The algebraic K-theory of integral group rings has been of interest since the early days of K-theory. Computations, however, have proven difficult. In this talk I will describe joint work with Vigleik Angeltveit on a strategy for studying the algebraic K-theory of the group ring $\mathbb{Z}[C_2]$. In particular I will discuss how methods and computations from equivariant stable homotopy theory yield new information about these algebraic K-theory groups.