

Sedimentary structures

| | | |
|-------|--|--|
| | trough cross-bedding | |
| | tabular cross-bedding | <u>Trace fossils</u> |
| | hummocky cross-stratification (HCS) | ⌚ <i>Diplocraterion</i> ⌚ <i>Arenicolites</i> ⌚ <i>Skolithos</i> ⌚ <i>Scolicia</i> ⌚ cf. <i>Curvolithus</i> ⌚ <i>Thalassinoides</i> ⌚ <i>Taunurus cauda-galli</i> ⌚ <i>Teichichnus</i> ⌚ <i>Zoophycos</i> ⌚ <i>Rhizocorallium</i> ⌚ <i>Pelecypodichnus</i> (escape trace) ⌚ <i>Pelecypodichnus</i> (resting trace) ⌚ <i>Chondrites</i> ⌚ <i>Planolites</i> ⌚ <i>Palaeophycus</i> ⌚ cf. <i>Helminthopsis</i> ⌚ <i>Palaeodictyon</i> ⌚ cf. <i>Asterichnus</i> |
| | granule/conglomerate lag | |
| | current ripples | |
| | wave ripples | |
| | slump bed | |
| | loading and flame structures | |
| | gutter casts | |
| | bioturbation | |
| | rootlets | |
| | pedogenic nodules | |
| | siderite nodules | <u>Body Fossils</u> |
| | flat laminations | ⌚ goniatites ⌚ bivalves ⌚ brachiopods ⌚ fish scales, teeth, etc. ★ crinoids ⌚ colonial corals ⌚ solitary corals ⌚ bryozoa ⌚ gastropods ⌚ algal mats (cf. stromatolites) × undifferentiated algal debris ⌚ plant debris |
| | coal (facies association C10) | |
| | carbonaceous shale/siltstone (facies association C10) | |
| | pseudobrecciated texture (only in facies association A2) | |

Palaeocurrents

- ↖ bidirectional wave palaeocurrents (perpendicular to wave ripple crests)
- ↘ unidirectional current palaeocurrents
- ↙ non-directional current palaeocurrents (e.g. primary current lineations, longitudinal scours)

