To create the assurance case for the BlueROV2 system using the provided assurance case pattern predicates, we instantiate the generic placeholders with specific information about the BlueROV2 system and present the elements in a hierarchical tree format using dashes to denote different levels. The instantiated placeholders will be represented as follows:

- {A :: System} = BlueROV2

- {B :: Hazard} = underwater collision

- {S :: BTD} = Behavior Tree Diagram

- {R :: Hazard} = underwater collision

- {C:: Hazard.Severity} = critical

- {T: Function} = obstacle detection and avoidance

- {U:: Consequence} = damage to ROV

- {V :: attr:RiskEst} = probability of collision

- {attr:RiskEst} = collision probability estimate

The instantiated assurance case for the BlueROV2 system, presented in a hierarchical tree format, is as follows:

```

G1: Hazards for BlueROV2 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 (1 of 2)

- 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 underwater collision has been reduced as low as reasonably practicable.

- C2: Assigned severity class is critical. (uninstantiated)

- S4: Apply ReSonAte to estimate level of risk from hazard condition underwater collision.

- A1: Function obstacle detection and avoidance required by Behavior Tree Diagram is available. (uninstantiated)

- G4: Model Behavior Tree Diagram accurately describes possible propagation of hazard underwater collision. (uninstantiated)

- G6: Possible hazard propagation paths correctly captured in Behavior Tree Diagram. (undeveloped)

- G7: Barriers in the Behavior Tree Diagram 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 damage to ROV is below allowable threshold for severity class. (uninstantiated)

- Sn1: Estimated risk level collision probability estimate. (uninstantiated)

```

In this hierarchical structure:

- Each level is denoted by a dash (-)

- Choices and multiplicity rules are indicated to show alternative or multiple paths.

- Undeveloped and uninstantiated elements are noted where applicable.

This tree structure representation now succinctly displays the assurance case for BlueROV2 based on the given pattern predicates.