

Legend

- My Annotations**
- Canning River
 - Greater Brixton St Wetlands Bush Forever Site
 - MKSEA
 - YULE BROOK
 - watercourse/ drain

Perth Regional Ecological Linkages

- State Roads

- Other Roads

Connectivity Reach (2016)

- part of a small network < 0
- 0 - 10
- 10 - 20
- 20 - 30
- 30 - 40
- 40 - 50
- 50 - 60
- part of a large network > 60

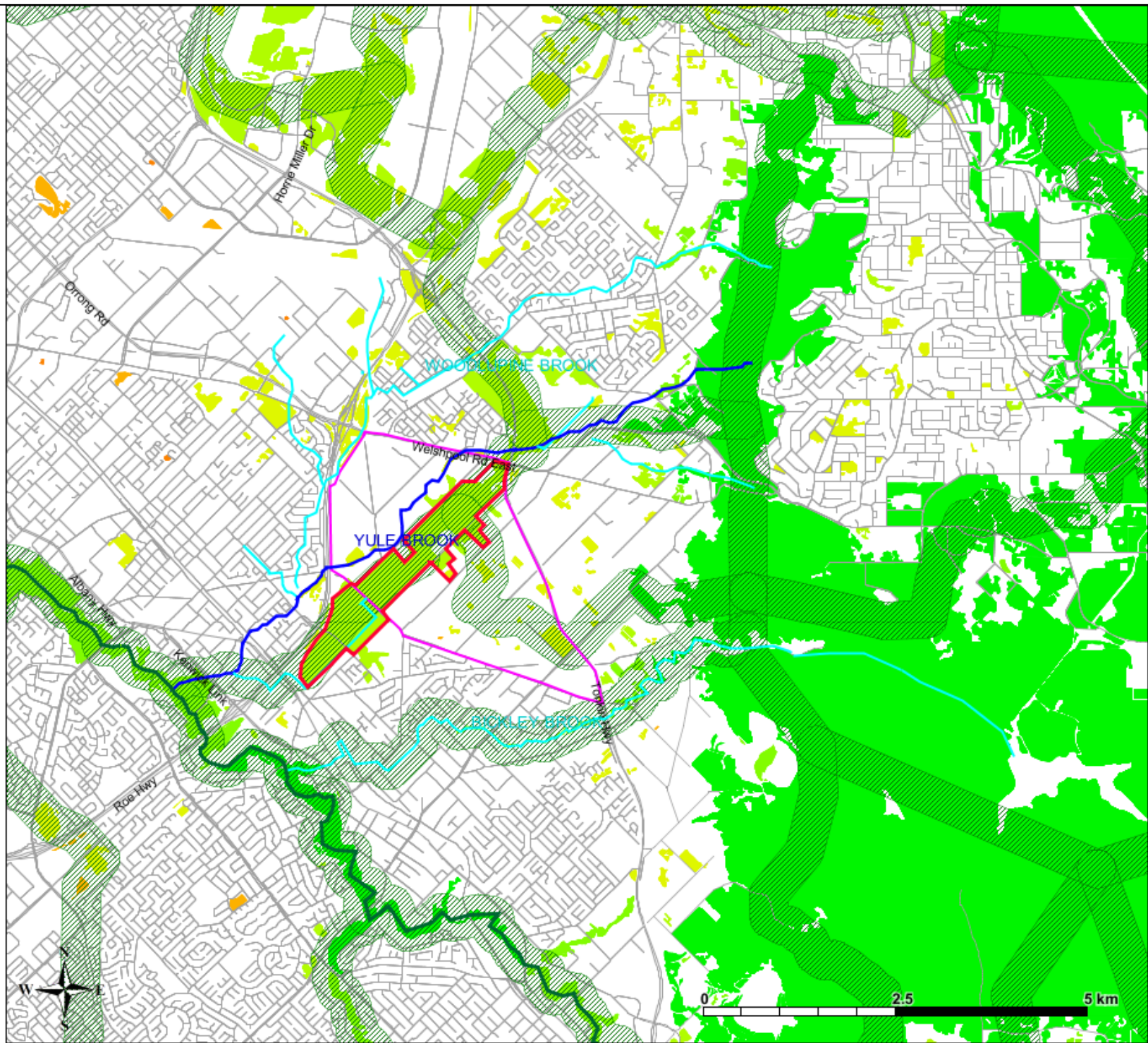
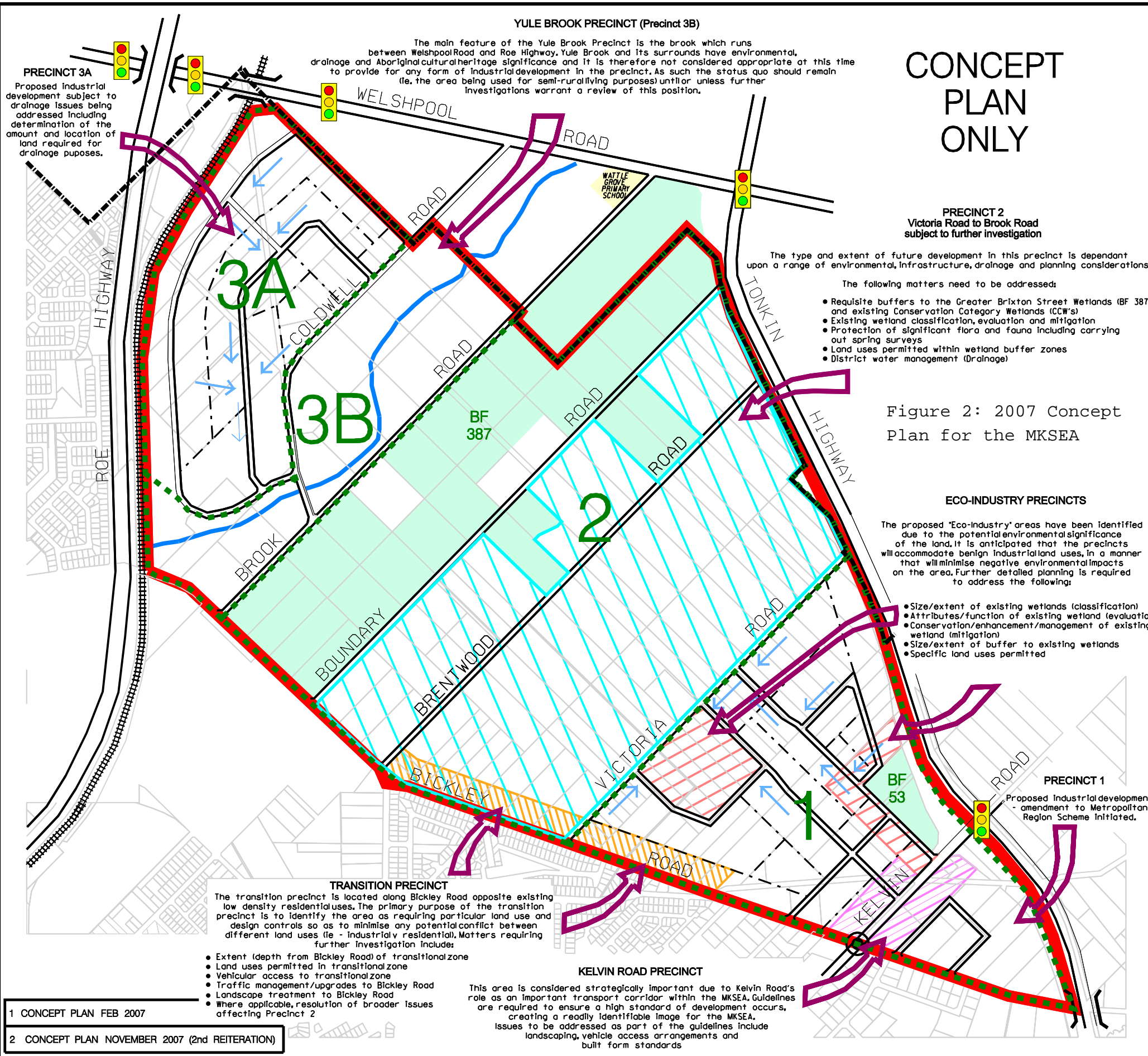


Figure 1:
Location of GBSW,
Yule Brook,
Canning River,
Darling Scarp, plus
ecological connectivity

