To instantiate the provided assurance case pattern for the BlueROV2 system, placeholders and uninstantiated elements will need to be filled with specific instances and context relevant to the system. Below is the instantiation, along with the hierarchical tree format of the assurance case:

\*\*@Assurance\_case\*\*

- \*\*Goal G1\*\*: Hazards for BlueROV2 addressed in accordance with ALARP (As Low As Reasonably Practicable) principle.

- \*\*Strategy S1\*\*: Argument by risk reduction/elimination of each hazard inherent to BlueROV2.

- \*\*Goal G2\*\*: No intolerable risks present in BlueROV2.

- \*\*Context C1\*\*: Definition of "intolerable" specific to underwater ROV operations.

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

- \*\*Strategy S3\*\*: Argue that no other risks have been identified in BlueROV2 operations. (undeveloped)

- \*\*Goal G3\*\*: Risk from electrical system hazards has been reduced as low as reasonably practicable.

- \*\*Context C2\*\*: Assigned severity class is high for electrical failure.

- \*\*Strategy S4\*\*: Apply ReSonAte to estimate level of risk from electrical hazard.

- \*\*Assumption A1\*\*: Function for electrical isolation requires manual activation is available.

- \*\*Goal G4\*\*: Model for electrical hazard propagation accurately describes potential failure cascades.

- \*\*Goal G5\*\*: Quantitative risk estimates are accurate and below acceptable threshold.

- \*\*Goal G9\*\*: State probability distribution used for risk estimation accurately reflects the BlueROV2’s dive scenarios. (undeveloped)

- \*\*Goal G10\*\*: Estimated probability of severe damage is below allowable threshold for high severity class.

- \*\*Solution Sn1\*\*: Estimated risk level showing compliance with safety thresholds.

\*\*@End\_Assurance\_case\*\*

This instantiation fills in the placeholders with specific references to the BlueROV2 system, detailing the structure and focus on critical hazards like electrical failures. Each undeveloped element currently lacks further decomposition and will need additional development in future revisions of the assurance case. Further risk estimation methodologies and system-level details may need to be incorporated to satisfy the assurance requirements comprehensively.