

TOONDAH HARBOUR

APPENDIX 1 - C
EIS GUIDELINE CROSS
REFERENCE TABLE



Chapter Heading	Information Required	Location in EIS
FEDERAL		
General information	This must provide the background and context of the action including: (a) the title of the action; (b) the full name and postal address of the designated proponent; (c) a clear outline of the objective of the action; (d) the location of the action; (e) the background to the development of the action; (f) how the action relates to any other actions (of which the proponent should reasonably be aware) that have been, or are being, taken or that have been approved in the region affected by the action; (g) the current status of the action; and (h) the consequences of not proceeding with the action.	Vol 1 - Chapter 1
Description of the action	All construction and operational components of the action and any handover of management of the development must be described in detail. This should include the precise location (including GPS coordinates) of all works to be undertaken (including plans and maps), structures to be built or elements of the action that may have impacts on MNES. The description of the action must also include details on how the works are to be undertaken (including stages of development and their timing) and design parameters for those aspects of the structures and elements of the action that may have relevant impacts. The EIS must include the location, boundaries and size (in hectares) of the disturbance footprint and of any adjoining areas which may be indirectly impacted by the proposal.	Chapter 3.
Feasible alternatives	Any feasible alternatives to the action to the extent reasonably practicable, including: (a) if relevant, the alternative of taking no action; (b) a comparative description of the impacts of each alternative on the MNES protected by controlling provisions of Part 3 of the EPBC Act for the action; and (c) sufficient detail to make clear why any alternative is preferred to another. Short, medium and long-term advantages and disadvantages of the options should be discussed.	Vol 1 - Section 1.5
Description of the environment	The EIS must include a description of the environment of the proposal site and the surrounding areas that may be affected by the action, in both the short and long term. This section must include the following information:	

	Vol 1 - Section 2.1 - General site conditions Vol 2 - Chapter 7 - Sediments
(a) a description of the ecological character of the Moreton Bay Ramsar Wetland including the following details: Ramsar values (identified in the listing criteria in the Ramsar Information Sheet), critical components, processes and services of the Moreton Bay Ramsar Wetland (identified in the Draft Ecological Character Description (ECD) or final ECD if available). This includes:	Vol 2 - Chapter 8 - Coastal processes Vol 2 - Chapter 9 - Water quality Vol 2 - Chapter 15 - terrestrial ecology Vol 2 - Chapter 16 - marine ecology
o extent and types of wetland habitats at the proposed development site and in areas that may be impacted by the development including, but not limited to, intertidal and subtidal habitats and areas; o extent and types of coral species and habitats at the proposed development site and in areas that may be	Vol 2 - Chapter 17 - Migratory shorebirds Vol 2 - Chapter 18 - Fisheries Vol 3 - Chapter 27 - Ramsar values, ECD, etc
impacted by the development; including, but not limited to, areas associated with reclamation, excavation, dredging and spoil management activities; o threatened and migratory species numbers, distribution and site fidelity at the proposed development site and in	
areas that may be impacted by the development; o threatened ecological community locations;	
o locations of feeding and roosting habitats and numbers of migratory birds, the behavioural ecology which links these habitats, their site fidelity and their usage of the area in regional context; o coastal morphology and hydrology;	
o water quality; o soils and marine sediments, including acid sulfate soils (ASS) and potential acid sulfate soils (PASS);	
o fish populations and spawning sites for fish; and omarine reptile and mammal populations.	
 □ current status and condition of the Moreton Bay Ramsar Wetland, including the past and projected trends and existing threats, at both the project site scale and the whole of the Ramsar Wetland scale; □ details of the project site including: o details of the current water quality; o details of the current storm water runoff volumes (including flood scenarios); 	Vol 1 - Section 2.1 - General site conditions Vol 1 - Section 2.2 - Current use Vol 2 - Chapter 7 - Sediments Vol 2 - Chapter 8 - Coastal processes Vol 2 - Chapter 9 - Water quality Vol 2 - Chapter 15 - terrestrial ecology
o details of ASS and PASS; o types and prevalence of invasive plant and animal species; o current use, including boating and dredging; and o types and levels of disturbances to shorebirds and shorebird habitat and marine species arising from current use	Vol 2 - Chapter 16 - marine ecology Vol 2 - Chapter 17 - Migratory shorebirds Vol 2 - Chapter 18 - Fisheries Vol 3 - Chapter 27 - Ramsar values, ECD, etc
of the site. If the scope, timing (survey season/s) and methodology for studies or surveys used to provide the above baseline information at the site and in areas that may be impacted by the project; and	
① detail of any known or potential sources of contaminated land in the vicinity of the site. Describe the risk of the development activities leading to land becoming contaminated and the potential consequences to the ecological character of the Moreton Bay Ramsar site, listed threatened species and communities and listed migratory species.	

T		
	ted threatened and migratory species and ecological communities that are likely to be	Vol 2 - Chapter 15 - terrestrial ecology
l li	he site, including the following details:	Vol 2 - Chapter 16 - marine ecology
	y season/s) and methodology for studies or surveys used to provide information on the	Vol 2 - Chapter 17 - Migratory shorebirds
listed species/community	habitat at the site (and in areas that may be impacted by the project);	Vol 3 - Chapter 24 - Threatened Species
	re consistent with (or a justification of divergence from) relevant Departmental guidelines	Significant Impact Assessment
or policy statements, or a	re in accordance with best practice studies or surveys;	Vol 3 - Chapter 25 - Migratory Species
☐ the past and projected t communities and listed m	rends and existing threats to the condition of habitat for threatened species and ecological igratory species; and	Significant Impact Assessment
	ironment considered critical to the continued presence and functioning of MNES	
identified as likely to be d	rectly or indirectly impacted (including, but not limited to, breeding, roosting, nesting and	
foraging habitat).		
		Vol 2 - Chapter 15 - terrestrial ecology
The EIS must include a hal		Vol 2 - Chapter 16 - marine ecology
migratory species. The ha	bitat assessment must include, but not be limited to, the habitat area (in hectares), quality,	Vol 2 - Chapter 17 - Migratory shorebirds
location and use specifica	tions of known and potential suitable habitat in relation to the project disturbance area.	Vol 3 - Chapter 24 - Threatened Species
		Significant Impact Assessment
The habitat assessment m	ust be informed by, at a minimum, a desktop assessment of relevant Commonwealth and	Vol 3 - Chapter 25 - Migratory Species
State Government databa	ses and the outcomes of field surveys or studies.	Significant Impact Assessment
	discuss the value of suitable habitat present within the project site and how it may be	
impacted by the project.		
The EIS must describe the	methodology for identifying priority areas for conservation.	
The EIS must provide an a	nalysis of the strengths, limitations and expected effectiveness of methodologies used to	
identify the MNES and ide	ntify any key information gaps, further studies needed and any proposals to address	
critical information needs		

Relevant impacts	The EIS must include a description of all of the relevant impacts of the action. Relevant impacts are impacts that the	Vol 2 - Chapter 15 - terrestrial ecology
Relevant impacts	action will have or is likely to have on a matter protected by a controlling provision (as listed in the preamble of this	Vol 2 - Chapter 15 - terrestrial ecology Vol 2 - Chapter 16 - marine ecology
	document). Impacts during both the construction and operational phases of the project and the handover of	
		Vol 2 - Chapter 17 - Migratory shorebirds
	management of the development must be addressed, and the following information provided:	Vol 3 - Chapter 24 - Threatened Species
	(a) a detailed assessment of the nature and extent of the likely short-term and longterm relevant impacts;	Significant Impact Assessment
	(b) a statement about whether any relevant impacts are likely to be unknown, unpredictable or irreversible;	Vol 3 - Chapter 25 - Migratory Species
	(c) analysis of the significance of the relevant impacts; and	Significant Impact Assessment
	(d) any technical data and other information used or needed to make a detailed assessment of the relevant impacts.	Vol 3 - Chapter 27 - Ramsar
	Where applicable the EIS must use the baseline data from Section 4 to support modelling and conclusions.	
	The EIS must also provide a detailed assessment of the extent and severity of any likely impact that this proposed	
	action may facilitate on the following (at the local, regional, state, national and international scale):	
	(a) The ecological character of wetlands of international importance;	
	The EIS must address the Moreton Bay Ramsar site values identified in the listing criteria, as set out in the Ramsar	
	Information Sheet (RIS) and the critical components, processes and services, as set out in the Draft Ecological	
	Character Description (ECD), including any updated versions of the RIS and ECD as far as possible. The RIS is available	
	at: http://www.environment.gov.au/water/wetlands/publications/ris-moreton-bay	
	, , , , , , , , , , , , , , , , , , , ,	
	(b) Listed threatened species and ecological communities;	Vol 2 - Chapter 15 - terrestrial ecology
	The EIS must include discussion of impacts to listed threatened species including but not limited to:	Vol 2 - Chapter 15 - terrestrial ecology Vol 2 - Chapter 16 - marine ecology
	· · · · · · · · · · · · · · · · · · ·	, ,,
	☐ Koala (Phascolarctos cinereus - combined populations of Queensland, New South Wales and the Australian Capital	Vol 2 - Chapter 17 - Migratory shorebirds
	Territory) – vulnerable;	Vol 3 - Chapter 24 - Threatened Species
	☐ Eastern Curlew (Numenius madagascariensis) — critically endangered;	Significant Impact Assessment
	☐ Lesser sand plover (Charadrius mongolus) — endangered;	
	Greater Sand Plover (Charadrius leschenaultia) - vulnerable	
	☐ Great Knot (Calidris tenuirostris) – critically endangered;	
	Red Knot (Calidris canutus) - endangered	
	☐ Curlew Sandpiper (Calidris ferruginea) – critically endangered;	
	🛮 Bar-tailed Godwit (Limosa lapponica baueri) – vulnerable;	
	☑ Grey-headed Flying-fox (Pteropus poliocephalus) – vulnerable;	
	☑ Loggerhead Turtle (Caretta caretta) – endangered;	
	☑ Green Turtle (Chelonia mydas) – vulnerable; and	
	☐ Hawksbill Turtle (Eretmochelys imbricata) – vulnerable.	

