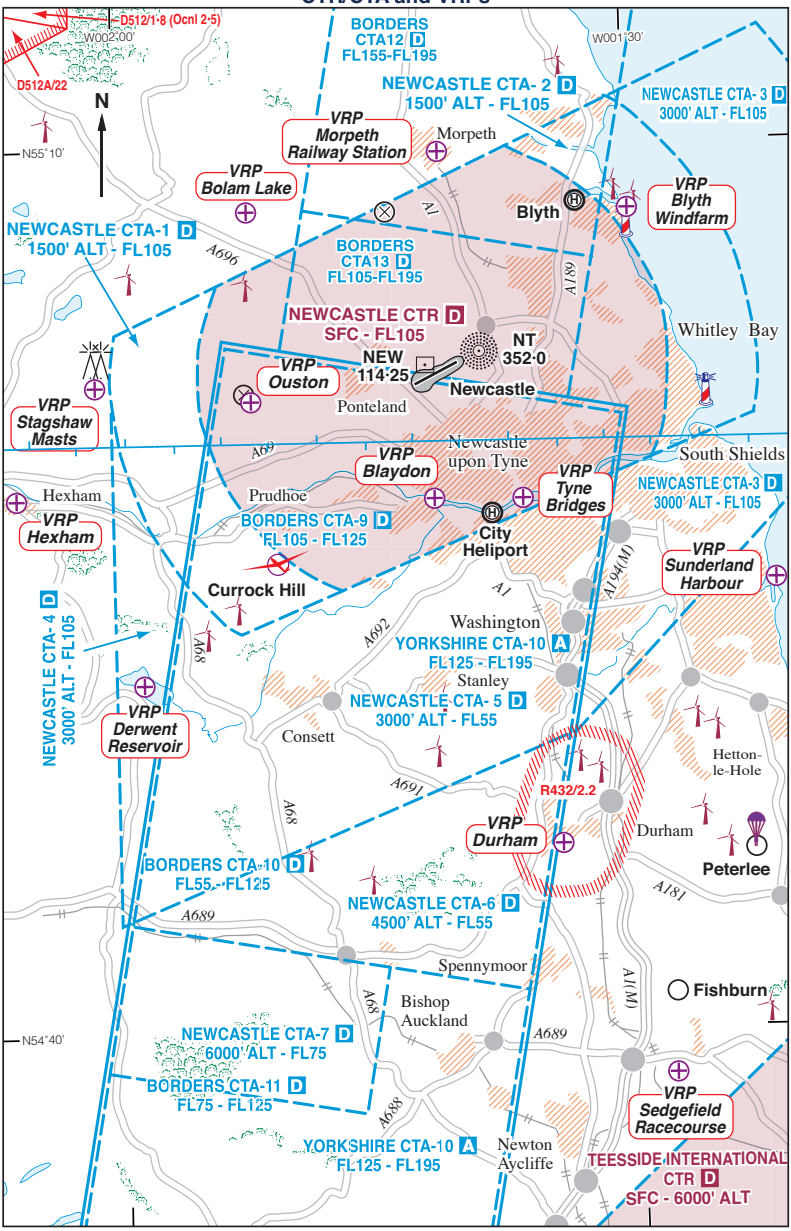NEWCASTLE
CTR/CTA and VRPs