



**Title: Goodwyn A Well Workovers
Environment Plan Summary**

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Goodwyn A Well Workovers Environment Plan Summary

This summary of the Goodwyn A Well Workovers Environment Plan has been submitted to comply with Regulation 11(7)(8) of the *Petroleum (Submerged Lands) (Management of Environment) Regulations 1999*.

Introduction

Woodside Energy Ltd (Woodside) proposes workovers on the following wells, from the Goodwyn A (GWA) platform, using a hydraulic workover unit (HWU) operated by Imperial Snubbing Services (ISS):

- GWA01;
- GWA02; and
- GWA04.

Project Description

The wells are currently shut in, due to technical issues within the well tubing. The tubing in each of these wells is proposed to be retrieved and replaced using a short stroke HWU, which will be temporarily located on GWA for approximately 90 days. Work is expected to commence in August 08. The GWA platform is an integrated drilling, production (gas and condensate), utilities and accommodation platform located in Permit Area WA-5-L on the North West Shelf, 138 km north-west of Dampier and 90 km north-west of the Montebello Islands Marine Park.

Coordinates of Activity

The surface location coordinates for the Goodwyn A platform, from which the well workovers are to be carried out, are:

Latitude:	19° 39' 12" South
Northing:	7826526.7 mN
Longitude:	115° 55' 42" East
Easting:	387649.6 mE

The surface location coordinates for the wells are: *UTM (GDA94, MGA zone 52)*

Well	Water Depth (m LAT)	Easting (Longitude)	Northing (Latitude)	Timing
GWA-01 (slot # 11)	130 m	387 649.44 E 115° 55' 41.99" mE	7 826 505.98 S 19° 39' 12.67" mN	Q3/Q4 08
GWA-02 (slot # 15)	130 m	387 656.88 E 115° 55' 42.24" mE	7 826 499.29 S 19° 39' 12.89" mN	Q3/Q4 08
GWA-04 (slot # 17)	130 m	387 660.60 E 115° 55' 42.37" mE	7 826 495.95 S 19° 39' 13.00" mN	Q3/Q4 08

Description of the Existing Environment

The Goodwyn A platform and wells are located within the North West Shelf (NWS). There are no known areas of environmental significance in the immediate vicinity of the platform. No endangered or vulnerable species are known to reside permanently with the area, although some may pass through on migratory routes.

Physical Environment

The water depth on the continental shelf of the NWS area ranges between 50 and 1,500 m, although most of the area lies between 50 and 500 m water depth. Two significant banks are present on the gently inclined shelf, the Rankin Bank and the Glomar Shoal. The seabed is generally characterised by deep (>5 m) soft, silty sediments which become deeper, softer and finer with increasing depth.

General wind patterns in the region are monsoonal, with a marked seasonal pattern. Wind direction is predominantly from the SE and NE during April to September with an average wind of speed 5 – 6 knots. During October to March the prevailing wind direction is from the SW, W and NW and the average wind speeds are less than 10 knots. Tropical cyclones occur in the area, typically three to four times per year, most commonly between December and April. Swells of up to 2 m can be expected year round, with April being the calmest month, and January and June the roughest. Wave direction predominantly follows wind direction (ESE in winter, WSW in summer), except during cyclone or storm conditions.

Biological Environment

Sampling of the benthic zone has consistently shown that the soft sediments of NWS support a low abundance, high diversity invertebrate fauna population, largely comprising burrowing polychaete worms (Phylum *annelida*) and crustaceans (Phylum *crustacean*). Echinoderms, bivalves and molluscs also contribute significantly to the faunal composition of the area.

Five species of turtle listed under the Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act) are known to occur in the region; Flatback, Leatherly, Green, Hawksbill and Loggerhead Turtles. Individuals of all five species may be expected to pass through the region on their way to and from nesting beaches on the mainland and adjacent islands, however, while at sea the density (concentration) of animals is low. A number of whale species may be encountered in the region including Pygmy, Blue, Sperm and Humpback Whales. The Humpback Whale is listed as Vulnerable under the EPBC Act. The Group IV Humpback Whale (*Megaptera novaeangliae*) population migrates across the NWS during the annual migration. During June, July and early August the whales follow a northward route across the NWS, which appears to follow the edge of the continental shelf, to the calving grounds off the Kimberley Coast. Cow-calf pairings tend to occur in the area from September/October. Research undertaken by the Centre for Whale Research indicates that cow-calf pairings generally remain in the proximity of the close shore during the southern migration following a relatively narrow route that passes close to the Dampier Archipelago and Montebello Islands.

Surveys off the NWS indicate that seabird distribution is generally very patchy except near islands where shelter and anomalies in surface water concentrate food seasonally. Most of the birds encountered offshore forage in flocks of 20 to more than 200 individuals, often of different species and are commonly associated with schools of pelagic fish, such as tuna. Foraging groups typically comprise Sooty Terns (*Sterna fuscata*), Wedge-tailed Shearwaters (*Puffinus pacificus*) and the occasional Frigatebird (*Frigata* spp).

