel region.

Together we are a strong voice and I believe that the comradery amongst the members has grown over the last year. I believe we can achieve more by working together which is why this group was formed.

I would like to thank everyone for your support over the last year and look forward to continuing our push to see great outcomes being made for our region.

Have a very safe and Merry Christmas and a Happy New Year. See you all back here in 2017.

OFFICER RECOMMENDATION:

That the Peel Regional Leaders Forum:

- 1. Note the Chair's Report 2016.**

KEY MESSAGES

For consistent use.

Our Tagline

Australian Natural Resource Management: 1000s of Local Solutions

This tagline was developed to identify the vast NRM network and to tie it into the government's innovation agenda by highlighting the solutions of NRM work and the fact that they are embedded in every local area. This highlights the power of NRM work in local electorates, providing more reason for local MP's to support and listen. This tagline will be the central feature of all NRM campaign material, even if it is only used as a single line in a document (media release, social media post etc.).

The messages below are a selection from which to choose - tailor for your audience. We will have these presented on the website with a collection of examples – national and regional – and links.

Australian Natural Resource Management – 1000s of Local Solutions

Tailored Messages


Farming Profitability: 1000s of local solutions

- NRM equals profits.
- NRM creates access to international markets.
- NRM manages the impact and risk of pest plants and animals.

Examples: National - 88% of farmers who engage in NRM practices report an increase in profitability.

The cost to agriculture from wild dogs, rabbits, foxes, pigs, pest birds and mice is estimated at approximately \$745 million in 2009.

Regional Jobs and Economic Growth: 1000s of local solutions	<ul style="list-style-type: none"> • NRM programs create local jobs and promote growth, development and greater prosperity, especially in regional and rural areas. • NRM programs give more people more reasons to live in more places.
Securing natural capital: 1000s of local solutions	<ul style="list-style-type: none"> • Australians rely upon natural capital for their wealth and well-being. • NRM helps the Commonwealth Government meet their legislative obligations. • The National Landcare Programme funds over 110 projects supporting threatened species including over \$25 million to 13 of our most threatened species.
Resilient Communities: 1000s of local solutions	<ul style="list-style-type: none"> • We support the wealth and well-being of every Australian. • Our work is embedded in local and regional communities. • In many cases we are integral to emergency and disaster response. • We build capacity to manage drought, climate variability and extremes. • Natural resource management improves well-being and farmer health.
Liveable Cities: 1000s of local solutions	<ul style="list-style-type: none"> • NRM happens in our cities too. • We work in urban and metropolitan areas. • Urban projects enhance liveability and well-being.
Closing The Gap	<ul style="list-style-type: none"> • ‘Caring for country’ is associated with significantly better health and fosters economic development along with environmental improvement. • Over 770 full time jobs have been created via indigenous ranger programs. • Indigenous enterprises have been developed with support from the National Landcare Programme.
Innovation and collaboration	<ul style="list-style-type: none"> • NRM is built upon collaboration and partnerships • NRM responds to opportunities and creates innovation <p>Examples:</p>



Through the Reef Programme (2013-16), partnerships have been developed across industries and communities to support 1,954 farmers to improve their land management practices over 1.33 million hectares.

80.6% of Australia's emissions reductions contracted under the Emissions Reduction Fund are coming from 245 projects in the land sector.

Why undertake natural resource management?

Our natural environment is critical to the health, wellbeing and economic security of every Australian.

Getting to why is critical for effective engagement and greater support. It demonstrates value, gets people thinking and importantly commands support from decision makers. The NRM why was decided upon as it is strong, links the protection of our natural environment to people's health, general wellbeing and importantly our national economic security. It is strong and commanding.

Why the Natural Resource Management system?

NRM and Landcare is unique to Australia. It has been quietly built over 30 years by people who care about their local land, water and community.

Linking this softer explanation of 'why the network' fits well with the bold commanding of why NRM. It highlights a connected and committed Australia-wide network that just gets on with the job; a very important job!



Science Update

PHCC General Meeting 15 December 2016

Steve Fisher, PHCC Science Advisor

*We acknowledge the Noongar people as Traditional Custodians
of this land and pay our respects to all Elders past and present*