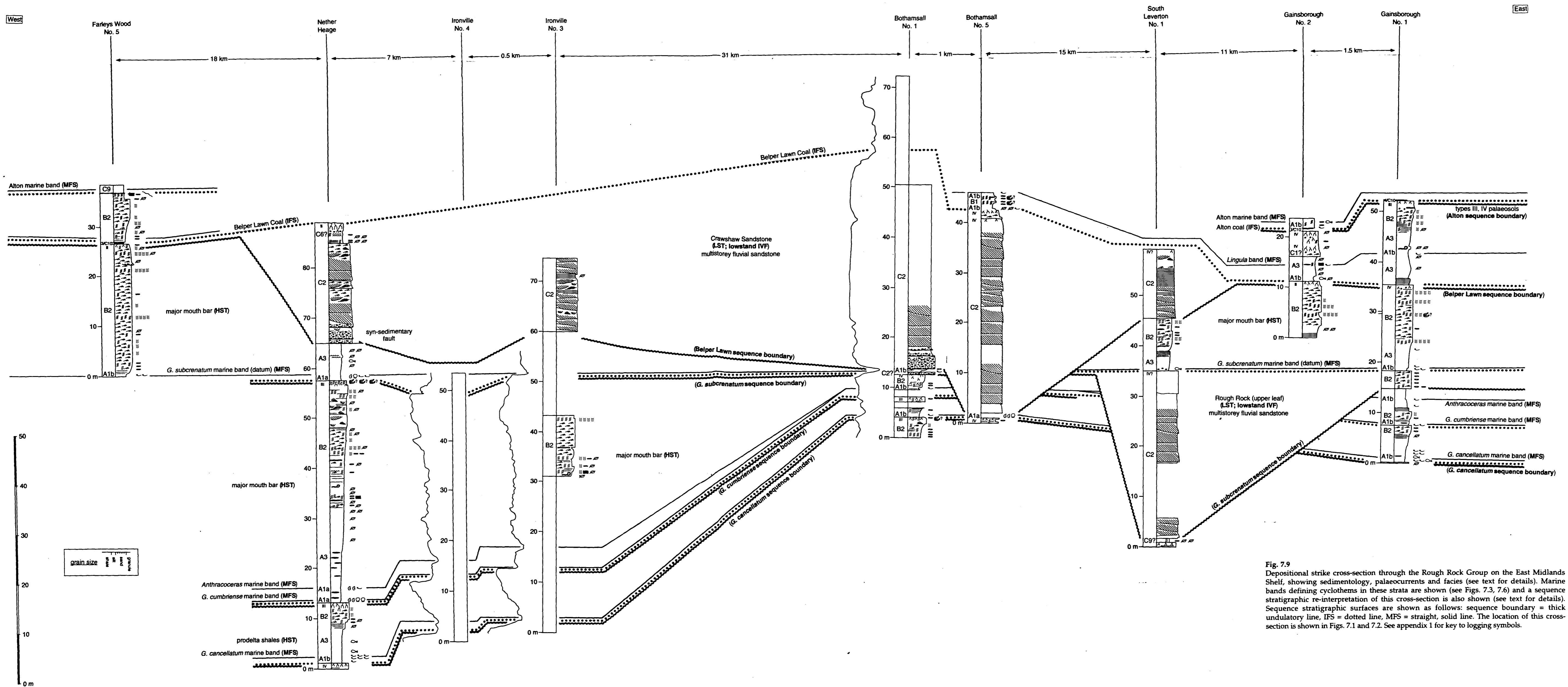


Fig. 7.9
Depositional strike cross-section through the Rough Rock Group on the East Midlands Shelf, showing sedimentology, palaeocurrents and facies (see text for details). Marine bands defining cyclothems in these strata are shown (see Figs. 7.3, 7.6) and a sequence stratigraphic re-interpretation of this cross-section is also shown (see text for details). Sequence stratigraphic surfaces are shown as follows: sequence boundary = thick undulatory line, IFS = dotted line, MFS = straight, solid line. The location of this cross-section is shown in Figs. 7.1 and 7.2. See appendix 1 for key to logging symbols.