The EIS must include discussion of impacts to listed migratory species including but not limited to: ### Grey Lander Tattler (Trings previpes); ### Ruddy Turnstone (Arenaria interpres); ### Great Knot (Calidris canutus) – also listed as critically endangered); ### Red-necked Stint (Calidris canutus) – also listed as endangered ### Red-necked Stint (Calidris canutus) – also listed as uninerable); #### Whimbrel (Numenius phaeopus); #### Careke Common (Calidris canutus) – also listed as critically endangered); ##### Careke Common (Calidris canutus) – also listed as critically endangered); ###### Careke Common (Calidris canutus) – also listed as critically endangered); ###################################	(c) Listed migratory species.	Vol 2 - Chapter 15 - terrestrial ecology
### Ruddy Turnstone (Årenaria interpres); ### Great Knot (Calidris tenuirostris) (also listed as critically endangered); ### Red-necked Stint (Calidris ruficollis); ### Bar-tailed Godwit (Limosa lapponica baueri) (also listed as vulnerable); ### Whimbrel (Numenius phaeopus); ### Eastern Curlew (Numenius madagascariensis) (also listed as critically endangered); ### Terek Sandpiper (Kenus cinereus); ### Curlew Sandpiper (Calidris ferruginea) (also listed as critically endangered), ### Sharp-tailed sandpiper (Calidris ferruginea) (also listed as critically endangered), ### Sharp-tailed sandpiper (Calidris ferruginea) (also listed as critically endangered), ### Sharp-tailed sandpiper (Calidris ferruginea) (also listed as critically endangered), ### Curlew Sandpiper (Calidris ferruginea) (also listed as underable); ### Lessers sand plover (Charadrius deschenaultia) – also listed as vulnerable ### Pacific Golden-plover (Pluvialis future) ### Double-banded plover (Charadrius bicinctus); ### Loggerhead Turtle (Caretta caretta) (also listed as endangered); ### Great Turtle (Chelonia mydas) (also listed as vulnerable); ### Hawksbill Turtle (Eretmochelys imbricata) (also listed as vulnerable); ### Hawksbill Turtle (Eretmochelys imbricata) (also listed as vulnerable); ### Dugong (Dugong dugon). ### Assessing the impacts, consideration must be given to: ### (a) EPBC Act Policy Statement 1.1 Significant Impact Guidelines, in particular significant impact criteria for listed threatened species and ecological communities; listed migratory species, and Wetlands of international Importance; #### (b) the ecological Character of the Moreton Bay Ramsar Wetland; #### (c) Australia's international responsibilities in relation to conservation of biodiversity, conservation of migratory significant Impact Assessment #### Vol 3 - Chapter 2 - Migratory Species Significant Impact Sessesment #### Vol 3 - Chapter 1 - Aretared Species Significant Impact Assessment		I
□ Great Knot (Calidris tenuirostris) (also listed as critically endangered); Red Knot (Calidris canutus) – also listed as endangered □ Red-necked Stint (Calidris ruficollis); □ Bar-tailed Godwit (Limosa Japponica baueri) (also listed as vulnerable); □ Whimbrel (Numenius phaeopus); □ Eastern Curlew (Numenius madagascariensis) (also listed as critically endangered); □ Terek Sandpiper (Kenus cinereus); □ Curlew Sandpiper (Calidris feruginea) (also listed as critically endangered). □ Sharp-tailed sandpiper (Calidris faruginea) (also listed as endangered); □ Lesser sand plover (Charadrius mongolus) (also listed as vulnerable) • Pacific Golden-plover (Pluvalis fulva) □ Double-banded plover (Charadrius beschenaulta) – also listed as vulnerable • Pacific Golden-plover (Pluvalis fulva) □ Double-banded plover (Charadrius beschenaulta) – also listed as vulnerable); □ Hawksbill Turtle (Caretta caretta) (also listed as endangered); □ Green Turtle (Chelonia mydas) (also listed as vulnerable); □ Hawksbill Turtle (Eretmochelys imbricata) (also listed as vulnerable); □ Indo-pacific Humpback Doljbin (Sousa chinensis), now considered separate species- Australian humpback dolphin (Sousa shulensis), and □ Dugong (Dugong dugon). In assessing the impacts, consideration must be given to: (a) EPBC Act Policy Statement 1.1 Significant Impact Guidelines, in particular significant impact criteria for listed threatened species and ecological communities; listed migratory species; and Wetlands of International Importance; (b) the ecological character of the Moreton Bay Ramsar Wetland; (c) Australia's international responsibilities in relation to conservation of biodiversity, conservation of migratory species and protection of Ramsar wetlands;	· · · · · · · · · · · · · · · · · · ·	, , ,
Red Knot (Calidris canutus) — also listed as endangered Red-necked Stint (Calidris vuficolils); Red-necked Stint (Calidris vuficolils); Red-necked Stint (Calidris vuficolils); Red-necked Stint (Calidris vuficolils); Red Knot (Numenius phaeopus); Restern Curlew (Numenius phaeopus); Terek Sandpiper (Kenus cinereus); Curlew Sandpiper (Calidris ferruginea) (also listed as critically endangered); Sharp-tailed sandpiper (Calidris ferruginea) (also listed as endangered). Sharp-tailed sandpiper (Calidris ferruginea) (also listed as endangered); Lesser sand plover (Charadrius mongolus) (also listed as endangered); I cerater Sand Plover (Charadrius leschenaultia) — also listed as vulnerable Pacific Golden-plover (Pluvilais Itula) Double-banded plover (Charadrius bicinctus); Loggerhead Turtle (Caretta caretta) (also listed as endangered); Green Turtle (Chelonia mydas) (also listed as vulnerable); Hawksbill Turtle (Eretmochelys imbricata) (also listed as vulnerable); In assessing the impacts, Consideration must be given to: (a) EPBC Act Policy Statement 1.1 Significant impact Guidelines, in particular significant impact criteria for listed threatened species and ecological communities; listed migratory species; and Wetlands of International Importance; (b) the ecological character of the Moreton Bay Ramsar Wetland; (c) Australia's international responsibilities in relation to conservation of biodiversity, conservation of migratory species Significant Impact Assessment Vol 3 - Chapter 24 - Threatened Species Significant Impact Assessment	, , , , , , , , , , , , , , , , , , , ,	
Red-necked Stint (Calidris ruficollis); Bar-tailed Godwit (Limosa lapponica baueri) (also listed as vulnerable); Whimbrel (Numenius phaeopus); Eastern Curlew (Numenius madagascariensis) (also listed as critically endangered); Terek Sandpiper (Xenus cinereus); Curlew Sandpiper (Calidris ferruginea) (also listed as critically endangered). Sharp-tailed sandpiper (Calidris ferruginea) (also listed as critically endangered). Sharp-tailed sandpiper (Calidris ferruginea) (also listed as endangered); Geater Sand plover (Chardrius mongolus) (also listed as endangered); Geater Sand plover (Chardrius leschenaultia) – also listed as vulnerable Pacific Golden-plover (Pluvalis fulva) Double-banded plover (Charadrius bicinctus); Loggerhead Turtle (Caretta caretta) (also listed as endangered); Green Turtle (Chelonia mydas) (also listed as vulnerable); Hawksbill Turtle (Eretmochelys imbricata) (also listed as vulnerable); Indo-pacific Humpback Dolphin (Sousa chinensis), now considered separate species- Australian humpback dolphin (Sousa sahulensis); and Dugong (Dugong dugon). Vol 2 - Chapter 15 - terrestrial ecology Vol 2 - Chapter 17 - Migratory birds Vol 3 - Chapter 18 - Migratory birds Vol 3 - Chapter 19 - Migratory birds Vol 3 - Chapter 29 - Migratory Species Significant Impact Assessment Vol 3 - Chapter 25 - Migratory Species Significant Impact Assessment	, , , , , , , , , , , , , , , , , , , ,	Significant Impact Assessment
### Bar-tailed Godwit (Limosa lapponica baueri) (also listed as vulnerable); ### Whimbre! (Numenius phaeopus); #### Eastern Curlew (Numenius phaeopus); ###################################	· · · · · · · · · · · · · · · · · · ·	
## Whimbrel (Numenius phaeopus); ## Eastern Curlew (Numenius madagascariensis) (also listed as critically endangered); ### Earek Sandpiper (Xenus cinerus); ### Curlew Sandpiper (Calidris ferruginea) (also listed as critically endangered). ### Sharp-tailed sandpiper (Calidris acuminata); ### Lesser sand plover (Charadrius mongolus) (also listed as endangered); ### Greater Sand Plover (Charadrius leschenaultia) – also listed as vulnerable ### Pacific Golden-plover (Pluvialis fulva) ### Double-banded plover (Charadrius bicinctus); ### Loggerhead Turtle (Caretta caretta) (also listed as endangered); ### Green Turtle (Chelonia mydas) (also listed as vulnerable); ### Indo-pacific Humpback Dolphin (Sousa chinensis), now considered separate species- Australian humpback dolphin (Sousa sahulensis); and ### Dugong (Dugong dugon). ### Dugong (Dugong dugon). ### Vol 2 - Chapter 15 - terrestrial ecology ### Vol 2 - Chapter 15 - terrestrial ecology ### Vol 2 - Chapter 17 - Migratory birds ### Vol 3 - Chapter 17 - Migratory birds ### Vol 3 - Chapter 17 - Migratory birds ### Vol 3 - Chapter 17 - Migratory birds ### Vol 3 - Chapter 17 - Migratory birds ### Vol 3 - Chapter 17 - Migratory birds ### Vol 3 - Chapter 17 - Migratory birds ### Vol 3 - Chapter 18 - Migratory Species ### Significant Impact Assessment ### Vol 3 - Chapter 24 - Threatened Species ### Significant Impact Assessment ### Vol 3 - Chapter 25 - Migratory Species ### Significant Impact Assessment	· · · · · · · · · · · · · · · · · · ·	
### Eastern Curlew (Numenius madagascariensis) (also listed as critically endangered); ### Treek Sandpiper (Calidris ferruginea) (also listed as critically endangered). ### Sharp-tailed sandpiper (Calidris ferruginea) (also listed as critically endangered). ### Sharp-tailed sandpiper (Calidris ferruginea) (also listed as endangered); ### Lesser sand plover (Charadrius mongolus) (also listed as endangered); ### Greater Sand Plover (Charadrius leschenaultia) — also listed as vulnerable ** Pacific Golden-plover (Pluvialis fulva) ### Double-banded plover (Charadrius bicinctus); ### Double-banded plover (Charadrius bicinctus); ### Double-banded plover (Charadrius bicinctus); ### Green Turtle (Caretta caretta) (also listed as endangered); ### Hawksbill Turtle (Eretmochelys imbricata) (also listed as vulnerable); ### Hawksbill Turtle (Eretmochelys imbricata) (also listed as vulnerable); ### Indo-pacific Humpback Dolphin (Sousa chinensis), now considered separate species- Australian humpback dolphin (Sousa sahulensis); and ### Dugong (Dugong dugon). ### Dugong (Dugong dugon). ### In assessing the impacts, consideration must be given to: ### (a) EPBC Act Policy Statement 1.1 Significant impact Guidelines, in particular significant impact criteria for listed threatened species and ecological communities; listed migratory species; and Wetlands of International Importance; (b) the ecological character of the Moreton Bay Ramsar Wetland; ### (c) Australia's international responsibilities in relation to conservation of biodiversity, conservation of migratory Significant impact Assessment voi 3 - Chapter 25 - Migratory Species Significant impact Assessment ### Voi 3 - Chapter 25 - Migratory Species Significant impact Assessment ### Voi 3 - Chapter 25 - Migratory Species Significant impact Assessment	, , , , , , , , , , , , , , , , , , , ,	
© Terek Sandpiper (Xenus cinereus); © Curlew Sandpiper (Calidris ferruginea) (also listed as critically endangered). © Sharp-tailed sandpiper (Calidris acuminata); © Lesser sand plover (Charadrius mongolus) (also listed as endangered); • Greater Sand Plover (Charadrius leschenaultia) – also listed as vulnerable • Pacific Golden-plover (Pluvialis fulva) © Double-banded plover (Charadrius bicinctus); © Loggerhead Turtle (Caretta caretta) (also listed as endangered); © Green Turtle (Chelonia mydas) (also listed as vulnerable); © Hawksbill Turtle (Eretmochelys imbricata) (also listed as vulnerable); © Indo-pacific Humpback Dolphin (Sousa chinensis), now considered separate species- Australian humpback dolphin (Sousa sahulensis); and © Dugong (Dugong dugon). In assessing the impacts, consideration must be given to: (a) EPBC Act Policy Statement 1.1 Significant impact Guidelines, in particular significant impact criteria for listed threatened species and ecological communities; listed migratory species; and Wetlands of International Importance; (b) the ecological character of the Moreton Bay Ramsar Wetland; (c) Australia's international responsibilities in relation to conservation of biodiversity, conservation of migratory species Significant Impact Assessment yspecies and protection of Ramsar wetlands;	, , , , , ,	
## Curlew Sandpiper (Calidris ferruginea) (also listed as critically endangered). ## Sharp-tailed sandpiper (Calidris acuminata); ## Lesser sand plover (Charadrius mongolus) (also listed as endangered); ## Greater Sand Plover (Charadrius leschenaultia) — also listed as vulnerable ## Pacific Golden-plover (Pluvialis fulva) ## Double-banded plover (Charadrius bicinctus); ## Loggerhead Turtle (Cretta caretta) (also listed as endangered); ## Green Turtle (Chelonia mydas) (also listed as vulnerable); ## Hawksbill Turtle (Eretmochelys imbricata) (also listed as vulnerable); ## Indo-pacific Humpback Dolphin (Sousa chinensis), now considered separate species- Australian humpback dolphin (Sousa sahulensis); and ## Dugong (Dugong dugon). ## Union In assessing the impacts, consideration must be given to: ## (a) EPBC Act Policy Statement 1.1 Significant Impact Guidelines, in particular significant impact criteria for listed threatened species and ecological communities; listed migratory species; and Wetlands of International Importance; ## (b) the ecological character of the Moreton Bay Ramsar Wetland; ## (c) Australia's international responsibilities in relation to conservation of biodiversity, conservation of migratory species and protection of Ramsar wetlands; ## Ovol 3 - Chapter 25 - Migratory Species Significant Impact Assessment ## Vol 2 - Chapter 15 - Migratory Species Significant Impact Assessment ## Vol 2 - Chapter 15 - Migratory Species Significant Impact Assessment	Eastern Curlew (Numenius madagascariensis) (also listed as critically endangered);	
© Sharp-tailed sandpiper (Calidris acuminata); © Lesser sand plover (Charadrius mongolus) (also listed as endangered); • Greater Sand Plover (Charadrius leschenaultia) – also listed as vulnerable • Pacific Golden-plover (Pluvialis fulva) © Double-banded plover (Charadrius bicinctus); © Loggerhead Turtle (Caretta caretta) (also listed as endangered); © Green Turtle (Chelonia mydas) (also listed as vulnerable); © Hawksbill Turtle (Eretmochelys imbricata) (also listed as vulnerable); © Indo-pacific Humpback Dolphin (Sousa chinensis), now considered separate species- Australian humpback dolphin (Sousa sahulensis); and © Dugong (Dugong dugon). In assessing the impacts, consideration must be given to: (a) EPBC Act Policy Statement 1.1 Significant Impact Guidelines, in particular significant impact criteria for listed threatened species and ecological communities; listed migratory species; and Wetlands of International Importance; (b) the ecological character of the Moreton Bay Ramsar Wetland; (c) Australia's international responsibilities in relation to conservation of biodiversity, conservation of migratory species Significant Impact Assessment species and protection of Ramsar wetlands; Ovol 3 - Chapter 25 - Migratory Species Significant Impact Assessment	🛮 Terek Sandpiper (Xenus cinereus);	
E Lesser sand plover (Charadrius mongolus) (also listed as endangered); • Greater Sand Plover (Charadrius leschenaultia) – also listed as vulnerable • Pacific Golden-plover (Pluvialis fulva) B Double-banded plover (Charadrius bicinctus); Loggerhead Turtle (Caretta caretta) (also listed as endangered); Green Turtle (Chelonia mydas) (also listed as vulnerable); Indo-pacific Humpback Dolphin (Sousa chinensis), now considered separate species- Australian humpback dolphin (Sousa sahulensis); and Dugong (Dugong dugon). In assessing the impacts, consideration must be given to: (a) EPBC Act Policy Statement 1.1 Significant Impact Guidelines, in particular significant impact criteria for listed threatened species and ecological communities; listed migratory species, and Wetlands of International Importance; (b) the ecological character of the Moreton Bay Ramsar Wetland; (c) Australia's international responsibilities in relation to conservation of biodiversity, conservation of migratory species significant Impact Assessment Vol 3 - Chapter 25 - Migratory Species Significant Impact Assessment		
Greater Sand Plover (Charadrius leschenaultia) – also listed as vulnerable Pacific Golden-plover (Pluvialis fulva) Double-banded plover (Charadrius bicinctus); Loggerhead Turtle (Caretta caretta) (also listed as endangered); Green Turtle (Chelonia mydas) (also listed as vulnerable); In awksbill Turtle (Eretmochelys imbricata) (also listed as vulnerable); In assessing the impacts, consideration must be given to: (a) EPBC Act Policy Statement 1.1 Significant impact Guidelines, in particular significant impact criteria for listed threatened species and ecological communities; listed migratory species; and Wetlands of International Importance; (b) the ecological character of the Moreton Bay Ramsar Wetland; (c) Australia's international responsibilities in relation to conservation of biodiversity, conservation of migratory species significant Impact Assessment Vol 2 - Chapter 15 - terrestrial ecology Vol 2 - Chapter 16 - marine ecology Vol 2 - Chapter 17 - Migratory birds Vol 3 - Chapter 24 - Threatened Species Significant Impact Assessment Vol 3 - Chapter 25 - Migratory Species Significant Impact Assessment	B Sharp-tailed sandpiper (Calidris acuminata);	
Pacific Golden-plover (Pluvialis fulva) Double-banded plover (Charadrius bicinctus); Cloggerhead Turtle (Caretta caretta) (also listed as endangered); Cloggerhead Turtle (Chelonia mydas) (also listed as vulnerable); Hawksbill Turtle (Eretmochelys imbricata) (also listed as vulnerable); In lodo-pacific Humpback Dolphin (Sousa chinensis), now considered separate species- Australian humpback dolphin (Sousa sahulensis); and Dugong (Dugong dugon). In assessing the impacts, consideration must be given to: (a) EPBC Act Policy Statement 1.1 Significant Impact Guidelines, in particular significant impact criteria for listed threatened species and ecological communities; listed migratory species; and Wetlands of International Importance; (b) the ecological character of the Moreton Bay Ramsar Wetland; (c) Australia's international responsibilities in relation to conservation of biodiversity, conservation of migratory species Significant Impact Assessment valads; Vol 2 - Chapter 15 - terrestrial ecology vol 2 - Chapter 16 - marine ecology vol 2 - Chapter 17 - Migratory birds vol 3 - Chapter 24 - Threatened Species Significant Impact Assessment vol 3 - Chapter 25 - Migratory Species Significant Impact Assessment vol 3 - Chapter 25 - Migratory Species Significant Impact Assessment	E Lesser sand plover (Charadrius mongolus) (also listed as endangered);	
☐ Double-banded plover (Charadrius bicinctus); ☐ Loggerhead Turtle (Caretta caretta) (also listed as endangered); ☐ Green Turtle (Chelonia mydas) (also listed as vulnerable); ☐ Hawksbill Turtle (Eretmochelys imbricata) (also listed as vulnerable); ☐ Indo-pacific Humpback Dolphin (Sousa chinensis), now considered separate species- Australian humpback dolphin (Sousa sahulensis); and ☐ Dugong (Dugong dugon). In assessing the impacts, consideration must be given to: (a) EPBC Act Policy Statement 1.1 Significant Impact Guidelines, in particular significant impact criteria for listed threatened species and ecological communities; listed migratory species; and Wetlands of International Importance; (b) the ecological character of the Moreton Bay Ramsar Wetlands; (c) Australia's international responsibilities in relation to conservation of biodiversity, conservation of migratory species Significant Impact Assessment Vol 2 - Chapter 15 - terrestrial ecology	 Greater Sand Plover (Charadrius leschenaultia) – also listed as vulnerable 	
☐ Loggerhead Turtle (Caretta caretta) (also listed as endangered); ☐ Green Turtle (Chelonia mydas) (also listed as vulnerable); ☐ Hawksbill Turtle (Eretmochelys imbricata) (also listed as vulnerable); ☐ Indo-pacific Humpback Dolphin (Sousa chinensis), now considered separate species- Australian humpback dolphin (Sousa sahulensis); and ☐ Dugong (Dugong dugon). In assessing the impacts, consideration must be given to: (a) EPBC Act Policy Statement 1.1 Significant Impact Guidelines, in particular significant impact criteria for listed threatened species and ecological communities; listed migratory species; and Wetlands of International Importance; (b) the ecological character of the Moreton Bay Ramsar Wetland; (c) Australia's international responsibilities in relation to conservation of biodiversity, conservation of migratory species and protection of Ramsar wetlands; Dugong (Dugong dugon). Vol 2 - Chapter 15 - terrestrial ecology Vol 2 - Chapter 15 - terrestrial ecology Vol 2 - Chapter 17 - Migratory birds Vol 3 - Chapter 24 - Threatened Species Significant Impact Assessment Vol 3 - Chapter 24 - Threatened Species Significant Impact Assessment Vol 3 - Chapter 25 - Migratory Species Significant Impact Assessment	Pacific Golden-plover (Pluvialis fulva)	
☐ Green Turtle (Chelonia mydas) (also listed as vulnerable); ☐ Hawksbill Turtle (Eretmochelys imbricata) (also listed as vulnerable); ☐ Indo-pacific Humpback Dolphin (Sousa chinensis), now considered separate species- Australian humpback dolphin (Sousa sahulensis); and ☐ Dugong (Dugong dugon). In assessing the impacts, consideration must be given to: (a) EPBC Act Policy Statement 1.1 Significant Impact Guidelines, in particular significant impact criteria for listed threatened species and ecological communities; listed migratory species; and Wetlands of International Importance; (b) the ecological character of the Moreton Bay Ramsar Wetland; (c) Australia's international responsibilities in relation to conservation of biodiversity, conservation of migratory species and protection of Ramsar wetlands; Significant Impact Assessment Vol 3 - Chapter 25 - Migratory Species Significant Impact Assessment	Double-banded plover (Charadrius bicinctus);	
☐ Hawksbill Turtle (Eretmochelys imbricata) (also listed as vulnerable); ☐ Indo-pacific Humpback Dolphin (Sousa chinensis), now considered separate species- Australian humpback dolphin (Sousa sahulensis); and ☐ Dugong (Dugong dugon). In assessing the impacts, consideration must be given to: (a) EPBC Act Policy Statement 1.1 Significant Impact Guidelines, in particular significant impact criteria for listed threatened species and ecological communities; listed migratory species; and Wetlands of International Importance; (b) the ecological character of the Moreton Bay Ramsar Wetland; (c) Australia's international responsibilities in relation to conservation of biodiversity, conservation of migratory species Significant Impact Assessment Vol 3 - Chapter 25 - Migratory Species Significant Impact Assessment	🛮 Loggerhead Turtle (Caretta caretta) (also listed as endangered);	
In assessing the impacts, consideration must be given to: (a) EPBC Act Policy Statement 1.1 Significant Impact Guidelines, in particular significant impact criteria for listed threatened species and ecological communities; listed migratory species; and Wetlands of International Importance; (b) the ecological character of the Moreton Bay Ramsar Wetland; (c) Australia's international responsibilities in relation to conservation of biodiversity, conservation of migratory species Significant Impact Assessment vol 3 - Chapter 25 - Migratory Species Significant Impact Assessment	🛮 Green Turtle (Chelonia mydas) (also listed as vulnerable);	
(Sousa sahulensis); and In assessing the impacts, consideration must be given to: (a) EPBC Act Policy Statement 1.1 Significant Impact Guidelines, in particular significant impact criteria for listed threatened species and ecological communities; listed migratory species; and Wetlands of International Importance; (b) the ecological character of the Moreton Bay Ramsar Wetland; (c) Australia's international responsibilities in relation to conservation of biodiversity, conservation of migratory species and protection of Ramsar wetlands; (Sousa sahulensis); and Vol 2 - Chapter 15 - terrestrial ecology Vol 2 - Chapter 16 - marine ecology Vol 2 - Chapter 17 - Migratory birds Vol 3 - Chapter 24 - Threatened Species Significant Impact Assessment Vol 3 - Chapter 25 - Migratory Species Significant Impact Assessment	🛮 Hawksbill Turtle (Eretmochelys imbricata) (also listed as vulnerable);	
In assessing the impacts, consideration must be given to: (a) EPBC Act Policy Statement 1.1 Significant Impact Guidelines, in particular significant impact criteria for listed threatened species and ecological communities; listed migratory species; and Wetlands of International Importance; (b) the ecological character of the Moreton Bay Ramsar Wetland; (c) Australia's international responsibilities in relation to conservation of biodiversity, conservation of migratory species and protection of Ramsar wetlands; Vol 3 - Chapter 15 - terrestrial ecology Vol 2 - Chapter 16 - marine ecology Vol 2 - Chapter 17 - Migratory birds Vol 3 - Chapter 17 - Migratory birds Vol 3 - Chapter 24 - Threatened Species Significant Impact Assessment Vol 3 - Chapter 25 - Migratory Species Significant Impact Assessment	🛮 Indo-pacific Humpback Dolphin (Sousa chinensis), now considered separate species- Australian humpback dolphin	
In assessing the impacts, consideration must be given to: (a) EPBC Act Policy Statement 1.1 Significant Impact Guidelines, in particular significant impact criteria for listed threatened species and ecological communities; listed migratory species; and Wetlands of International Importance; (b) the ecological character of the Moreton Bay Ramsar Wetland; (c) Australia's international responsibilities in relation to conservation of biodiversity, conservation of migratory species and protection of Ramsar wetlands; Vol 2 - Chapter 15 - terrestrial ecology Vol 2 - Chapter 16 - marine ecology Vol 2 - Chapter 17 - Migratory birds Vol 3 - Chapter 24 - Threatened Species Significant Impact Assessment Vol 3 - Chapter 25 - Migratory Species Significant Impact Assessment	(Sousa sahulensis); and	
(a) EPBC Act Policy Statement 1.1 Significant Impact Guidelines, in particular significant impact criteria for listed threatened species and ecological communities; listed migratory species; and Wetlands of International Importance; (b) the ecological character of the Moreton Bay Ramsar Wetland; (c) Australia's international responsibilities in relation to conservation of biodiversity, conservation of migratory species and protection of Ramsar wetlands; Vol 3 - Chapter 16 - marine ecology Vol 2 - Chapter 17 - Migratory birds Vol 3 - Chapter 24 - Threatened Species Significant Impact Assessment Vol 3 - Chapter 25 - Migratory Species Significant Impact Assessment	🛽 Dugong (Dugong dugon).	
(a) EPBC Act Policy Statement 1.1 Significant Impact Guidelines, in particular significant impact criteria for listed threatened species and ecological communities; listed migratory species; and Wetlands of International Importance; (b) the ecological character of the Moreton Bay Ramsar Wetland; (c) Australia's international responsibilities in relation to conservation of biodiversity, conservation of migratory species and protection of Ramsar wetlands; Vol 3 - Chapter 16 - marine ecology Vol 2 - Chapter 17 - Migratory birds Vol 3 - Chapter 24 - Threatened Species Significant Impact Assessment Vol 3 - Chapter 25 - Migratory Species Significant Impact Assessment		
threatened species and ecological communities; listed migratory species; and Wetlands of International Importance; (b) the ecological character of the Moreton Bay Ramsar Wetland; (c) Australia's international responsibilities in relation to conservation of biodiversity, conservation of migratory species and protection of Ramsar wetlands; Vol 2 - Chapter 17 - Migratory birds Vol 3 - Chapter 24 - Threatened Species Significant Impact Assessment Vol 3 - Chapter 25 - Migratory Species Significant Impact Assessment	In assessing the impacts, consideration must be given to:	Vol 2 - Chapter 15 - terrestrial ecology
threatened species and ecological communities; listed migratory species; and Wetlands of International Importance; (b) the ecological character of the Moreton Bay Ramsar Wetland; (c) Australia's international responsibilities in relation to conservation of biodiversity, conservation of migratory species and protection of Ramsar wetlands; Vol 2 - Chapter 17 - Migratory birds Vol 3 - Chapter 24 - Threatened Species Significant Impact Assessment Vol 3 - Chapter 25 - Migratory Species Significant Impact Assessment	(a) EPBC Act Policy Statement 1.1 Significant Impact Guidelines, in particular significant impact criteria for listed	Vol 2 - Chapter 16 - marine ecology
(b) the ecological character of the Moreton Bay Ramsar Wetland; (c) Australia's international responsibilities in relation to conservation of biodiversity, conservation of migratory species and protection of Ramsar wetlands; Vol 3 - Chapter 24 - Threatened Species Significant Impact Assessment Vol 3 - Chapter 25 - Migratory Species Significant Impact Assessment		
(c) Australia's international responsibilities in relation to conservation of biodiversity, conservation of migratory species and protection of Ramsar wetlands; Vol 3 - Chapter 25 - Migratory Species Significant Impact Assessment		
species and protection of Ramsar wetlands; Vol 3 - Chapter 25 - Migratory Species Significant Impact Assessment	•	
Significant Impact Assessment		-
		, , , ,