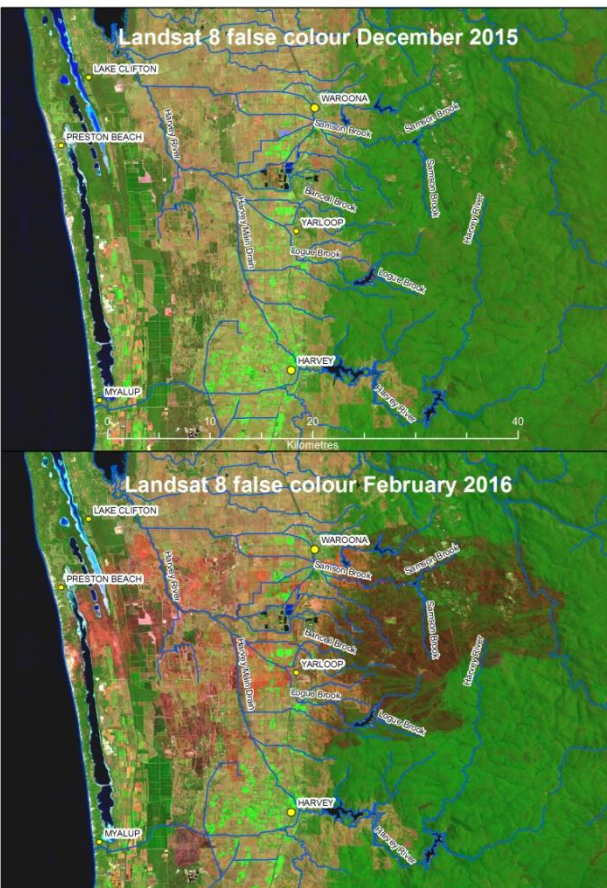


PHCC

Peel-Harvey Catchment Council

**Working
Together**

1. Impacts of Bushfire on Water Quality in the Harvey River Basin



- Four areas of research activity:
 - i. erosion and loss of riparian vegetation
 - ii. mobilisation of nutrients and other contaminants**
 - iii. impacts of fire retardant foams**
 - iv. impacts on aquatic biota
- Outcomes include:
 - model erosion and sediment loss
 - design and implement a Sampling and Analysis Plan to monitor water quality**
 - framework for response plan to bushfire to assess effect on ecosystem health
 - assess ecotoxicity of foams**

2. ARC-Linkage Project

1. Catchment-estuary function & linkages

- Coupled catchment-estuary model
- Nutrient 'source-to-fate' isotope tracing

2. Estuarine ecological health response

- Faunal (fish & invertebrate) health indices

3. Estuarine ecosystem service provision

4. Socio-economic health indicators

DSS for sustainable development

A/Prof. Matt Hipsey
Dr Peishong Huang
Dylan Pritchard (Student)
Prof. Bradley Eyre
Dr Naomi Wells
Mustefa Rashid
Dr. Peta Kelsey
Dr Kierny Kilminster
Karl Hennig

UWA

SCU

DoW

Dr Chris Hallett
Dr Fiona Valesini
Kierny Graham (PhD Student)

Murdoch

Dr Matt Hipsey
Prof. Paul Plummer
Nancy Haddaden (PhD Student)
Prof. Mike Elliot
Dr Fiona Valesini

UWA

Hull

Murdoch

ARC-Linkage Project

1. Catchment-estuary function & linkages

- Coupled catchment-estuary model
- Nutrient 'source-to-fate' isotope tracing

- Model development progressing
- Nutrient tracing site visit Sep 2016

2. Estuarine ecological health response

- Faunal (fish & invertebrate) health indices

- Fish sampling commenced 2016
- Preliminary sediment quality surveys
- Existing invertebrate data compiled (GIS)

3. Estuarine ecosystem service provision

- Due to commence Feb 2017

4. Socio-economic health indicators

- Due to commence late 2017

DSS for sustainable development

- Final project output 2019

ARC Project - Other Related Initiatives

- Dolphin population assessment (Murdoch University)
- Estuary Guardians Citizen Science (John Tonkin College)
- Coastal Values: Community Perspectives (City of Mandurah, Peron Naturaliste Partnership)
- Bird surveys (e.g. Caspian Terns, Conservation Council WA)
- Transform Peel - Peel Waterways Initiative (Peel Development Corporation)
- Green Growth Plan / SAPPR (Dept. Premier and Cabinet)
 - water quality sampling
 - sediment sampling
- Peel Waterways Institute (Stage 1, PDC, PHCC, Peel Regional Leaders ' Forum)

3. Conservation Council – Caspian Terns



Study by Nic Dunlop (CCWA)

- 60 breeding pairs on Penguin Island “banded”
- 73 of 74 subsequent observations in Peel Inlet
- 72 of 73 sightings near Coodanup
- Caspian Terns are “conspicuous residents” of Peel-Harvey Estuary



Photos Courtesy of Dr Nic Dunlop, Conservation Council of WA

Accumulation of Mercury by Caspian Terns

- Penguin Island specimens:
 - v. high concentrations of mercury in tail feathers
 - diet of mostly sea mullet and Perth herring



- Sea mullet are detritivores & likely Hg accumulators
- Peel-Harvey Estuary suggested as a source of the mercury
 - methylation of naturally-occurring mercury (algal mats, high C, low O₂)

Caspian Terns Study

- Conclusions (stated)
 - Caspian terns - potential indicators of ecological condition
 - Important to continue banding and dietary analysis
 - Accumulation of mercury likely from P-H Estuary sea mullet
- Other implications (not stated)
 - Is the Peel-Harvey Estuary a “kitchen” for methylmercury?
 - Are sea mullet from P-H Estuary safe to eat?
 - What is the impact on MSC Certification?
- Strategy – get ahead of the game
 - Work collectively with stakeholders
 - Communications strategy
 - Collect appropriate evidence