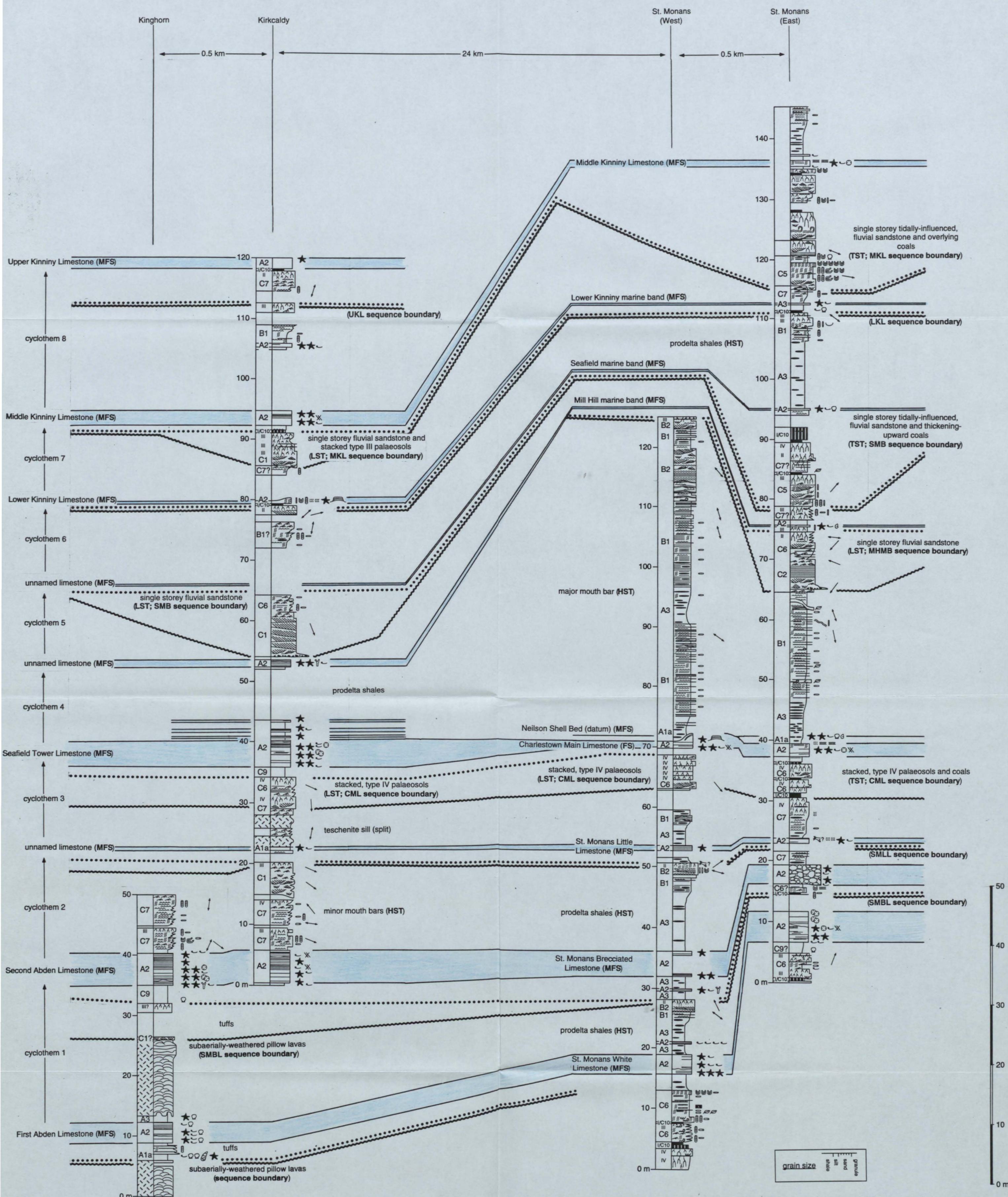


Fig. 4.6

Depositional strike cross-section through the Lower Limestone Group in East Fife showing sedimentology, palaeocurrents and facies (see text for details). Cyclothem and sequence stratigraphic interpretations of this cross-section are shown on the left and right of the cross-section, respectively. Sequence stratigraphic surfaces are shown as follows: sequence boundary = thick undulatory line, IFS = dotted line, MFS = straight, solid line. The location of this cross-section is shown in Fig. 4.1 and simplified cyclothem and sequence stratigraphic interpretations of this cross-section are also shown in Figs. 4.3 and 4.12, respectively. See appendix 1 for key to logging symbols.

