

1.4 Assess the appropriateness of your chosen testing approach

System-level testing:

Strengths:

- End to end testing ensures correct JSON output and correct error handling, addressing key system-level requirements
- Timing testing verifies tasks complete within the 30 second requirement

Limitations:

- No major limitations

Integration-level testing:

Strengths:

- Testing the retrieval of data from the ILP REST service ensures system correctly integrates with external data source
- Testing that drone movement rules integrate correctly with drone selection verifies that combined subsystem functionality produces valid flight paths

Limitations:

- Integration tests cannot account for all possible combinations of drones, service points, and no-fly zones, so some edge cases may remain untested
- The behaviour of the ILP REST service may change or be unavailable, which could limit the reliability of these tests

Unit-level testing:

Strengths:

- Testing drone selection ensures that valid drones are returned, validating core logic.
- Testing movement directions and step sizes verifies that drone navigation rules are correctly implemented in isolation

Limitations:

- No large limitations identified