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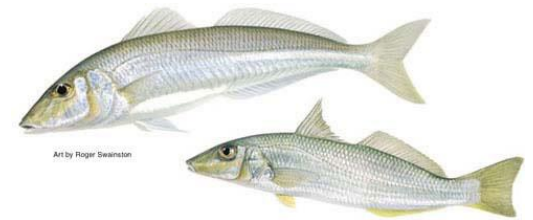
Advice (Integrating Science)

1. Buy out of commercial fishing licences

- Recommended to not endorse this proposal

2. Peel Main Drain Project

- Regional Estuaries Initiative



3. Lake McLarty TAG

- Draft Action Plan (Jo Garvey; Andrew Del Marco)

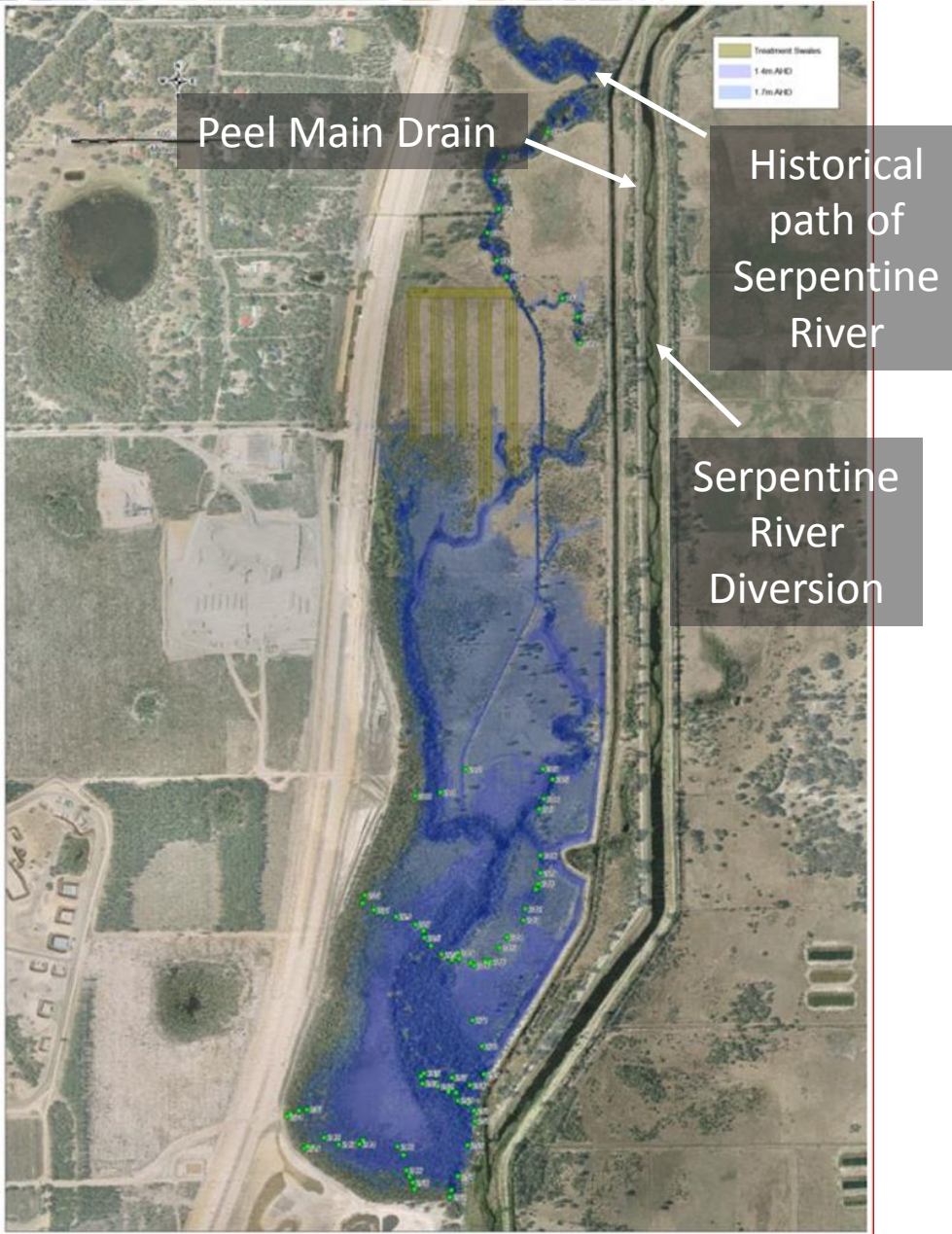
4. Water Corporation Partner Agreement

- Recognising drainage water quality as well as conveyance

5. Future drainage projects (DPC)

- Delivering Green Growth Plan environmental commitments

Peel Main Drain Project



- Divert water from the Peel Main Drain to historical flowpath of Serpentine River
- Improve water quality using a series of treatment options
- Return water to the Serpentine River

Peel Main Drain: Water Quality Assessment

- Three water quality sampling events on 12 Oct., 24 Oct. & 8 Dec.
- Comparison of water quality in drain, throughout wetland and the receiving water (Serpentine River)
- Comparable water quality



