Below is the hierarchical tree format for the assurance case of the BlueROV2 system based on the provided assurance case pattern.

- G1: Hazards for BlueROV2 system addressed in accordance with ALARP principle.

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

- G2: No intolerable risks present in the system.

- C1: Definition of "intolerable"

- Choice: Apply either S2 or S3.

- 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 specific hazard has been reduced as low as reasonably practicable.

- C2: Assigned severity class is hazard severity

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

- A1: Function required by BTD is available.

- G4: Model BTD accurately describes possible propagation of hazard specific hazard.

- 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 specific consequence is below allowable threshold for severity class.

- Sn1: Estimated risk level specific risk estimation