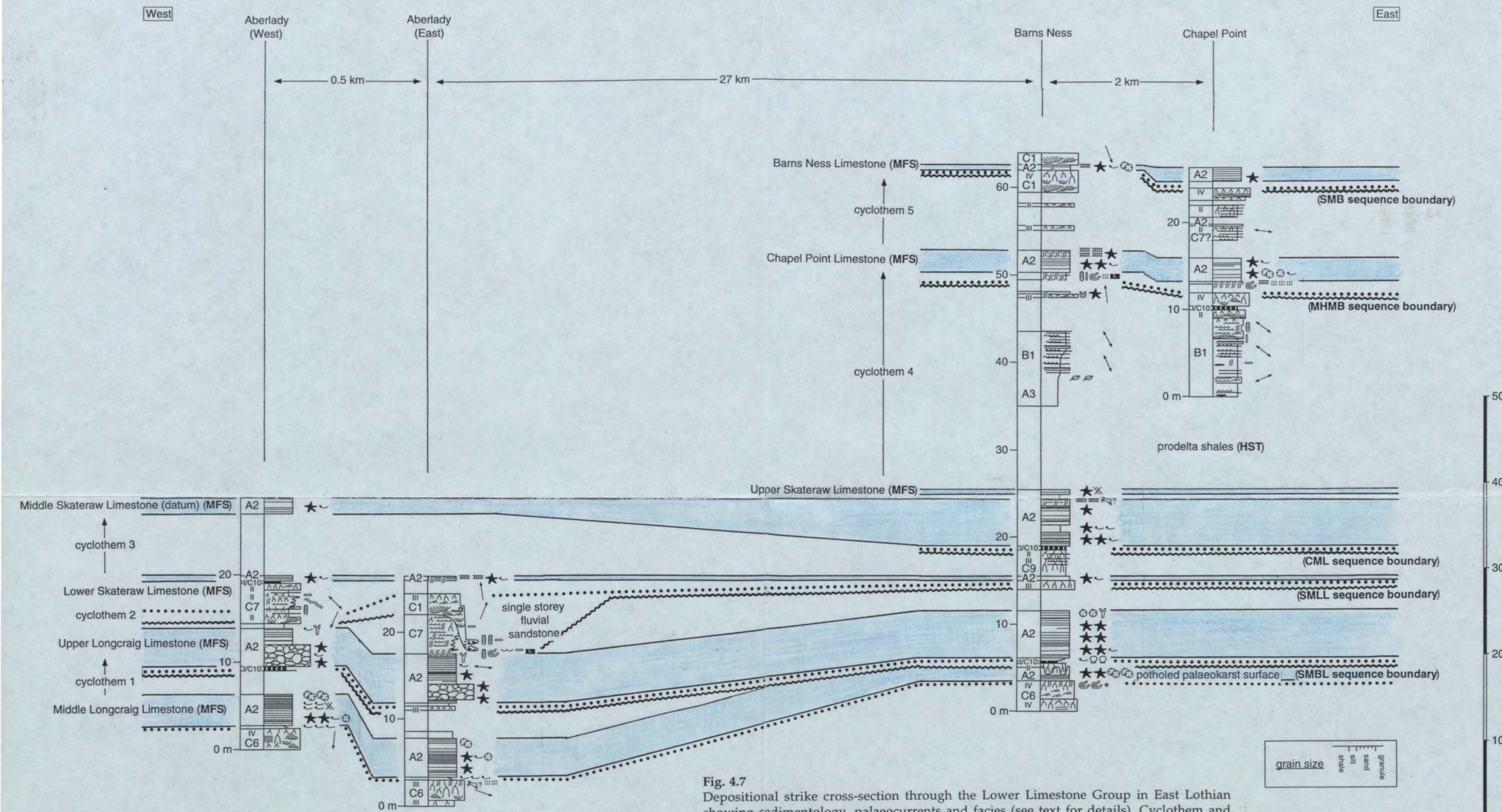


Fig. 4.7
 Depositional strike cross-section through the Lower Limestone Group in East Lothian showing sedimentology, palaeocurrents and facies (see text for details). Cyclothem and sequence stratigraphic interpretations of this cross-section are shown on the left and right of the cross-section, respectively. Sequence stratigraphic surfaces are shown as follows: sequence boundary = thick undulatory line, IFS = dotted line, MFS = straight, solid line. The location of this cross-section is shown in Fig. 4.1 and simplified cyclothem and sequence stratigraphic interpretations of this cross-section are also shown in Figs. 4.4 and 4.13, respectively. See appendix 1 for key to logging symbols.