Peel Main Drain: Selected Water Quality Variables

	Total N (mg/L)	Total P (mg/L)	Aluminium, Total (mg/L)	Copper, Total (mg/L)
Main Drain	1.3 / 1.5	0.27 / 0.25	0.28 / 0.29	< 0.001 / < 0.001
Wetland	0.64 - 1.8	0.017 - 0.26	0.018 - 5.6	< 0.001 - 0.007
Serpentine R	1.6 / 1.1	0.21 / 0.15	0.25 / 0.22	< 0.001 / < 0.001
Trigger Value*	1.5 ¹	0.060 ¹	0.055 ²	0.0014

*ANZECC and ARMCANZ (2001) Trigger Value for:

1. slightly disturbed ecosystems (south-west Australia wetlands)
2. slightly – moderately disturbed ecosystems (freshwater, dissolved)

Communications

1. 2015/16 Report Accepted by DRD

Attachment 1: Final Report of the Peel Waterways Institute (PWI) submitted to the Department of Regional Development (DRD) for acceptance of the Peel Waterways Institute as a not-for-profit organisation.

Key Description	Key Milestones	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21	2021/22	2022/23	2023/24	2024/25	2025/26	2026/27	2027/28	2028/29	2029/30	2030/31	2031/32	2032/33	2033/34	2034/35	2035/36	2036/37	2037/38	2038/39	2039/40	2040/41	2041/42	2042/43	2043/44	2044/45	2045/46	2046/47	2047/48	2048/49	2049/50	2050/51	2051/52	2052/53	2053/54	2054/55	2055/56	2056/57	2057/58	2058/59	2059/60	2060/61	2061/62	2062/63	2063/64	2064/65	2065/66	2066/67	2067/68	2068/69	2069/70	2070/71	2071/72	2072/73	2073/74	2074/75	2075/76	2076/77	2077/78	2078/79	2079/80	2080/81	2081/82	2082/83	2083/84	2084/85	2085/86	2086/87	2087/88	2088/89	2089/90	2090/91	2091/92	2092/93	2093/94	2094/95	2095/96	2096/97	2097/98	2098/99	2099/00	2100/01	2101/02	2102/03	2103/04	2104/05	2105/06	2106/07	2107/08	2108/09	2109/10	2110/11	2111/12	2112/13	2113/14	2114/15	2115/16	2116/17	2117/18	2118/19	2119/20	2120/21	2121/22	2122/23	2123/24	2124/25	2125/26	2126/27	2127/28	2128/29	2129/30	2130/31	2131/32	2132/33	2133/34	2134/35	2135/36	2136/37	2137/38	2138/39	2139/40	2140/41	2141/42	2142/43	2143/44	2144/45	2145/46	2146/47	2147/48	2148/49	2149/50	2150/51	2151/52	2152/53	2153/54	2154/55	2155/56	2156/57	2157/58	2158/59	2159/60	2160/61	2161/62	2162/63	2163/64	2164/65	2165/66	2166/67	2167/68	2168/69	2169/70	2170/71	2171/72	2172/73	2173/74	2174/75	2175/76	2176/77	2177/78	2178/79	2179/80	2180/81	2181/82	2182/83	2183/84	2184/85	2185/86	2186/87	2187/88	2188/89	2189/90	2190/91	2191/92	2192/93	2193/94	2194/95	2195/96	2196/97	2197/98	2198/99	2199/00	2200/01	2201/02	2202/03	2203/04	2204/05	2205/06	2206/07	2207/08	2208/09	2209/10	2210/11	2211/12	2212/13	2213/14	2214/15	2215/16	2216/17	2217/18	2218/19	2219/20	2220/21	2221/22	2222/23	2223/24	2224/25	2225/26	2226/27	2227/28	2228/29	2229/30	2230/31	2231/32	2232/33	2233/34	2234/35	2235/36	2236/37	2237/38	2238/39	2239/40	2240/41	2241/42	2242/43	2243/44	2244/45	2245/46	2246/47	2247/48	2248/49	2249/50	2250/51	2251/52	2252/53	2253/54	2254/55	2255/56	2256/57	2257/58	2258/59	2259/60	2260/61	