Abstract: Whether non-native speakers’ on-line processing can be native-like remains a hot issue. Recently many have shown that qualitatively native-like processing is attainable, especially for learners with high proficiency. However, most of the studies recruited learners who had been immersed to the English-speaking country. The current study investigated processing of filler-gap dependency and island constraints for Chinese learners of English as a second but foreign language. We also attempted to look into individual differences by taking different variables into account. The results showed that native-like active gap-filling strategy positively correlated with L2 proficiency, native-like island effect negatively correlated with age of acquisition, but neither one correlated with working memory capacity. These findings lent more support to the grammar-based account for island effects, though future studies adopting more precise measure of working memory would be needed. The study also called for further investigation into L1 background on processing islands in an L2.