(d) consistency with relevant Statutory instruments, including regulations, zoning plans, plans of management and permits (for example the Marine Parks (Moreton Bay) Zoning Plan 2008); (e) relevant approved Conservation Advices, Recovery Plans and Threat Abatement Plans as well as any agreements or plans that cover impacts on MNES; (f) non-statutory mechanisms including Federal and State policies, position statements and guidelines; (g) partnership and collaborative arrangements with Queensland and other Australian government agencies; (h) partnerships with Traditional Owners in the management of the wetland; (i) partnership and stewardship programs, including education programs and engagement, with local governments, communities, Indigenous persons, business and industry; (j) research and monitoring programs; and (k) compliance and enforcement programs. The EIS must include, but not be limited to, a discussion on the following impacts:	Vol 2 - Chapter 15 - terrestrial ecology Vol 2 - Chapter 16 - marine ecology Vol 2 - Chapter 17 - Migratory birds Vol 3 - Chapter 24 - Threatened Species Significant Impact Assessment Vol 3 - Chapter 25 - Migratory Species Significant Impact Assessment Vol 3 - Chapter 27 - Ramsar
Hydrology The EIS must assess the potential impacts on MNES due to any alterations to water quality and hydrological changes associated with the development, and its subsequent use, with specific reference to mudflats, saltpans, riparian habitat, seagrass, corals, mangroves, estuary, intertidal zone, marine and in-stream biological uses and marine waters including hydrodynamics and water quality. The assumptions, calibration, validation and related uncertainty of any model predictions must be provided.	Vol 2 - Chapter 8 - Coastal Processes and Dredge Plumes Vol 2 - Chapter 9 - Surface Water Quality Vol 2 - Chapter 10 - Groundwater Vol 3 - Chapter 16 - Marine Ecology
Surface water The EIS must include a discussion and assessment of the potential impacts on water quality associated with the development and its subsequent use. The discussion must consider the current baseline water quality data, any relevant water quality objectives, and an assessment of the impacts on terrestrial species and the marine environment including: (a) the chemical and physical properties of any waste water (stormwater, run-off, and pollution) at the point of entering natural surface waters; (b) the change in flow from all phases of the development, including potential stream diversions, scouring and erosion. It must also include a discussion of the impacts of concentrating drainage flows into water courses in terms of both hydrological and ecological implications on the marine environment (aquatic and fishing resources); (c) changes to tidal inundation levels and frequencies associated with the development; (d) anticipated flows of water to and from the development; (e) water supply and usage, and wastewater disposal; and (f) impacts on marine water quality due to dredging, excavation, reclamation, construction, increased use, etc. Each of the above must be considered under both the current range of environmental conditions and under a climate change scenario resulting in sea level 1.5 m above the current highest astronomical tide with a storm surge.	Vol 2 - Chapter 8 - Coastal Processes and Dredge Plumes Vol 2 - Chapter 9 - Surface Water Quality
Groundwater The EIS must include an assessment of the potential impacts to MNES associated with changes (including altered porosity and permeability associated with any land disturbance) to local groundwater resources associated with the development. The impact assessment must define the extent of the area within which groundwater resources are likely to be affected by the development and the significance of the development to groundwater depletion or recharge, and potential to contaminate groundwater resources.	Vol 2 - Chapter 10 - Groundwater