2261/62	2262/63	2263/64	2264/65	2265/66	2266/67	2267/68	2268/69	2269/70	2270/71	2271/72	2272/73	2273/74	2274/75	2275/76	2276/77	2277/78	2278/79	2279/80	2280/81	2281/82	2282/83	2283/84	2284/85	2285/86	2286/87	2287/88	2288/89	2289/90	2290/91	2291/92	2292/93	2293/94	2294/95	2295/96	2296/97	2297/98	2298/99	2299/00	2300/01	2301/02	2302/03	2303/04	2304/05	2305/06	2306/07	2307/08	2308/09	2309/10	2310/11	2311/12	2312/13	2313/14	2314/15	2315/16	2316/17	2317/18	2318/19	2319/20	2320/21	2321/22	2322/23	2323/24	2324/25	2325/26	2326/27	2327/28	2328/29	2329/30	2330/31	2331/32	2332/33	2333/34	2334/35	2335/36	2336/37	2337/38	2338/39	2339/40	2340/41	2341/42	2342/43	2343/44	2344/45	2345/46	2346/47	2347/48	2348/49	2349/50	2350/51	2351/52	2352/53	2353/54	2354/55	2355/56	2356/57	2357/58	2358/59	2359/60	2360/61	2361/62	2362/63	2363/64	2364/65	2365/66	2366/67	2367/68	2368/69	2369/70	2370/71	2371/72	2372/73	2373/74	2374/75	2375/76	2376/77	2377/78	2378/79	2379/80	2380/81	2381/82	2382/83	2383/84	2384/85	2385/86	2386/87	2387/88	2388/89	2389/90	2390/91	2391/92	2392/93	2393/94	2394/95	2395/96	2396/97	2397/98	2398/99	2399/00	2400/01	2401/02	2402/03	2403/04	2404/05	2405/06	2406/07	2407/08	2408/09	2409/10	2410/11	2411/12	2412/13	2413/14	2414/15	2415/16	2416/17	2417/18	2418/19	2419/20	2420/21	2421/22	2422/23	2423/24	2424/25	2425/26	2426/27	2427/28	2428/29	2429/30	2430/31	2431/32	2432/33	2433/34	2434/35	2435/36	2436/37	2437/38	2438/39	2439/40	2440/41	2441/42	2442/43	2443/44	2444/45	2445/46	2446/47	2447/48	2448/49	2449/50	2450/51	2451/52	2452/53	2453/54	2454/55	2455/56	2456/57	2457/58	2458/59	2459/60	2460/61	2461/62	2462/63	2463/64	2464/65	2465/66	2466/67	2467/68	2468/69	2469/70	2470/71	2471/72	2472/73	2473/74	2474/75	2475/76	2476/77	2477/78	2478/79	2479/80	2480/81	2481/82	2482/83	2483/84	2484/85	2485/86	2486/87	2487/88	2488/89	2489/90	2490/91	2491/92	2492/93	2493/94	2494/95	2495/96	2496/97	2497/98	2498/99	2499/00	2500/01	2501/02	2502/03	2503/04	2504/05	2505/06	2506/07	2507/08	2508/09	2509/10	2510/11	2511/12	2512/13	2513/14	2514/15	2515/16	2516/17	2517/18	2518/19	2519/20	2520/21	2521/22	2522/23	2523/24	2524/25	2525/26	2526/27	2527/28	2528/29	2529/30	2530/31	2531/32	2532/33	2533/34	2534/35	2535/36	2536/37	2537/38	2538/39	2539/40	2540/41	2541/42	2542/43	2543/44	2544/45	2545/46	2546/47	2547/48	2548/49	2549/50	2550/51	2551/52	2552/53	2553/54	2554/55	2555/56	2556/57	2557/58	2558/59	2559/60	2560/61	2561/62	2562/63	2563/64	2564/65	2565/66	2566/67	2567/68	2568/69	2569/70	2570/71	2571/72	2572/73	2573/74	2574/75	2575/76	2576/77	2577/78	2578/79	2579/80	2580/81	2581/82	2582/83	2583/84	2584/85	2585/86	2586/87	2587/88	2588/89	2589/90	2590/91	2591/92	2592/93	2593/94	2594/95	2595/96	2596/97	2597/98	2598/99	2599/00	2600/01	2601/02	2602/03	2603/04	2604/05	2605/06	2606/07	2607/08	2608/09	2609/10	2610/11	2611/12	