Based on the provided assurance case pattern and the domain information about the BlueROV2 system, here is the assurance case for BlueROV2 system in a hierarchical tree format using Goal Structuring Notation (GSN):

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- G1: Hazards for BlueROV2 system addressed in accordance with ALARP principle (undeveloped, uninstantiated)

- S1: Argument by risk reduction/elimination of each hazard

- G2: No intolerable risks present in the system

- C1: Definition of "intolerable"

- S2: Argue that risk posed by any remaining hazards is negligible (undeveloped)

- S3: Argue that no other risks have been identified (undeveloped)

- G3: Risk from obstacle encounter has been reduced as low as reasonably practicable

- C2: Assigned severity class is Major

- S4: Apply ReSonAte to estimate level of risk from hazard condition obstacle encounter

- A1: Function (Obstacle Detection, Command Authority, Avoidance Logic) required by BTD is available (uninstantiated)

- G4: Model obstacle encounter BTD accurately describes possible propagation of hazard obstacle encounter (uninstantiated)

- G6: Possible hazard propagation paths correctly captured in BTD (undeveloped)

- G7: Barriers in the BTD correctly describe their respective control action including any required system functions (undeveloped)

- G8: All non-negligible threats have been identified (undeveloped)

- G5: Quantitative risk estimates are accurate and below acceptable threshold

- G9: State probability distribution used for risk estimation is an accurate representation of expected system states (undeveloped)

- G10: Estimated probability of collision is below allowable threshold for severity class (uninstantiated)

- Sn1: Estimated risk level 10^-3 per hour (uninstantiated)

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\*\*Instantiation Summary:\*\*

- \*\*System\*\*: BlueROV2 system

- \*\*Hazard\*\*: Obstacle encounter

- \*\*BTD\*\*: Obstacle encounter BTD

- \*\*Consequence\*\*: Collision

- \*\*Hazard Severity\*\*: Major

- \*\*Required Functions\*\*: Obstacle Detection, Command Authority, and Avoidance Logic