	Loss of an distribution to westland and towards in habitate	Val 2 Chapter 15 torrestrial coolegy
	Loss of, or disturbance to, wetland and terrestrial habitats The FIG must include an accessment of the patential disease and indicate imposts to each protected matter including.	Vol 2 - Chapter 15 - terrestrial ecology
		Vol 2 - Chapter 16 - marine ecology
		Vol 2 - Chapter 17 - Migratory shorebirds
	, , , , , , , , , , , , , , , , , , , ,	Vol 3 - Chapter 24 - Threatened Species
		Significant Impact Assessment
	habitats affected by dredging (including disposal of dredge spoil), excavation, reclamation, construction and	Vol 3 - Chapter 25 - Migratory Species
	operation of the facilities.	Significant Impact Assessment
		Vol 3 - Chapter 27 - Ramsar
	The assessment must also consider impacts on terrestrial species and the marine environment including, but not	
	limited to, disturbance of acid sulfate soils; increase in weed and pest species; erosion and sedimentation; run-off	
	and contamination.	
	Short-term and long-term effects must be considered with comment on whether the impacts are likely to be known,	
	unpredictable or irreversible.	
	Dredging, excavation and land reclamation	Vol 1 - Chapter 2, Sections 2.3, 2.4
	The EIS must include a discussion of impacts associated with proposed dredging, excavation and land reclamation	Vol 2 - Chapter 7 - Soils, Sediments and
	operations as part of the development as a whole and also for each stage of dredging, excavation and reclamation if	Contaminated Land
	they are to be conducted at significantly different times. This must include:	
	(a) details of the size of dredging and excavation operations associated with construction of the harbour and marina	
	and extension to the entrance channel. This would include details of:	
	i. the volume of material to be removed and re-used,	
	ii. the area of wetland habitat lost,	
	iii. the current and new width/depth/length of the shipping channel,	
	iv. description of dredging methods and equipment including staging of dredging and placement of dredged	
	material,	
	v. length and timing of dredging activities,	
	vi. Assessment of sediment according to the National Assessment Guidelines for Dredging (NAGD) 2009 this must	
	include an assessment of the suitability of this material for reclamation,	
	vii. Assessment of the risk and potential impacts of acid sulfate soils (ASS) and potential acid sulfate soils (PASS),	
	viii. Consideration of potential impacts of mobilised sediments (e.g. metal or contaminant release);	
	viii. Consideration of potential impacts of mobilised sediments (e.g. metal of containinant felease);	
-		

