Attention deficit/hyperactivity disorder (ADHD) is one of the most prevalent paediatric neuropsychiatric disorders and is characterised by hyperactivity, inattention and increased impulsivity. Children with ADHD are often also characterised by deficits in a variety of cognitive domains, including problems in working memory, a generally slower and more variable style of information processing and deficits in temporal processing, inhibitory functions and delay processing. Overarching executive functions like information updating, response inhibition and mental set shifting are also impaired in many, but not all, children with ADHD, demonstrating the neuropsychological heterogeneity characterising this disorder. Deficits in executive functions can persist into adulthood and have a substantial negative impact on everyday life. A variety of approaches are commonly considered for the treatment of ADHD (including pharmacological interventions, patient-centred cognitive-behavioural therapy approaches and specific teacher/parent training programmes). More recently, adding to this multimodal treatment approach, neurofeedback has grown in popularity as an intervention option for patients with ADHD. This article considers this intervention approach and the opportunities for optimising treatment for executive control dysfunctions in ADHD using theta/beta neurofeedback.