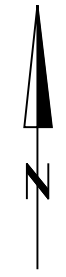



CONCEPT PLAN ONLY


Figure 2: 2007 Concept Plan for the MKSEA

LEGEND

- BUSH FOREVER SITES
- ECO - INDUSTRY PRECINCT
- TRANSITION PRECINCT
- KELVIN ROAD PRECINCT
- DRAINAGE ROUTE / DIRECTION
- SUBJECT TO FURTHER INVESTIGATIONS
- PRECINCT BOUNDARIES
- MUNICIPAL BOUNDARY
- MKSEA BOUNDARY
- PRECINCT NUMBER
- POSSIBLE STREET BLOCK LAYOUT
- EXISTING CONTROLLED INTERSECTIONS
- EXISTING ROUND-A-BOUT
- EXISTING FREIGHT RAIL LINE





MADDINGTON KENWICK
Sustainable Communities Partnership



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GOVERNMENT OF WESTERN AUSTRALIA

MADDINGTON KENWICK STRATEGIC EMPLOYMENT AREA CONCEPT PLAN NOVEMBER 2007

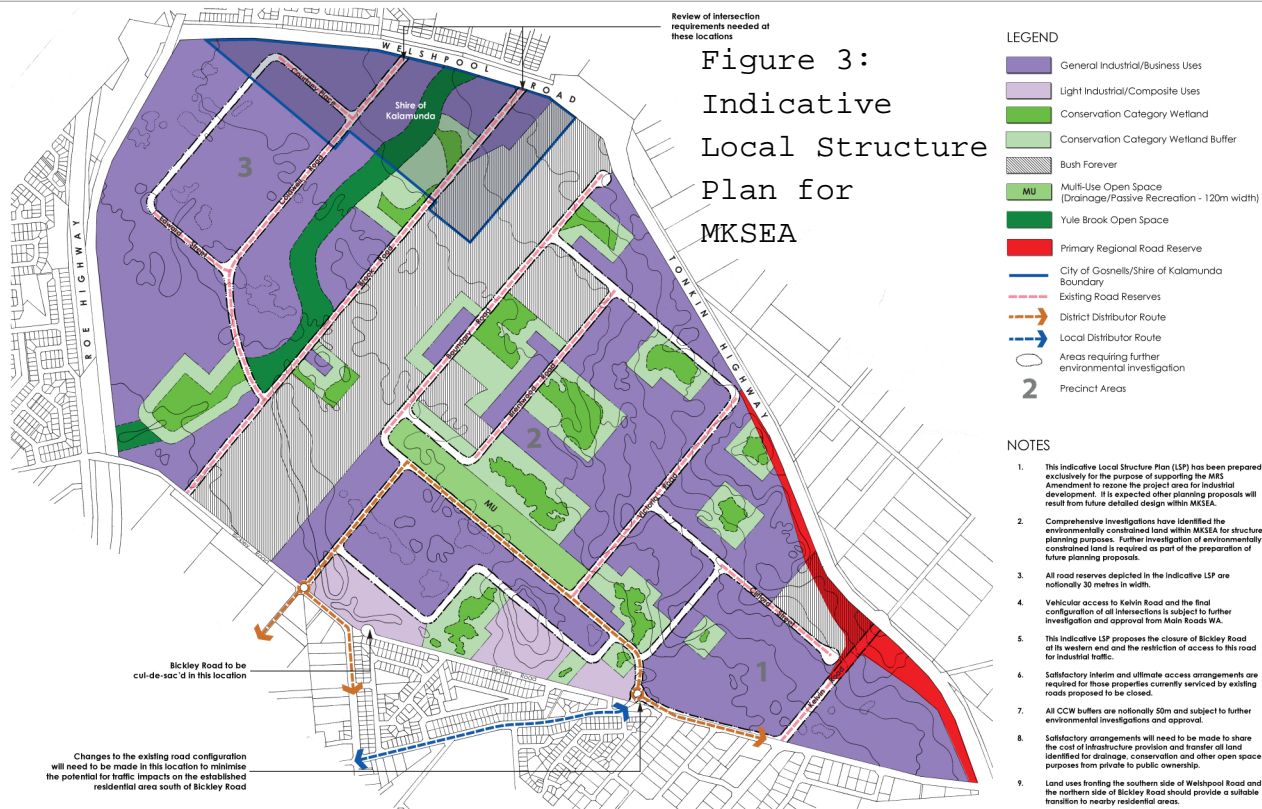
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- 1 CONCEPT PLAN FEB 2007
- 2 CONCEPT PLAN NOVEMBER 2007 (2nd REITERATION)