 (b) predictive, fully three dimensional modelling of indirect impacts of dredge generated sediments must include:	Vol 2 - Chapter 8 - Coastal Processes
i. hydrodynamic modelling,	Vol 2 - Chapter 9 - Surface Water Quality
ii. sediment transport modelling where the range of particle fractions (sand, silt and clay) are all modelled,	Vol 2 - Chapter 16 - Marine Ecology
iii. modelling must include all types of resuspension possibilities including currents and wave-induced bottom shear	Total chapter to marine toology
stresses as well as wave induced mud fluidisation. If not modelled a justification as to why this phenomena was not	
relevant for that site,	
iv. ecological impact predictions. Lethal and sub lethal thresholds used for the ecological impact predictions must be	
clearly indicated and substantiated with relevant scientific peer reviewed articles,	
v. testing the sensitivity of ecological impact predictions to different pressure thresholds and considering seasonal	
effects must also be undertaken to understand the likely range of prediction outcomes;	
vi. proponent to provide results of modelling in a suitable electronic format (i.e. shapefiles),	
vii. the modelling must represent the conditions at the time of year in which the dredging will actually occur. If this is	
not known then modelling must be undertaken for all seasons (i.e. summer conditions, winter conditions,	
transitional conditions) depending on prevalent oceanographic conditions,	
viii. Modelling must include likely dispersion and resuspension from dredging operations during a range of probable	
hydrodynamic conditions, weather events and expected dredge equipment scenarios,	
ix. Model outputs must use a spatially based scheme that provides for a clear and consistent way of describing and	
presenting the extent, severity and duration of predicted impacts of dredging and reclamation, and	
x. Modelling must be independently peer reviewed. Information relating to the peer review, including the Terms of	
Reference and the peer reviewer's report must be included as part of the EIS documentation;	
(b) A plan of the proposed land to be reclaimed, drawn to an appropriate scale, showing the following information:	Plans showing finished levels and cross
i. the boundary of the land to be reclaimed, tied to real property boundaries;	sections are provided in Appendix 1-H.
ii. the location of the line of mean high water spring tide and highest astronomical tide in relation to the area of	Bulk earthworks plans showing existing and
reclamation;	future levels are included as Appendix 1-L
iii. existing levels of the land and proposed final levels of reclamation in relation to the lowest astronomical tide	Figure 16-10 shows marine habitats withing
(LAT) or Australian Height Datum (AHD);	the land to be reclaimed
iv. location of marine plants and species habitat within the land to be reclaimed;	
v. typical cross section across the land to be reclaimed showing the proposed finished levels and method of	
protecting the seaward boundary of the reclamation from erosion;	
(c) A description of the reclamation process and methodology. This would include:	Volume 1 - section 2.4 - Dredging and
i. A detailed description of construction methods and location issues/risks must be presented,	Reclamation Works
ii. source, characteristics and amount of material for bunds and bund wall stability,	Appendix 1-J - Dreding and Reclamation
iii. three dimensional modelling of the impacts of the land reclamation on the current sediment transport and	Options Assessment and Design Report
hydrodynamic patterns within Raby and Redland Bay area,	Volume 2 - Chapter 8 - Coastal Processes
iv. discussion of how the land reclamation may affect the current erosion and deposition patterns in terms of	
changes to the low water mark of the Ramsar Wetland,	
v. quantity and quality of tail water likely to be generated from dredging activities and the rate of their discharge,	
vi. the settling rate of fine sediments from all dredge material types,	
vii. the residence time within settling ponds prior to discharge (related to dredge pumping rate, ratio of solids to	
water in the dredged material, settling rates, available capacity of the disposal and settling areas, potential bulking	
factor, intensity and duration of rainfall events with consideration given to the worst case scenario for these	
factors);	