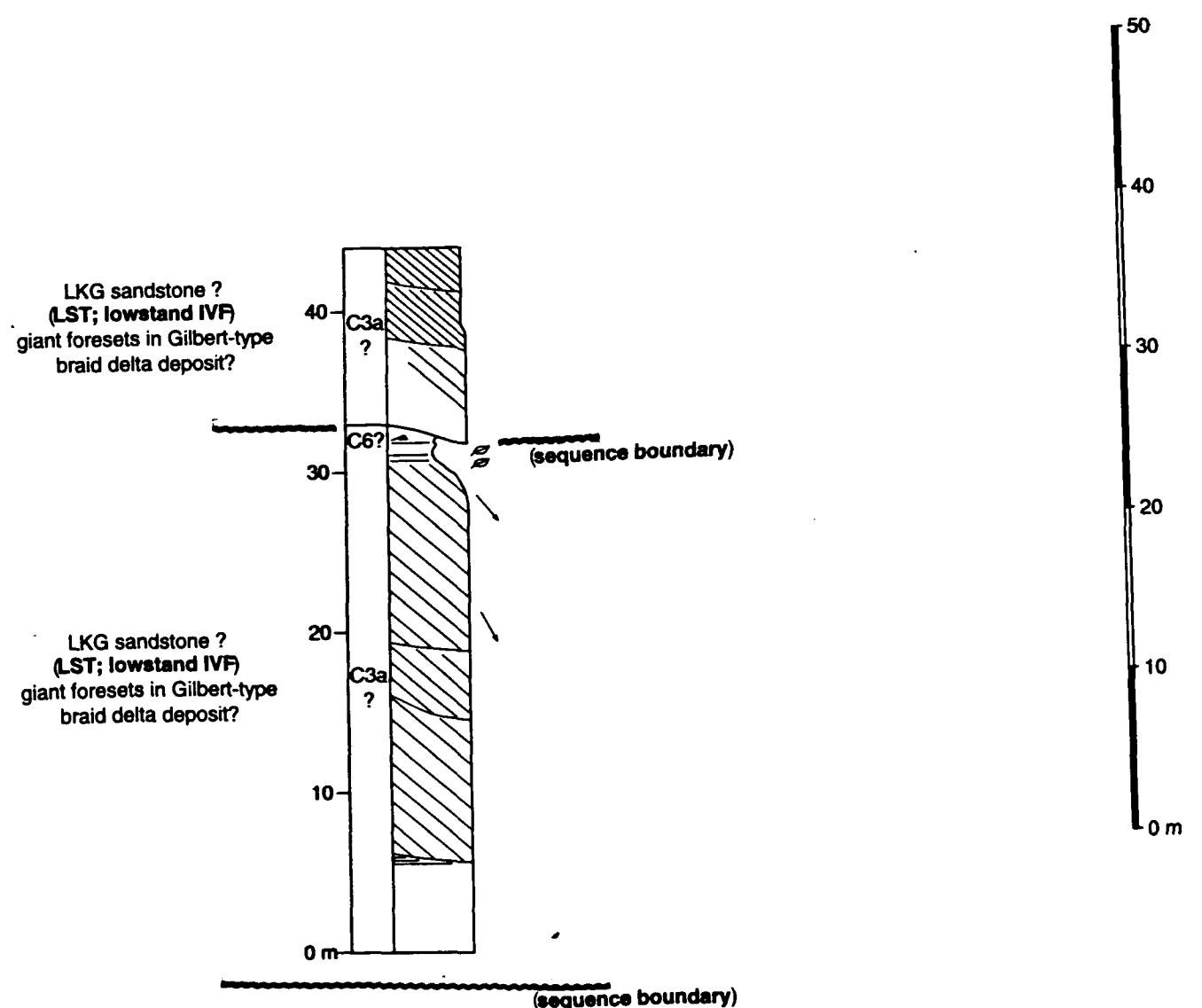
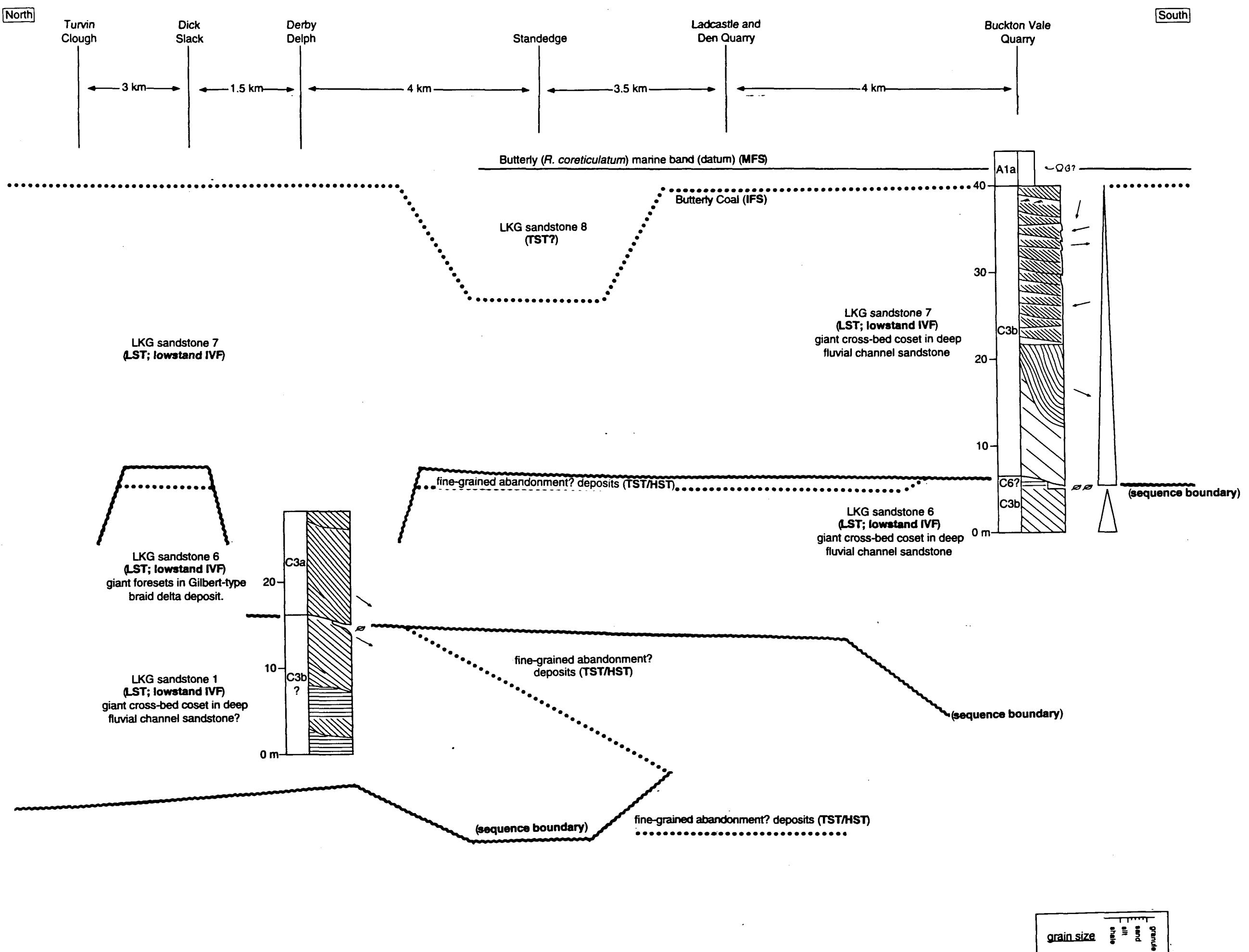


Fig. 6.8
Depositional dip cross-section through the Lower Kinderscout Grit in the Huddersfield sub-basin and Edale Gulf, Pennine Basin, showing sedimentology, palaeocurrents and facies (see text for details). Fining-upward fluvial successions are interpreted as preserved facies (see text for details). The correlation framework illustrated in this cross-section is based on the author's interpretation of logged sections and sections described in the B.G.S. Memoirs and maps (see text for details). These strata have been interpreted as part of a single cyclothem (e.g. Collinson 1988), but a sequence stratigraphic re-interpretation of this cross-section is shown (see text for details). Sequence stratigraphic surfaces are shown as follows: sequence boundary = thick undulatory line, IFS = dotted line, MFS = straight, solid line. The location of this cross-section is shown in Figs. 6.1 and 6.3. See appendix 1 for key to logging symbols.

