SEA HAWK – Patrol boat designed to replicate bigger ship performance

Shipbuilder:	**Norman R. Wright & Sons**
Designer:	**Norman R. Wright & Sons**
Vessel's name:	***Sea Hawk***
Owner/Operator:	**NSW Police Force**
Country:	**Australia**
Flag:	**Australia**
Total number of sister ships already completed	**4**
Total number of sister ships still on order:	**2**
Contract date	**July 2023**
Delivery date	**February 2024**

Norman R. Wright & Sons was asked by multiple agencies to develop a 12m patrol vessel with big boat features. The end result is the in-house developed 12m XLW (eXtra Long Waterline) patrol boat hullform. The hull was developed with the use of extensive CFD to ensure the ultimate in seakeeping and efficiency was met. End users of these smaller patrol vessels want to be able to go out in all sea conditions and match the performance of their much larger fleet, which results in less crew and fuel being required to perform the same duties.

The rugged vessel is built to a 5g bottom loading in advanced composites using E-glass/carbon, epoxy and foam cores, with structure approved to DNV Patrol S classification. The remainder of the vessel complies with AMSA NSCV Class 2C survey requirements, permitting use up to 30nm offshore while carrying two crew plus 10 special personnel.

This is the third variation on this hullform, with the earlier versions being petrol outboard-powered. This version is powered by Volvo D6 IPS-500 units, producing 380hp each. The Volvo IPS is coupled with the DP and hold features, allowing the small crew to push a button in order to maintain the vessel's position and orientation while performing their duties. The builder/designer says: "While all propulsion variants have their place, the diesel inboard IPS version uses around half the fuel of the outboard powered versions at 20knots, with 90hp less and considerably greater displacement."

Crew comfort was a priority and was achieved with a soft riding hull, forward-facing windscreen and UES mechanical suspension seats for all. The interior accommodation is fully air-conditioned. A small galley can be found in the wheelhouse along with a PC workstation. The forward accommodation features a full stand-up enclosed head with toilet, shower and basin, V-berth and large storage compartments.

The cockpit is on a single level with a 2tonne tow post and rope reel forward. A forward hatch leads to the genset void housing the Kohler 9kVA generator and fuel system, and space for a gyrostabiliser if required. The engines are accessed through the single large electric opening hatch, with another smaller one over the IPS units. The transom is fitted with a Stella Marine hydraulic lowering platform to assist with retrieving items from the water and diving.

TECHNICAL PARTICULARS

Length, oa	13.71m
Length, bp	11.95m
Breadth, moulded	3.74m
Depth, moulded	2.25m
Displacement	11.62tonnes (fully loaded)
Design, draught	1m (max to underside of props)
Lightweight	10.05tonnes
Service speed	24 knots@80% MCR
Max speed	35.2knots (fully loaded)
Bollard pull	2tonnes
Range	270nm@24knots

Propulsion
Main engine(s):

Number of engines	2
Make	Volvo
Model	D6-IPS 500
Output of each engine	280kW@3,500rpm

Bridge electronics:

Radar(s)	Furuno
Autopilot	Volvo
GPS	Furuno/Volvo
Chart plotter	Furuno
Engine monitoring system	Volvo
Other communication systems	Furuno
	Multi-beam Sonar FLIR
	M364 LR Long Range Thermal Camera

Onboard capacities:

Fuel oil	1,100litres
Fresh water	200litres
Sullage	120litres

Complement:

Number of crew	2
Number of passengers	10 special personnel
Number of cabins	1

Other significant or special items of equipment:
- Kohler 9kVA generator

Classification

Classification society	N/A
Notations	AMSA NSCV Class 2C

Other important international regulations complied with:
- DNV 1A HSLC R2 Patrol S (Structure)

SEA HAWK