(d) details of proposed maintenance dredging (of entrance channel/marina) including previous maintenance dredging programs carried out at Toondah Harbour; (e) assessment of the potential impacts of increased sedimentation, noise, lighting, disturbance of acid sulfate soils and other contaminants on the listed terrestrial and marine species, their habitats and the ecological character of the Moreton Bay Ramsar Wetland; (f) discussion on the impacts associated with increased weeds and pests as a result of dredging and land reclamation.	Vol 1 - section 3.2 Vol 2 - Chapter 7 - Soils, Sediments and Contaminated Land Vol 2 - Chapter 12 - Terrestrial and Underwater Noise and Vibration Vol 2 - Chapter 13 - Lighting Assessment and Strategy Vol 2 - Chapter 15 - terrestrial ecology Vol 2 - Chapter 16 - marine ecology Vol 2 - Chapter 17 - Migratory shorebirds Vol 3 - Chapter 27 - Ramsar
Noise The EIS must include an assessment of the impacts of noise and vibration associated with the construction (for example pile driving and dredging), and ongoing operations of the development (e.g. noise from residents, businesses and visitors to the site) on all MNES. This must include an assessment of short-term and long-term impacts, including measured background noise levels that take into account seasonal variations. The magnitude, duration and frequency of any vibration must be discussed. The locations of sensitive sites must be identified on a map at a suitable scale. Details of the results of baseline monitoring of noise and vibration in the proposed vicinity of the development must be included. Sufficient data must be gathered to provide a baseline for later studies. The daily variation of background noise levels at nearby sensitive sites must be monitored and reported in the EIS, with particular regard given to detailing variations at different periods of the night. Any current activities near the development that may cause a background level of ground vibration (for example: roads, boating and ferry activities, etc.) must be described.	Vol 2 - Chapter 12 - Terrestrial and Underwater Noise and Vibration Vol 3 - Chapter 24 - Threatened Species Significant Impact Assessment Vol 3 - Chapter 25 - Migratory Species Significant Impact Assessment Vol 3 - Chapter 27 - Ramsar
Lighting The EIS must include an assessment of the potential impacts of increased lighting associated with construction and operation of the development on MNES (in particular migratory birds and turtles). This assessment must provide details of the lighting used during all stages (including night operations/maintenance, permanent residences and commercial operations and increased vehicle traffic), and the effects of lighting on Commonwealth listed terrestrial species and the broader marine environment.	Vol 2 - Chapter 13 - Lighting Assessment and Strategy Vol 3 - Chapter 24 - Threatened Species Significant Impact Assessment Vol 3 - Chapter 25 - Migratory Species Significant Impact Assessment Vol 3 - Chapter 27 - Ramsar
Waste The EIS must describe and assess the potential impacts of all wastes to be generated by the proposed development (during construction and operation) and provide details of each waste in terms of: (a) the potential level of impact on MNES; (b) the peak design capacity evaluation of the wastewater treatment system and associated infrastructure; (c) operational handling and fate of all wastes including storage; (d) on-site treatment methods proposed for the wastes (including grey-waste); (e) methods of disposal (including the need to transport wastes off-site for disposal) proposed to be used for any trade wastes, liquid wastes and solid wastes; (f) proposed discharge/disposal criteria for liquid and solid wastes; (g) how the quality of effluent discharge will meet the Queensland Government water quality objectives for Moreton Bay; and (h) processes of waste minimisation techniques proposed.	Vol 2 - Chapter 14 - Waste Vol 3 - Chapter 24 - Threatened Species Significant Impact Assessment Vol 3 - Chapter 25 - Migratory Species Significant Impact Assessment Vol 3 - Chapter 27 - Ramsar

Consequential and facilitated impacts	Volume 3 - Chapter 26 - Cumulative and
The EIS must provide a detailed assessment of any likely impacts that the development may facilitate on MNES at	Consequential Impacts
the local, regional, state, national and international scale. Assessment of consequential and facilitated impacts must include consideration of:	
(a) the role of the upgraded harbour facilities in increasing general visitation to Moreton Bay, and the impacts of those visitors and their recreational activities;	
,	
(b) potential for increased activity (for example road traffic, boating and pets at the development site and more	
broadly in Moreton Bay);	
(c) any other known development proposals which may be facilitated or impacted (either positively or negatively) by	
the development;	
(d) The potential to disturb contaminated land;	
(e) whether the development will result in an intensification of development or proposals in the region, or an	
increase in housing or workforce or in local and regional community changes; and	
(f) any requirements for further proposals of major regional infrastructure to allow the development to go ahead.	
	Volume 3 - Chapter 26 - Cumulative and
Cumulative impacts	Consequential Impacts
Cumulative impacts must be considered in terms of the potential overall consequence or magnitude of impacts on	Volume 3 - Chapter 27 - Ramsar
each of the MNES. The assessment of cumulative impacts must include:	
(a) review and analysis of residual impacts of the proposed development and of other known proposals where there	
may be a spatial or temporal overlap;	
(b) consideration of the potential for cumulative impacts on the ecological character of the Moreton Bay Ramsar	
Wetland, resilience of any important populations of listed threatened or migratory species and ecological	
communities and on overall habitat quality and availability;	
(c) consideration of the impact of climate change on MNES; and	
(d) discussion of the potential for existing pressures and threats to be exacerbated by the proposed development.	
(a) allocation of the potential for existing pressures and affects to be exacerbated by the proposed development.	
The discussion must include an evaluation of the likely short term and long term cumulative impacts on the general	
environment and ecosystem function where relevant to MNES. In this regard consideration must be given to the	
potential magnitude of effects and also the duration and reversibility of effects.	
 potential magnitude of effects and also the daration and reversibility of effects.	L