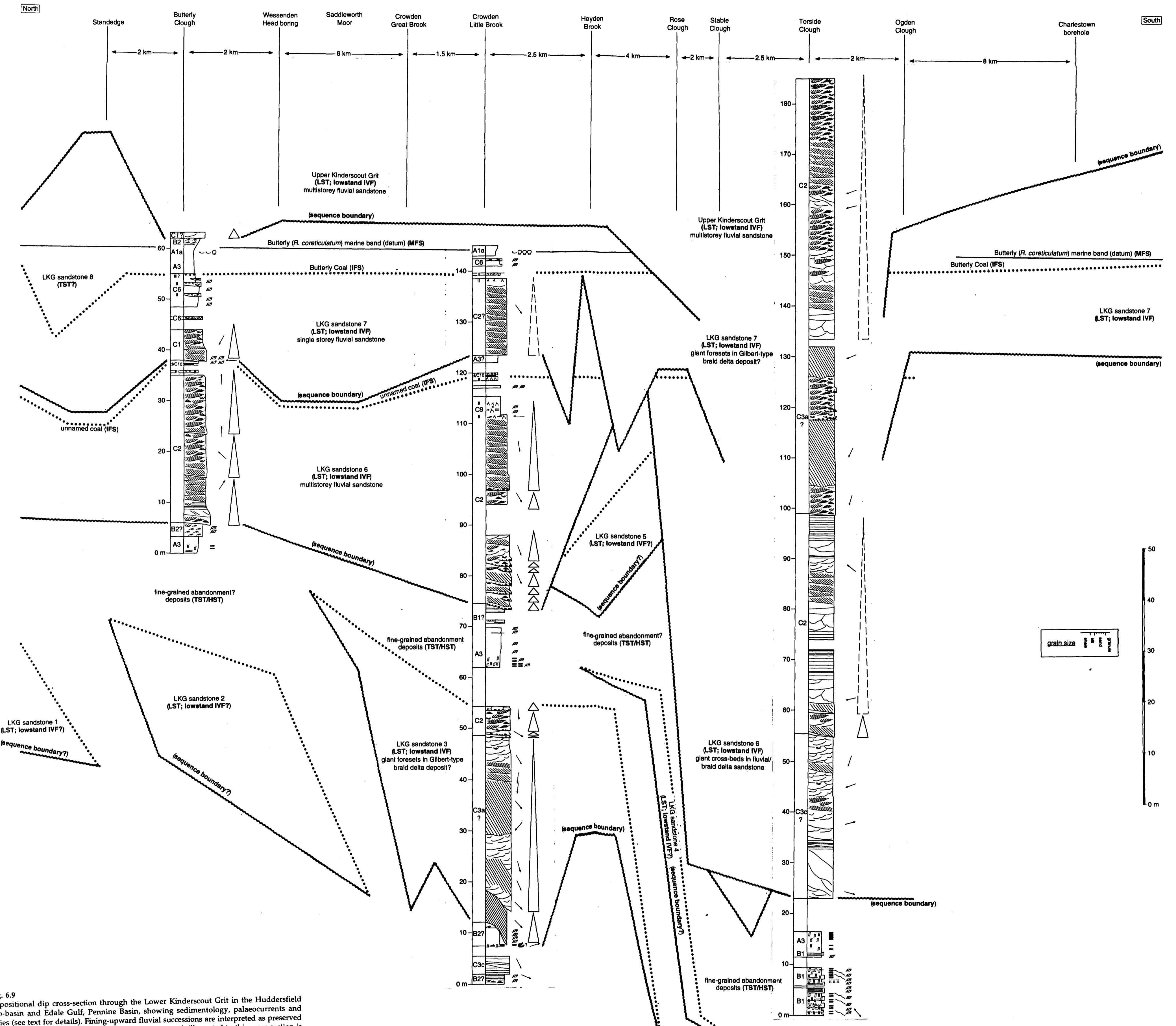


Fig. 6.9
 Depositional dip cross-section through the Lower Kinderscout Grit in the Huddersfield sub-basin and Edale Gulf, Pennine Basin, showing sedimentology, palaeocurrents and facies (see text for details). Fining-upward fluvial successions are interpreted as preserved remnants of channel storeys. The correlation framework illustrated in this cross-section is based on the author's interpretation of logged sections and sections described in the B.G.S. Memoirs and maps (see text for details). These strata have been interpreted as part of a single cyclothem (e.g. Collinson 1988), but a sequence stratigraphic re-interpretation of this cross-section is shown (see text for details). Sequence stratigraphic surfaces are shown as follows: sequence boundary = thick undulatory line, IFS = dotted line, MFS = straight, solid line. The location of this cross-section is shown in Figs. 6.1 and 6.3. See appendix 1 for key to logging symbols.