Socio-Economic Environment

The offshore NWS supports one open fishery and three offshore fisheries, extending northwards and eastwards from the North West Cape out to the limits of state jurisdiction at a depth of 200 m. The main fisheries in this area include the Pilbara Trawl Fishery, Pilbara Trap Fishery, Western Tuna and Billfish Fishery and the Northern Shark Fishery. There are no recreational fisheries in the vicinity of any permit areas on the NWS.

Major Environmental Hazards and Controls

The proposed workover activities are essentially repair work to the wells and a risk assessment for the activities identifies that the main source of risk to the environment is the routine discharge of inhibited brine. The actual environment risks are likely to be lower than those identified for drilling activities. The risk assessment process demonstrates that identified hazards / activities associated with the workover activities have been assessed as medium or low. Aside from the workover operations themselves, there will be no additional disturbance to the seafloor from anchors or transponders, since the workovers will take place from the platform already in place.

The risk of a major hydrocarbon spill during the workover activities is very low as inhibited brine is the main fluid to be recovered and used during these well repair activities and hydrocarbons are not expected to be present in the well fluid to be recovered. Any spillage that may occur will be managed according to the oil spill arrangements and procedures outlined in the approved Western Australia and Dampier Sub-Basin Oil Spill Contingency Plan (ERP-3210).

A series of comprehensive environmental management controls will be maintained by Woodside and Imperial Snubbing Services to ensure that no significant environmental effects are realised from the well workover activities.

Summary of Management Approach

The following table identifies the key management objectives, standard and criteria to achieve these objectives.

Objectives	Standards	Criteria
No significant disturbance to seabed and benthic habitats	<ul style="list-style-type: none"> Woodside Environmental Standards 	<ul style="list-style-type: none"> No anchoring is required to be undertaken for these activities from the Goodwyn A platform.
No introduction of exotic marine species	<ul style="list-style-type: none"> AQIS Australian Ballast Water Management Requirements <i>Quarantine Act 1980</i> 	<ul style="list-style-type: none"> Support vessels adhere to AQIS Australian Ballast Water Management Requirements and quarantine requirements.
No significant impact to transient marine fauna	<ul style="list-style-type: none"> Woodside Environmental Standards EBPC Amendment Regulations 2006 DEWHA Guidelines for Minimising Disturbances to Whales 	<ul style="list-style-type: none"> Guidelines for minimising whale disturbance followed. Required safe distance of 300 m from cetaceans maintained by support vessels, where safe to do so.
No significant impact on marine environment from workover fluids	<ul style="list-style-type: none"> Woodside Environmental Standards Preventative Maintenance System (PMS) 	<ul style="list-style-type: none"> Use of approved workover fluids. Appropriate containment for chemicals onboard.
No significant impact on marine environment from routine discharge	<ul style="list-style-type: none"> Woodside Environmental Standards MARPOL 73/78 Annex IV, Annex I 	<ul style="list-style-type: none"> Workover brine fluids approved for recovery from the well and to be use in the workovers are not expected to have hydrocarbon content.
No significant environmental impact from solid and hazardous wastes	<ul style="list-style-type: none"> Woodside Environmental Standards Woodside Waste Management Plan - Dampier MARPOL 73/78 Annex IV 	<ul style="list-style-type: none"> Waste Management Plan in place and adhered to. General wastes are managed in accordance with the established Goodwyn A platform waste management processes. Hazardous wastes documented and tracked according to requirements. MSDS sheets readily available. Waste log maintained and quantities of wastes transported ashore recorded.
No hydrocarbon or chemical spills to the marine environment	<ul style="list-style-type: none"> Woodside Environmental Standards Western Australia and Dampier Sub-Basin Oil Spill Contingency Plan (ERP-3210) Vessel Shipboard Oil Pollution Emergency Plan Emergency Response Plan 	<ul style="list-style-type: none"> Approved Oil Spill Contingency Plan in place. Crew induction covers spill prevention and spill response procedures. Job Hazard Analysis for bulk transfers reviewed before transfers. Dry break couplings used on transfer hoses. All valves, couplings and the transfer hose checked for integrity prior to use. Approval is sought and provided prior to all dispersant applications.

Objectives	Standards	Criteria
No significant impact on recreational vessels, commercial fishing, and shipping	<ul style="list-style-type: none"> • Woodside Environmental Standards • Emergency Response Plan • Australian Maritime Safety Authority (AMSA) requirements 	<ul style="list-style-type: none"> • Functional vessel navigation lighting in place and in use. • Consultation with identified stakeholders undertaken, as needed. • Marine notices broadcast according to Standard Maritime Safety Procedures (AMSA), via the Rescue Co-ordination Centre (RCC).

Consultation

Consultation with broader stakeholders is not deemed necessary at this time as the workover activities are additional activities to take place from the Hydraulic Work Over unit that will be located on the Goodwyn A platform. This will be reviewed on an ongoing basis.

Contact Details

For Further information about the project, please contact:

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