2612/13	2613/14	2614/15	2615/16	2616/17	2617/18	2618/19	2619/20	2620/21	2621/22	2622/23	2623/24	2624/25	2625/26	2626/27	2627/28	2628/29	2629/30	2630/31	2631/32	2632/33	2633/34	2634/35	2635/36	2636/37	2637/38	2638/39	2639/40	2640/41	2641/42	2642/43	2643/44	2644/45	2645/46	2646/47	2647/48	2648/49	2649/50	2650/51	2651/52	2652/53	2653/54	2654/55	2655/56	2656/57	2657/58	2658/59	2659/60	2660/61	2661/62	2662/63	2663/64	2664/65	2665/66	2666/67	2667/68	2668/69	2669/70	2670/71	2671/72	2672/73	2673/74	2674/75	2675/76	2676/77	2677/78	2678/79	2679/80	2680/81	2681/82	2682/83	2683/84	2684/85	2685/86	2686/87	2687/88	2688/89	2689/90	2690/91	2691/92	2692/93	2693/94	2694/95	2695/96	2696/97	2697/98	2698/99	2699/00	2700/01	2701/02	2702/03	2703/04	2704/05	2705/06	2706/07	2707/08	2708/09	2709/10	2710/11	2711/12	2712/13	2713/14	2714/15	2715/16	2716/17	2717/18	2718/19	2719/20	2720/21	2721/22	2722/23	2723/24	2724/25	2725/26	2726/27	2727/28	2728/29	2729/30	2730/31	2731/32	2732/33	2733/34	2734/35	2735/36	2736/37	2737/38	2738/39	2739/40	2740/41	2741/42	2742/43	2743/44	2744/45	2745/46	2746/47	2747/48	2748/49	2749/50	2750/51	2751/52	2752/53	2753/54	2754/55	2755/56	2756/57	2757/58	2758/59	2759/60	2760/61	2761/62	2762/63	2763/64	2764/65	2765/66	2766/67	2767/68	2768/69	2769/70	2770/71	2771/72	2772/73	2773/74	2774/75	2775/76	2776/77	2777/78	2778/79	2779/80	2780/81	2781/82	2782/83	2783/84	2784/85	2785/86	2786/87	2787/88	2788/89	2789/90	2790/91	2791/92	2792/93	2793/94	2794/95	2795/96	2796/97	2797/98	2798/99	2799/00	2800/01	2801/02	2802/03	2803/04	2804/05	2805/06	2806/07	2807/08	2808/09	2809/10	2810/11	2811/12	2812/13	2813/14	2814/15	2815/16	2816/17	2817/18	2818/19	2819/20	2820/21	2821/22	2822/23	2823/24	2824/25	2825/26	2826/27	2827/28	2828/29	2829/30	2830/31	2831/32	2832/33	2833/34	2834/35	2835/36	2836/37	2837/38	2838/39	2839/40	2840/41	2841/42	2842/43	2843/44	2844/45	2845/46	2846/47	2847/48	2848/49	2849/50	2850/51	2851/52	2852/53	2853/54	2854/55	2855/56	2856/57	2857/58	2858/59	2859/60	2860/61	2861/62	2862/63	2863/64	2864/65	2865/66	2866/67	2867/68	2868/69	2869/70	2870/71	2871/72	2872/73	2873/74	2874/75	2875/76	2876/77	2877/78	2878/79	2879/80	2880/81	2881/82	2882/83	2883/84	2884/85	2885/86	2886/87	2887/88	2888/89	2889/90	2890/91	2891/92	2892/93	2893/94	2894/95	2895/96	2896/97	2897/98	2898/99	2899/00	2900/01	2901/02	2902/03	2903/04	2904/05	2905/06	2906/07	2907/08	2908/09	2909/10	2910/11	2911/12	2912/13	2913/14	2914/15	2915/16	2916/17	2917/18	2918/19	2919/20	2920/21	2921/22	2922/23	2923/24	2924/25	2925/26	2926/27	2927/28	2928/29	2929/30	2930/31	2931/32	2932/33	2933/34	2934/35	2935/36	2936/37	2937/38	2938/39	2939/40	2940/41	2941/42	2942/43	2943/44	2944/45	2945/46	2946/47	2947/48	2948/49	2949/50	2950/51	2951/52	29
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Thank you for your time today!