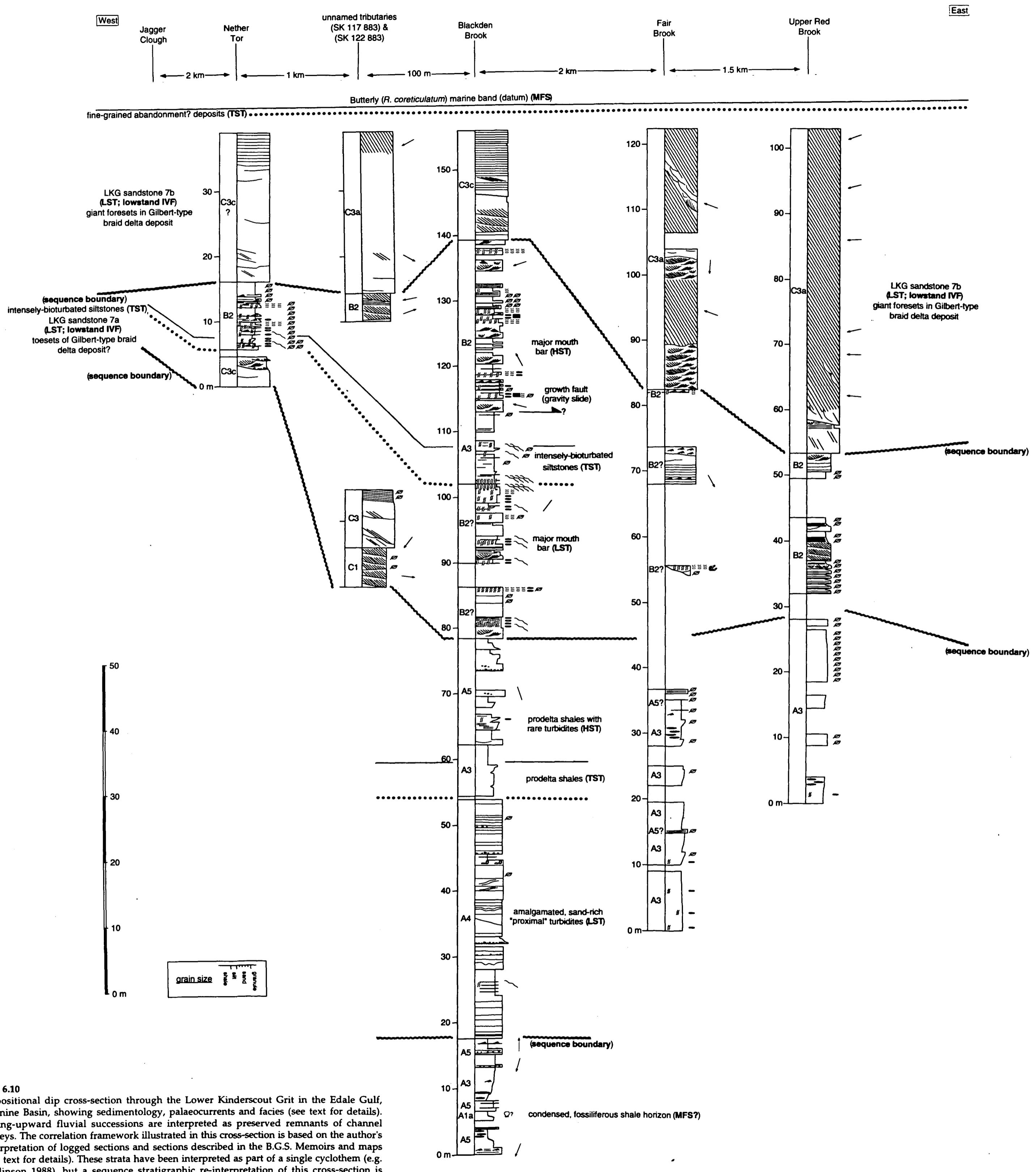


Fig. 6.10

Depositional dip cross-section through the Lower Kinderscout Grit in the Edale Gulf, Pennine Basin, showing sedimentology, palaeocurrents and facies (see text for details). Fining-upward fluvial successions are interpreted as preserved remnants of channel storeys. The correlation framework illustrated in this cross-section is based on the author's interpretation of logged sections and sections described in the B.G.S. Memoirs and maps (see text for details). These strata have been interpreted as part of a single cyclothem (e.g. Collinson 1988), but a sequence stratigraphic re-interpretation of this cross-section is shown (see text for details). Sequence stratigraphic surfaces are shown as follows: sequence boundary = thick undulatory line, IFS = dotted line, MFS = straight, solid line. The location of this cross-section is shown in Figs. 6.1 and 6.3. See appendix 1 for key to logging symbols.