Review of Intersection requirements needed of these locations

Figure 3:
Indicative
Local Structure
Plan for
MKSEA



LEGEND

- General Industrial/Business Uses
- Light Industrial/Composite Uses
- Conservation Category Wetland
- Conservation Category Wetland Buffer
- Bush Forever
- Multi-Use Open Space (Drainage/Passive Recreation - 120m width)
- Yule Brook Open Space
- Primary Regional Road Reserve
- City of Gosnells/Shire of Kalamunda Boundary
- Existing Road Reserves
- District Distributor Route
- Local Distributor Route
- Areas requiring further environmental investigation
- Precinct Areas

NOTES

1. This Indicative Local Structure Plan (LSP) has been prepared exclusively for the purpose of supporting the MRS Amendment to reserve the project area for industrial development. It is expected other planning proposals will result from future detailed design within MKSEA.
2. Comprehensive investigations have identified the environmentally constrained land within MKSEA for structure planning purposes. Further investigation of environmentally constrained land is required as part of the preparation of future planning proposals.
3. All road reserves depicted in the Indicative LSP are notationally 30 metres in width.
4. Vehicular access to Kelvin Road and the final configuration of all intersections is subject to further investigation and approval from Main Roads WA.
5. This Indicative LSP proposes the closure of Bickley Road at its western end and the restriction of access to this road for industrial traffic.
6. Satisfactory interim and ultimate access arrangements are required for those properties currently serviced by existing roads proposed to be closed.
7. All CCW buffers are notationally 50m and subject to further environmental investigations and approval.
8. Satisfactory arrangements will need to be made to share the cost of infrastructure provision and transfer of land identified for drainage, conservation and other open space purposes from private to public ownership.
9. Land uses fronting the southern side of Welshpool Road and the northern side of Bickley Road should provide a suitable transition to nearby residential areas.



APPENDIX A: The listed flora, vegetation and fauna values of Conservation Significance in the Greater Brixton St Wetlands (GBSW) and in the proposed Maddington Kenwick Strategic employment Area (MKSEA) industrial area. (Updated 12.08.17)

Table 1: THREATENED FLORA

Cons. Status	Name	GBSW	MKSEA	Statutory Protection
Endangered	<i>Andersonia gracilis</i> DC.	*		EPBC Act
Endangered	<i>Austrostipa bronwenae</i> A.R.Williams	*		WA Biodiversity Act
Endangered	<i>Calytrix breviseta</i> Lindl. subsp. <i>breviseta</i>	*	*	EPBC Act
Vulnerable	<i>Conospermum undulatum</i> Lindl.	*	*	EPBC Act
Endangered	<i>Diuris purdei</i> Diels	*		EPBC Act
Vulnerable	<i>Eleocharis keigheryi</i> K.L.Wilson	*		EPBC Act
Endangered	<i>Eremophila glabra</i> subsp. <i>chlorella</i> (Gand.) Chinnock	*	*	WA Biodiversity Act
Critically Endangered	<i>Grevillea thelemanniana</i> Endl. subsp. <i>thelemanniana</i>	*	*	WA Biodiversity Act
Endangered	<i>Lepidosperma rostratum</i> S.T.Blake	*	*	EPBC Act
Critically Endangered	<i>Ptilotus pyramidatus</i> (Moq.) F.Muell.	*		EPBC Act
Critically Endangered	<i>Synaphea</i> sp. Fairbridge Farm (D. Papenfus 696)	*		EPBC Act
Total Threatened Flora		11	5	

Table 2: PRIORITY FLORA (including fungi) (no statutory protection, DBCA list only)

