

The effects of Cenozoic compression within the Faroe–Shetland Basin and surrounding areas are mainly manifested in the form of growth folds. The scale and orientation of the folds varies significantly, with axial trace lengths ranging between less than 10 to over 250 km and trends including east, NE-, NNE-, ENW-, NNW- and WNW. The NE-trending features are the most numerous, though they are mainly restricted to the NE Faroe–Shetland Basin where an inherited Caledonian structural grain is most prevalent. Limited evidence exists for late Paleocene and early Eocene activity along the Wyville Thomson Ridge, whereas mid–late Eocene and Oligocene fold growth is more common in the SW Faroe–Shetland Basin. Although the effects of well-defined early–mid Miocene deformation appear to be mainly constrained to the NE Faroe–Shetland Basin, this phase of activity is also inferred to have been responsible for major growth of the Wyville Thomson Ridge. Early Pliocene fold growth is observed within the Faroe–Shetland Basin and adjacent areas, with raised seabed profiles over some of the anticlinal features suggesting that the effects of compressional stress continue at the present day. Despite the variation in trend and size of growth folds, there is, we believe, similarity in their local mechanism of emplacement, with buttressing of sedimentary successions against pre-existing basement architecture and igneous intrusions being of particular significance. However, the lack of obvious spatial or temporal pattern to fold growth development within the NE Atlantic margin as a whole mitigates against a single regional driving mechanism being able to explain the current distribution, orientation and timing of the folds