-	<u> </u>	
Proposed avoidance and mitigation	The EIS must provide information on proposed avoidance and mitigation measures to deal with the relevant impacts	Mitigation measures are included
measures	of the action on MNES. Specific and detailed descriptions of proposed measures must be provided and	throughout the EIS Volume 2, in each
	substantiated, based on best available practices and must include the following elements:	relevant technical discipline, Chapters 7 - 18,
	•a description of each proposed avoidance or mitigation measure in relation to the above likely impacts; and	and a consolidated framework in Volume 3 -
	•an assessment of the expected or predicted effectiveness and achievability of each proposed avoidance or	Chapter 28 and supporting appendix
	mitigation measure including timeframes for achieving effectiveness.	
	The EIS must include a consolidated list of mitigation measures proposed to be undertaken to prevent, minimise or	
	compensate for the relevant impacts of the action, including:	
	(a) a description of the environmental outcomes the measures are expected to achieve including details of any	
	baseline data or proposed monitoring to demonstrate progress towards achieving these outcomes;	
	(b) a description of proposed avoidance and mitigation measures to deal with relevant direct and indirect impacts	
	of the action, including mitigation measures proposed to be undertaken by the proponent and any complementary	
	measures that have been proposed by State or local governments;	
	(c) measures to identify and avoid areas of high conservation or biodiversity value as far as possible;	
	(d) details of ongoing management of the construction and operation of the project, including monitoring	
	programs to support an adaptive management approach and determine the effectiveness of the measures	
	proposed, who will be responsible for such measures and the extent of their responsibility; and	
	(e) adaptive management strategies that will be implemented if mitigation and management measures are	
	insufficient and/or ineffective. This must include adequate monitoring regimes and defined trigger levels that will	
	prompt further management and/or remediation actions. Where the mitigation measure, relates to the ecological	
	character of the Moreton Bay Ramsar site identify design and operational features to maintain and enhance that	
	character where possible, both at the development site and where the proposed development (both construction	
	and operation) may impact on those values.	

All actions and mitigation measures must be consistent with the Australian Ramsar management principles which are set out in Schedule 6 of the EPBC Regulations 2000. These include:

- (a) actions to maintain the ecological character of the wetland;
- (b) wise and sustainable use of the wetland;
- (c) public consultation, and continuing community and technical input;
- (d) actions to deal with impacts, including physical loss, modification or encroachment on the wetland, loss of biodiversity, pollution and nutrient input, changes to water regimes, utilisation of resources, introduction of invasive species;
- (e) restoration or rehabilitation actions; and
- (f) monitoring and reporting.

Ongoing monitoring and reporting is required, during construction and operation, to enable the Department to assess any local or wider impacts of the development on the ecological character of the Moreton Bay Ramsar site. If responsibility for implementation or management of mitigation measures during the operation of the project is proposed to be transferred to parties other that the proponent, detail the stages at which such transfer would occur and how ongoing mitigation measures will be managed.

The EIS must consider the environmental outcomes that will be achieved by the proposed action. This must include consideration of the Department's outcomes- based conditions policy and guidance documents.

The EIS must demonstrate how a net benefit will be achieved for the Moreton Bay Ramsar site and other MNES through the implementation of avoidance, mitigation and offset measures in a timely, transparent and scientifically robust manner. These measures must be additional to what is already required under existing laws or schemes. This may include actions which will maintain the ecological character of the Moreton Bay Ramsar site as a whole, improve existing habitat for MNES, create new habitat for MNES, reduce threats to habitat for MNES and avert the loss of habitat for MNES under threat.

The entities responsible for undertaking the proposed measures must be included as well as a description and a map to clearly define the location and boundaries of any proposed additional conservation areas. This must be

Volume 3 - Chapter 27 - Ramsar Volume 3 - Chapter 28 - Environmental Offsets Strategy The EIS must include detailed costings for the measures that will be implemented to achieve net benefit outcomes. Vol 3 - Chapter 24 - Threatened Species Timeframes and key milestones for implementation of net benefits and a discussion of risks and uncertainties Significant Impact Assessment associated with the proposed net benefits must also be included. Vol 3 - Chapter 25 - Migratory Species Significant Impact Assessment The EIS must include mechanisms to ensure that net benefits are maintained for the duration of the impacts. There Vol 3 - Chapter 27 - Ramsar must also be mechanisms for monitoring and reporting of net benefit milestones and outcomes. The EIS must detail | Vol 3 - Chapter 28 - Environmental the timing and frequency of any monitoring and reporting activities. Management Framework Vol 3 - Chapter 29 - Environmental Offsets The EIS must include an analysis of the likely effectiveness of the mitigating measures in protecting MNES outcomes | Strategy at the regional landscape scale, including associated regulatory and policy arrangements to implement commitments. The EIS must include an analysis of how the mitigation measures are in accordance with any statutory or policy requirements, including but not limited to: (a) any relevant threat abatement plan for listed threatened species and communities; (b) any relevant recovery plan for listed threatened species and communities; and (c) relevant conventions and agreements under which a migratory species is listed, including the Convention on the Conservation of Migratory Species of Wild Animals (the Bonn Convention), the China-Australia Migratory Bird Agreement (CAMBA), Japan-Australia Migratory Bird Agreement (JAMBA), Republic of Korea-Australia Migratory Bird Species (ROKAMBA) and agreements relevant to the conservation of the species. **Environmental Management Plans** Mitigation measures are included throughout the EIS Volume 2, in each The EIS must include a detailed outline of any Environmental Management Plans (EMPs) that sets out the framework relevant technical discipline, Chapters 7 - 18, for management, mitigation and monitoring of relevant impacts of the action, including any provisions for and a consolidated framework in Volume 3 independent environmental auditing. Chapter 28 and supporting appendix The EMPs need to address the project phases (construction, operation and handover) separately and any staging of each phase. Each EMP must state the environmental objectives, performance criteria, monitoring, reporting, corrective action, responsibility and timing for each environmental issue. The EMPs must also describe contingencies for events such as failure of sewerage systems, heavy or prolonged rainfall, storms, or saltwater intrusion into ground water. The name of the agency responsible for endorsing or approving each mitigation measure or monitoring program

must be provided.

	(b) new information relating to MNES or the EIS is to be assessed and accounted for in management of the area affected by the project.	
	(a) monitoring of MNES will occur, including monitoring of progress in achieving the desired conservation outcomes identified in the EIS, how the monitoring will be analysed throughout the life of the project and how the results of the monitoring will influence the project; and	
	The EIS must describe how the adaptive management strategies will be implemented to ensure MNES are effectively chapt protected over the life of the project. This includes how:	pter 28 and supporting appendix
Adaptive management	implement, maintain, operate and enforce management measures.	igation measures are included oughout the EIS Volume 2, in each evant technical discipline, Chapters 7 - 18, I a consolidated framework in Volume 3 -
	account of the Australian Ramsar Management Principles (EPBC Regulations): (a) clear, measurable, time specific environmental outcomes to be achieved by implementing the plan. The plan defines environmental outcomes as measurable extent and condition targets, or circumstances of, the protected and a	igation measures are included bughout the EIS Volume 2, in each evant technical discipline, Chapters 7 - 18, I a consolidated framework in Volume 3 - 19 and supporting appendix

Offsets	Environmental offsets are broadly understood to mean actions taken outside a development site that compensate	Vol 3 - Chapter 29 - Environmental Offsets
	for the significant residual impacts of that development. Offsets are not intended to replace avoidance and	Strategy
	mitigation which are expected to be the primary strategies for managing the potential impacts of development	
	proposals. The MNES section must provide details of:	
	(a) residual significant impacts on MNES that are likely to occur after the proposed activities to avoid and mitigate	
	all impacts are taken into account; and	
	(b) where residual significant impacts are likely to occur, the reasons why the avoidance or mitigation of these	
	significant impacts is not expected to be achieved.	
	The EIS must include details of an offset package proposed to be implemented to compensate for the residual	
	significant impact of the project if these are determined likely, as well as an analysis about how the offset(s) meets	
	the requirements in the Department's Environment Protection and Biodiversity Conservation Act 1999	
	Environmental Offsets Policy October 2012 (EPBC Act Offset Policy).	
	The offset package can comprise a combination of direct offsets and other compensatory measures, so long as it	
	meets the requirements of the EPBC Act Offset Policy.	
	Offsets must compensate for an impact for the full duration of the impact (i.e. should impacts be in perpetuity the	
	offsets must also be in perpetuity).	
	Offsets must directly contribute to the ongoing viability of the MNES impacted by the project, be based on	
	scientifically robust information and deliver an overall conservation outcome that improves or maintains the	
	viability of the MNES as compared to what is likely to have occurred under the status quo, that is, if neither the	
	action not the offset had taken place.	
	The outcomes of the offset strategy need to be specific, measurable and achievable, based on robust baseline data	
	and demonstrate with a high degree of certainty that predicted outcomes will be achieved.	
	Note: offsets do not make an unacceptable impact acceptable and do not reduce the likely impacts of a proposed	Vol 3 - Chapter 29 - Environmental Offsets
	action. Instead, offsets compensate for any residual significant impact.	Strategy
	The offsets strategy must include:	
	(a) objectives	
	(b) quantity of impacts which are being offset	
	(c) the type of offsets proposed (direct/indirect)	