Cons. Status	Name	GBSW	MKSEA
Priority 1	<i>Amanita quenda</i> EM Davison	*	not surveyed
Priority 1	<i>Calandrinia</i> sp. Piawaning (AC Beauglehole 12257)	*	
Priority 1	<i>Schoenus</i> sp. Beaufort (GJ Keighery 6291)	*	
Priority 2	<i>Comesperma griffinii</i> Keighery	*	
Priority 2	<i>Comesperma rhadinocarpum</i> F. Muell.	*	
Priority 2	<i>Isotropis cuneifolia</i> subsp. <i>glabra</i> Keighery	*	
Priority 2	<i>Lepyrodia curvescens</i> BG.Briggs & LAS Johnson	*	*
Priority 2	<i>Schoenus loliaceus</i> Kuek.	*	
Priority 3	<i>Amanita wadjukiorum</i> EM Davison	*	not surveyed
Priority 3	<i>Babingtonia urbana</i> Rye	*	
Priority 3	<i>Byblis gigantea</i> Lindl.	*	
Priority 3	<i>Chamaescilla gibsonii</i> Keighery	*	
Priority 3	<i>Cyathochaeta teretifolia</i> W.Fitzg.	*	*
Priority 3	<i>Eryngium pinnatifidum</i> subsp. <i>palustre</i> (GJKeighery 13459)	*	
Priority 3	<i>Eryngium subdecumbens</i> (GJ Keighery 5390)	*	
Priority 3	<i>Isopogon drummondii</i> Benth.	*	*
Priority 3	<i>Myriophyllum echinatum</i> Orchard	*	
Priority 3	<i>Schoenus benthamii</i> F.Muell.	*	
Priority 3	<i>Schoenus capillifolius</i> D.A.Cooke	*	
Priority 3	<i>Schoenus pennisetis</i> S.T.Blake	*	*
Priority 3	<i>Schoenus</i> sp. Waroona (GJ Keighery 12235)	*	
Priority 3	<i>Stylidium aceratum</i> Lowrie & Kenneally	*	
Priority 3	<i>Stylidium longitubum</i> Benth.	*	
Priority 4	<i>Aponogeton hexatepalus</i> H.Bruggen	*	
Priority 4	<i>Centrolepis caespitosa</i> D.A.Cooke	*	

Table 2 (cont.): PRIORITY FLORA (including fungi) (no statutory protection, DBCA list only)

Cons. Status	Name	GBSW	MKSEA
Priority 4	<i>Drosera occidentalis</i> Morrison subsp. <i>occidentalis</i>	*	
Priority 4	<i>Hydrocotyle lemnooides</i> Benth.	*	
Priority 4	<i>Ornduffia submersa</i> (Aston) Tippet & Les	*	
Priority 4	<i>Verticordia lindleyi</i> Schauer subsp. <i>lindleyi</i>	*	*
Total Priority Species		30	5

Table 3: THREATENED ECOLOGICAL COMMUNITIES (TECs) Listed under the EPBC Act

Cons. Status	Name of TEC	GBSW	MKSEA
Critically Endangered	Claypans of the Swan Coastal Plain	*	*
Endangered	<i>Corymbia calophylla</i> - <i>Kingia australis</i> woodlands on heavy soils of the Swan Coastal Plain	*	*
Endangered	Shrublands and Woodlands on Muchea Limestone of the Swan Coastal Plain	*	*
Endangered	Banksia Woodlands of the Swan Coastal Plain	*	*
Total in GBSW		4	4

Table 4: SUMMARY OF FLORA AND VEGETATION VALUES [Note: area estimates include only native vegetation areas mapped in good or better condition]

Location	Total native flora taxa	Total area est. (ha)	Total Threatened Flora Species and (EPBC listed T species only)	DBCA Priority Flora Species	EPBC listed TECs
Total Greater Brixton St Wetlands (BFA 387)	>560	≈143.11	11(8)	30	4
Total MKSEA	315	≈28.08	5(3)	5	4

Table 5: LISTED FAUNA

Cons. Status	Name	Greater Brixton St Wetlands	MKSEA	Statutory Protection
Critically Endangered	<i>Leioproctus douglasiellus</i> (a native bee)	*	No detailed field survey	EPBC Act
Endangered	<i>Calyptorhynchus latirostris</i> (Carnabys Black Cockatoo)	* (foraging habitat)	* (foraging habitat)	EPBC Act
Vulnerable	<i>Calyptorhynchus banksii naso</i> (Forest Red Tailed Black Cockatoo)	* (foraging habitat)	* (foraging habitat and a major roost, Bird Life WA, 2017)	EPBC Act
Migratory Bird IA	<i>Ardea modesta</i> (Great Egret)	*	No detailed field survey	International Agreement
Priority 2	<i>Leioproctus bilobatus</i> (a native bee)	*	No detailed field survey	Nil, DCBA list only
Priority 5	<i>Isoodon obesulus fusciventer</i> (Quenda)	*	*	Nil, DCBA list only