*We acknowledge the Noongar people as Traditional Custodians
of this land and pay our respects to all Elders past and present*

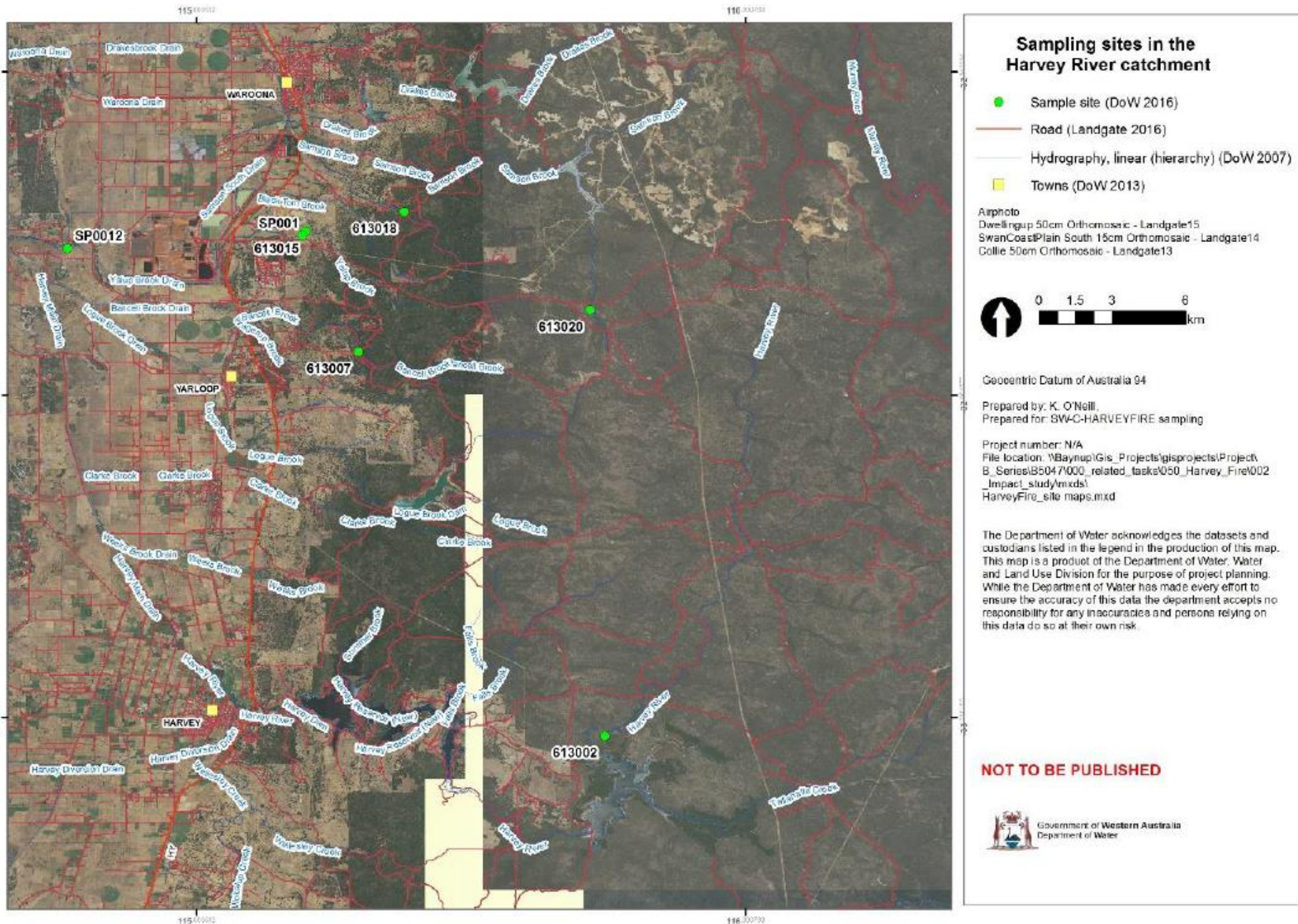


PHCC

**Working
Together**

Peel-Harvey Catchment Council

Water Quality – Chosen Sampling Sites



Peel Waterways Institute (Stage 1)



The Peel Challenge

No clear sectors to drive new growth
Productivity levels declining

- Population forecast to grow from 130,000 to 444,000 by 2050
- Declining standards of living
Youth Unemployment Rate: Est. 20%
City of Mandurah Unemployment Rate: 10.15%
Mandurah Female Unemployment Rate: 14.1%
Average taxable income declined 14.2%



A CASE FOR FEDERAL INVESTMENT: FROM PEEL DEVELOPMENT COMMISSION

The Transform Peel Initiative

Transform Peel comprises a 28,000 ha Peel Food Zone, a 1,000 ha Peel Business Park and the Peel Integrated Water Initiative. The commencement has been achieved by Stage One Activation funding \$49.3 million from the Western Australian Government's Royalties for Regions program through the Growing our South initiative.

Outcomes:

- 29,000 hectares
- 33,000 jobs of which 8,600 are strategic
- Economic output of \$16.2 billion pa by 2050
- Export value of \$1.8 billion pa
- Rates income of \$50 million pa
- Cumulative stamp duty accruing to State \$759 million

Watch the flyover video here

EMPLOYMENT | INNOVATION | ENVIRONMENT

Transform Peel is devised, developed and delivered by the Peel Development Commission.



The Peel Request

To achieve the projected outcomes to employment, innovation and environment, a further investment of \$19.53 million will be required. Significantly, this additional amount on Phase 2 of Transform Peel is considered necessary to de-risk the initiative for private capital investment.

		17-18	18-19	18-19
1. Peel Integrated Water Initiative Stage II	\$13.7M	5	4	4.7
a) Environmental				
b) Water				
2. Research Facility	\$3.73M	3.73		
3. Project Program Management	\$2.1M	1	0.5	0.6
Total	\$19.53M	\$9.73M	\$4.5M	\$5.3M

