3.4 Evaluation of Results

The result of testing show that the implemented tests were effective in validating the chosen requirements. Repeated execution of unit, integration and system-level tests produced consistent passing results, providing confidence that the core logic and system behaviour are all correct.

At the unit level, consistent passing of tests verifies that move angles, move size and avoidance of no-fly zones suggests that the core movement rules are currently followed. Since these tests validate each step in a path, it provides strong assurance that individual movement behaviour is correct.

At the integration level, the successful execution of tests combining movement constraints and path generation demonstrates that components interact correctly to produce valid 2D paths. The correctness of the data retrieval from the ILP REST service supports confidence that the system can integrate correctly with external services.

At the system level, the results indicate that the REST service consistently produces valid JSON output and meets the 30 second performance requirement under the tested conditions. This provides confidence that the system behaves correctly.

However, there are also limitations. Testing relied primarily on functional correctness and did not include any formal code coverage measures. Additionally, the randomly generated tests may not cover edge-cased or reflect real world use.

Despite these limitation, the test results are sufficiently comprehensive to support confidence that the system meets its stated requirements within the scope of the project.