BIBLIOGRAPHY

- Australian Government Department of Environment and Energy (2017).** Current listed Threatened Flora and Fauna Species and Communities. Accessed online on 31/07/17 at <http://www.environment.gov.au/biodiversity/threatened>.
- Bourke, L. (2017).** *Hydrological function of the Greater Brixton Street Wetlands: Data sourcing and review*. Prepared for the Swan Region by the Wetlands Conservation Program, Science and Conservation Division, Department of Parks and Wildlife, Kensington, Western Australia
- BirdLife Western Australia (2017).** *Great Cocky Count 2017*. Unpublished report BirdLife WA, Floreat.
- Dhakal, S.P. (2016).** Thirty years of urban environmental volunteering in Western Australia. Friends of Brixton St Wetlands, Kenwick: glimpses & insights. Friends of Brixton St Wetlands, Kenwick, Western Australia.
- Davis, R.G. and Tauss, C., (2011).** A new and rare species of *Ptilotus* (Amaranthaceae) from a suburban wetland of the eastern Swan Coastal Plain, Western Australia. *Nuytsia* 21(3): 97-102.
- Keighery, G. J. and Keighery B. J. (2000).** *The Flora of the Greater Brixton St Wetlands*. In Marshall, J. (Ed): *The Brixton St Wetlands Management Guidelines, Natural History and Research*. (pp. 15-34). Unpublished report for the Friends of Brixton St Wetlands, Kenwick, Western Australia.
- Keighery, B. J. and Tauss, C. (2008).** *Vegetation, Flora and Conservation Values of Lot 106 Wanaping Rd, Kenwick in the Greater Brixton Wetlands*. Unpublished report for the Western Australian Planning Commission.
- Tauss, C. (2007).** *Lot 61 Welshpool Rd, Wattle Grove: Flora, Vegetation and Wetland Assessment*. Unpublished report for 360 Environmental Consultants, Subiaco Western Australia.
- Tauss, C. (2017).** The flora and vegetation of the Greater Brixton St Wetlands (Bush Forever Area 387): review, flora update and fine scale vegetation classification and mapping. Unpublished data for V & C Semeniuk Research Group, Warwick Western Australia.
- Tauss, C., Bamford, M. J. and Wajon, J. E. (2014).** *Level 1 Flora, Vegetation and Fauna Survey: Kenwick Diesel Maintenance Depot (adjacent to the Greater Brixton St Wetlands)*. Unpublished report by PDC Global Pty Ltd for WA Public Transport Authority, East Perth.
- Tauss, C. and Weston, A. S. (2010).** *The Flora, Vegetation and Wetlands of the Maddington- Kenwick Strategic Employment Area in the vicinity of the Greater Brixton St Wetlands*. Unpublished report for the City of Gosnells.
- Speck, N. H and Baird, A. M. (1984).** Vegetation of the Yule Brook Reserve near Perth Western Australia. *Journal of the Royal Society of Western Australia*. 66(4) 147-162.
- V & C Semeniuk Research Group (2001).** *Hydrological Study of the Greater Brixton St Wetlands*. Report for the Friends of the Brixton St Wetlands and the Gordon Reid Foundation, Western Australia.
- V & C Semeniuk Research Group (2008).** *Identification, evaluation, sediments/soils, and hydrology of wetlands - Lot 106 Wanaping Rd, Kenwick*. Report for the State Solicitors Office, Western Australia.
- Western Australian Local Government Association (2017).** *Mapping of Vegetation Complexes of the Swan Coastal Plain, Environmentally Sensitive Areas and Aboriginal Sites and other Heritage Places in Kenwick/Wattle Grove*. WALGA Local Biodiversity Project Environmental Planning Tool. Accessed online on 9/08/17.
- Western Australian Planning Commission (2016).** *Metropolitan Region Scheme Amendment 1302/57 (Minor Amendment). Employment Area Precincts 3A & 3B*. Report on Submissions and Submissions. City of Gosnells.
- Western Australian Department of Biodiversity, Conservation and Attractions (2017).** Current listed Threatened Flora and Fauna Species. . Accessed online on 31/07/17 at: <http://www.dpaw.wa.gov.au/plants-and-animals/threatened-species-and-communities>
- Western Australian Herbarium (1998-).** *FloraBase: the Western Australian Flora*. The Western Australian Herbarium, Department of Parks and Wildlife, South Perth. Accessed online on 31/07/17 at: www.florabase.wa.gov.au