	V 12 Cl + 20 F : + 10ff +
(d) the location (including a geo-referenced map) and suitability of proposed direct offsets	Vol 3 - Chapter 29 - Environmental Offsets
(e) current land tenure or proposed future (e.g. over areas that are presently water) of any proposed offset and the	Strategy
method of securing enduring protection of the offset site and managing the offset for the life of the impact	
(f) the nature of and extent to which actions of the Queensland or Redland City Council governments would be	
required to implement the proposed offsets	
(g) how any proposed staging of the overall development will impact the delivery of offsets	
(h) specific environmental outcomes to be achieved, and reasoning for these in reference to relevant statutory	
recovery plans, conservation advices and threat abatement plans	
(i) a completed 'offsets guide'. All figures used to determine the suitability of offsets including habitat quality	
scores at the project site must be derived using a suitably robust and repeatable framework. Details about each	
framework must also be provided	
(j) risk assessment	
(k) environmental management activities and mitigation measures or customise, by referring to specific measures	
as follows, including the timing of actions	
(I) a monitoring program, which must include:	
•performance indicators (clear and concise criteria against which achievement of outcomes are to the measured),	
which are capable of accurate and reliable measurement	
•outcomes (time bound outcomes as measured by performance indicators), which might include milestones (interim	
outcomes)	
•monitoring requirements (timing and frequency of monitoring to detect changes in the performance indicators, to	
determine if outcomes are being achieved, and to inform adaptive management), and	
trigger values for corrective actions	
(m) detail and time-specific outcomes (Key Performance Indicators) against which the achievement of the proposed	Vol 3 - Chapter 29 - Environmental Offsets
offset outcomes will be measured. This includes interim milestones so the proponent can demonstrate they are on	Strategy
track to achieving the proposed offset outcomes	
(n) potential corrective actions to be implemented if trigger values are reached, and how environmental incidents	
and emergencies will be managed	
(o) roles and responsibilities (clearly stating who is responsible for activities)	
(p) auditing and review mechanisms, and	
(q) an analysis of how the offset package meets the requirements of the EPBC Act Offsets Policy.	
(4)	I .

Other approvals and conditions	State and local Government approvals	Vol 1 - Chapter 4 - Assessment Framework
	The EIS must set out as far as practicable at this stage of the proposal, the scope and likely schedule of applications and assessment requirements and whether the proposal is in accordance with the various State and local government statutory processes.	
	If an approval is issued under Part 9 of the EPBC Act, actions will be required by Walker Group Holdings and the Queensland Government to ensure that any development is compliant with Queensland government statutes and policies, including but not limited to:	
	•Marine Parks Act 2004 (MP Act) and the Marine Parks Regulation 2017- e.g. in relation to the boundaries of the protected area estate;	
	•Marine Parks (Moreton Bay) Zoning Plan 2008 (Zoning Plan) – e.g. in relation to environmental management requirements and constraints;	
	 Aboriginal Cultural Heritage Act 2003 (ACH Act) – e.g. in relation to the management and protection of indigenous cultural heritage Economic Development Act 2012 (ED Act) – e.g. for development applications within the Toondah Harbour Priority 	
	Development Area (PDA); •Environmental Offsets Act 2014 (EO Act) – e.g. in relation to compensatory proposals to deal with any potential	
	residual impacts not addressed under the EPBC Act; •Environmental Protection Act 1994 (EP Act) – e.g. for dredging and land reclamation environmental authorities and	
	management of matters such as noise and air emissions; •Fisheries Act 1994 (Fisheries Act) – e.g. in relation to protection of marine plants and fish passage; • Land Act 1994 (Land Act) – e.g. for conversion of land tenures;	
	Maritime Safety Queensland Act 2002 (MSQ Act) – e.g. for marina and ferry terminal and channel design, construction and operation	
	•Nature Conservation Act 1992 (NC Act) – e.g. in relation to the protection of listed animal species and habitats	
	•Queensland Heritage Act 1992 (QH Act) – e.g. in relation to the management and protection of non-indigenous cultural heritage	Vol 1 - Chapter 4 - Assessment Framework
	Priority Development Area The EIS must describe how the project conforms to the PDA and its purpose and objectives and the PDA Development Scheme.	
	Moreton Bay Marine Park The EIS must consider the Moreton Bay Marine Park zoning plan; this provides the framework for management of the Marine Park and, in effect, the Moreton Bay Ramsar site.	
	The EIS must be consistent with the management principles for the area and specify management outcomes for the protection, presentation and use of the area in accordance with the relevant management plans.	
	Other requirements The EIS must include information on any other requirements for approval or conditions that apply, or that the proponent reasonably believes are likely to apply, to the proposed action.	

Promoting ecologically sustainable development	The EIS must describe how the following principles of ecologically sustainable development (ESD) have been applied in the project:	Vol 2 - Chapter 22 - Sustainability
	(a) decision making processes should effectively integrate both long-term and short-term economic, environmental, social and equitable considerations.	
	(b) if there are threats of serious or irreversible environmental damage, lack of full scientific certainty should not be used as a reason for postponing measures to prevent environmental degradation.	
	(c) the principle of inter-generational equity – that the present generation should ensure that the health, diversity	
	and productivity of the environment is maintained or enhanced for the benefit of future generations.	
	(d) the conservation of biological diversity and ecological integrity should be a fundamental consideration in decision making.	
	The EIS must also describe how the proposed development will not be inconsistent with Australia's obligations	
	under each of the international agreements relevant to the conservation of MNES.	
Auditing and reporting	The EIS must set out:	Vol 3 - Chapter 28 - Environmental Management Framework
	(a) a program of baseline reporting on the current status/condition of the site and surrounding region;	
	(b) a program of monitoring, public reporting and independent or third party auditing to be undertaken;	
	(c) a process that will incorporate these findings into ongoing management;	
	(d) who is responsible for overseeing and taking these actions; and	
	(e) record keeping and review processes under the approval	
Review, modification or abandonment	The EIS must identify and analyse the likely circumstances and procedures that may result in the review,	Vol 3 - Chapter 28 - Environmental
	modification or abandonment of the project. This is to include a discussion of how any commitments under the EIS	Management Framework
	will continue to be met.	
Consultation	The EIS must include details of any consultation about the action, including:	Consultation undertaken to date is provided
	(a) any consultation that has already taken place;	in Volume 1 - Chapter 5 - Stakeholder and
	(b) proposed consultation about relevant impacts of the action;	Community Engagement
	(c) if there has been consultation about the proposed action, any documented response to, or result of, the	
	consultation; and	
	(d) identification of affected parties, including a statement mentioning any communities that may be affected and	
	describing their views.	
	The Minister must be provided with a report on the public submissions received on the draft EIS, together with	
	proposed final drafts of the EIS, incorporating any revisions made in response to public comments.	
	The EIS must include a process for ongoing consultation with Indigenous people whose rights, claims or interests	
	may be affected by the development. This must include consultation on the development of mitigation measures	
	and management of proposed additional protected areas.	
	The process for consultation with Indigenous people must be take into consideration Engage Early Guidance for	
	proponents on best practice Indigenous engagement for environmental assessments under the Environment	
	Protection and Biodiversity Conservation Act 1999 (EPBC Act), Commonwealth of Australia 2016.	

Endorsement criteria		Addressed throughout EIS. MNES are directly addressed in Chapters 24, 25 and 27.
	The EIS must set out how the project meets the objectives of the EPBC Act. In determining whether or not to approve the project, the Minister will have regard to the extent to which the project meets the objectives of the EPBC Act including how the project:	
	 (a) protects the environment, especially MNES; (b) promotes ecologically sustainable development; (c) promotes the conservation of biodiversity; (d) promotes a cooperative approach to the protection and management of biodiversity and MNES; and (e) assists in the co-operative implementation of Australia's international environmental responsibilities. 	
	In determining whether or not to approve the project the Minister must be satisfied that commitments for the protection and management of MNES must be enforceable and achievable over the life of the project. The EIS must demonstrate an effective system of adaptive management that addresses uncertainty and contingency management as well as procedures for monitoring, auditing and public reporting on implementation	
Environmental record of persons proposing to take the action	The EIS must include details of any proceedings under a Commonwealth, State or Territory law for the protection of the environment or the conservation and sustainable use of natural resources against: (a) the person proposing to take the action; and (b) for an action for which a person has applied for a permit, the person making the application. If the person proposing to take the action is a corporation, details of the corporation's environmental policy and	The Project proponent is described in Volume 1 - section 1.3
Economic and social matters	planning framework must also be included. The economic and social impacts of the action, both positive and negative, must be analysed. Matters of interest may include: (a) details of any public consultation activities undertaken, including with Indigenous communities, and their outcomes; (b) projected economic and social costs and benefits of the project, including the basis for their estimation through cost/benefit analysis or similar studies; (c) employment opportunities expected to be generated by the project (including construction and operational phases). Economic and social impacts must be considered at the local, regional and national levels. Details of the relevant cost and benefits of alternative options to the proposed action, as identified in section 3 above, should also be included.	Vol 2 - Chapters 20 and 21
Information sources	For information provided in a draft EIS, the draft EIS must state: (a) the source of the information; (b) how recent the information is; (c) how the reliability of the information was tested; and (d) what uncertainties (if any) are in the information	Throughout EIS and Appendices. References sections have been provided at the completion of each volume.
Conclusion		An overall conclusion is included with the Executive Summary