Our Project Partners



Government of Western Australia
Department of Water



Department of Agriculture and Food
GOVERNMENT OF WESTERN AUSTRALIA



ROYALTIES
FOR REGIONS



For more information contact

Andrew Ward, CEO
andrew.ward@peel.wa.gov.au
(08) 9535 4140



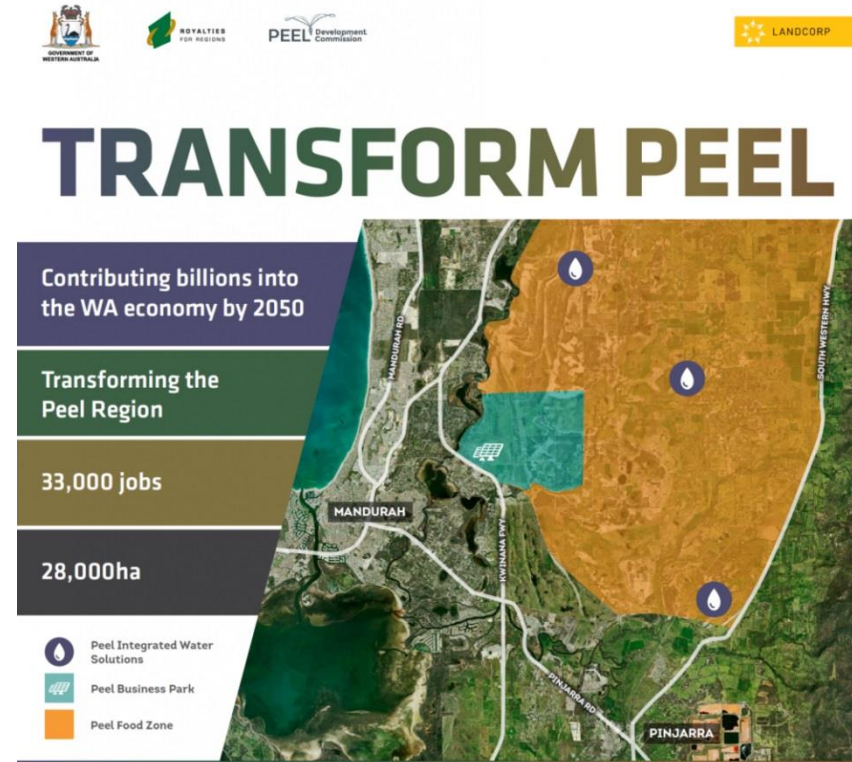
Murdoch
UNIVERSITY

SMART URBAN FARM FACTORIES

Stakeholder Engagement

Transform Peel Project

- Create economic opportunities, jobs, crowd-in investments, foster growth and development in the Peel region.
 - 33000 jobs
 - \$16 billion economic output
- Peel Food Zone (28,000ha)
 - Intensive Farming (Domestic and Export markets)
 - Harnessing technology solutions such as aquaponics, hydroponics, indoor farms and other agricultural innovations



Peel Food Zone

- Despite abundant land there are significant economic gains to be realized by incorporating current advances in urban farming including vertical and indoor farming solutions
 - Improved productivity
 - Reduced energy consumption
 - Sustainable ecosystems (reduced water)
 - Fillip to infrastructure manufacturing
 - Modular Design
- Alternate uses allowing for higher value add activity to take place (e.g. R&D) making land more productive.



What is the project about...

- Explore combinations of technology and enterprises in the urban farming space that can bring value and create opportunity in the Peel region.
- What are the available business models and technology that can
 - Augment the local market;
 - Harness new markets through exports;
 - Contribute to the eco system and strengthen livelihoods in the Peel region.

What does this involve?

- Pursuing technology transfer/ development and investment in new forms of urban farming (including potential vertical farms, aquaponics, hydroponics, aeroponics etc) in the Peel region will include:
 - Applying additional industrial production techniques that insulate food production from the natural environment will provide biosecurity safeguards, intensity, efficiency and increased yield;
 - A closed-looped system will maximise water efficiency and reduce nutrient run-off;
 - Agricultural activities will be sustained within an urbanising environment;
 - Preparing for skills transition to support and sustain the creation of new forms of technology-driven intensive farming.

SONY



In the Miyagi Prefecture, Japan, Sony has built one of the largest indoor urban farms, which produces 10,000 lettuce heads daily

- Uses a warehouse of 2,500 square meters is fitted with 17,500 LED light
- 40% energy consumption compared to conventional farming.
- Light is emitted around-the-clock at wavelengths optimal for plant (lettuce) production.
- 100-fold improvement in productivity (10,000 lettuce heads a day).
- Water consumption reduced by 99% (controlling humidity, irrigation and temperature).
- Food losses have reduced to 10% compared with 50% in conventional farms.



- Uses simple design innovations for their vertical urban farms
 - 95% lesser water,
 - 10x more yield;
 - 75% less input,
 - \$0.05 of electricity per kg of vegetables
 - 40w of energy 12L per kg





- **Panasonic** vertical indoor farms grows 30 different crop varieties in Singapore.
- Production time is halved – lettuce production takes 30 days.
- Improved shelf-life for products (up to 2 months)
- Uses 60% amount of energy resources as conventional farming
- Utilizes soil-based and hydroponics
- Intense R&D on light exposure, soil patterns, etc.



What information do we need?

- **Stakeholder Engagement and Involvement**
 - Who are the stakeholders? What are their views?
- **Data on local demands and food exports from WA**
 - Volume, value, type of food, export prices
- **Understanding the current Supply Chain**
 - dynamics of the current processes from production all through to export/consumption
- **Evolving climatic changes**
 - Weather, soil, water, variations in trends, bio-security issues

What do we need to learn?

- i) What technologies and alternate farming systems will be most relevant to the Peel region?
- ii) What are the varieties of crops that can be produced in urban farms in the Peel region?
- iii) What are issues that relate to pests and diseases, soil and water-related issues that should be considered? How can these potentially be overcome?
- iv) Price Factors: cost of inputs, crop yield, existing market prices for output, global and regional prices, how competitive might the export market for urban farm products be?
- v) Infrastructure requirements (e.g. land tenure – freehold, lease etc?) & investment needs.

Project Team & Governance

**CEO - PEEL DEVELOPMENT COMMISSION
(Project Sponsor)**

PROJECT TEAM



Associate Prof
Peter Waring



Associate Prof
Chris Vas



Dr Azad Bali



Professor
Paul Teng

Plus ...
2 representatives from the PDC



Murdoch
UNIVERSITY