West

East

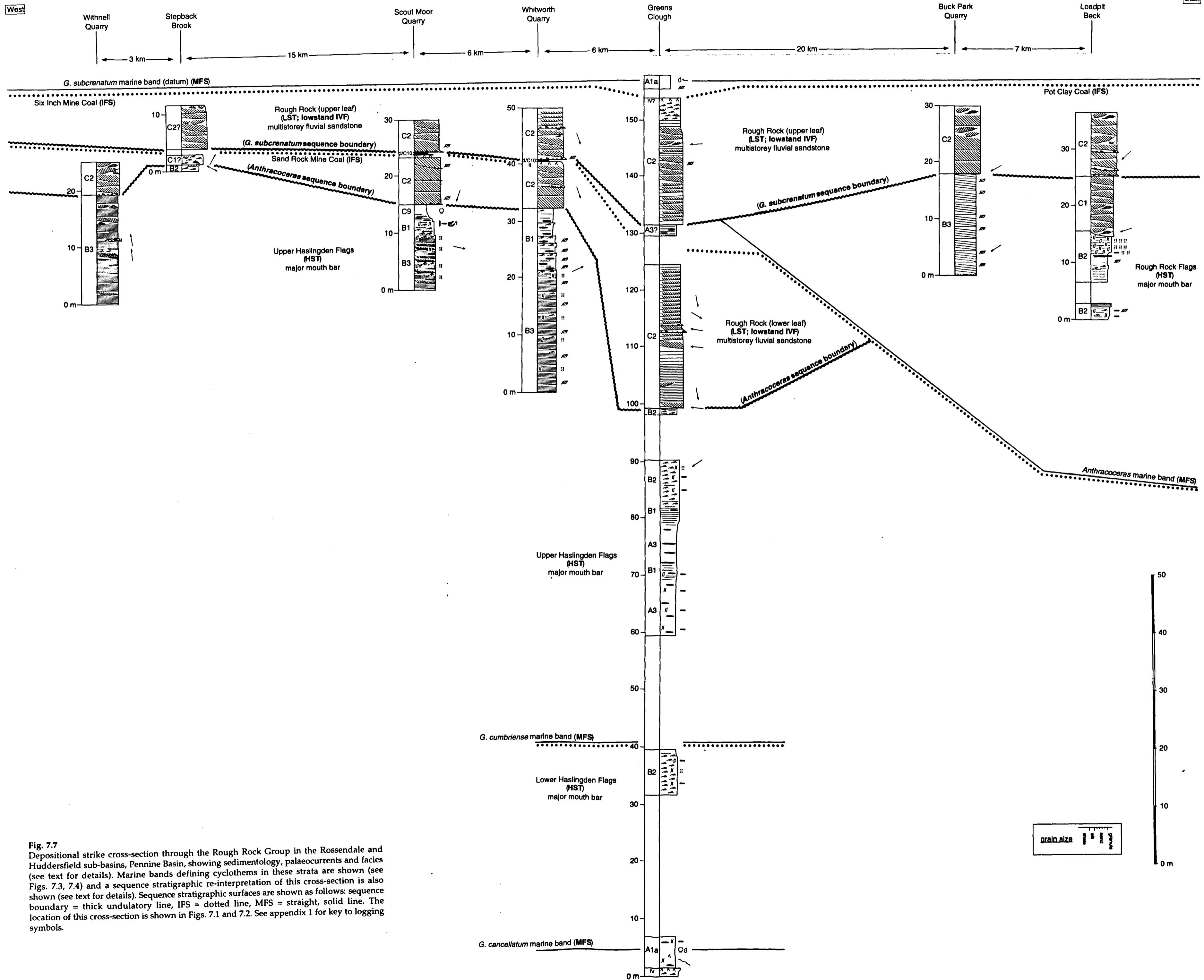


Fig. 7.7
Depositional strike cross-section through the Rough Rock Group in the Rossendale and Huddersfield sub-basins, Pennine Basin, showing sedimentology, palaeocurrents and facies (see text for details). Marine bands defining cyclothsems in these strata are shown (see text for details). Sequence stratigraphic re-interpretation of this cross-section is also shown (see text for details). Sequence stratigraphic surfaces are shown as follows: sequence boundary = thick undulatory line, IFS = dotted line, MFS = straight, solid line. The location of this cross-section is shown in Figs. 7.1 and 7.2. See appendix 1 for key to logging symbols.

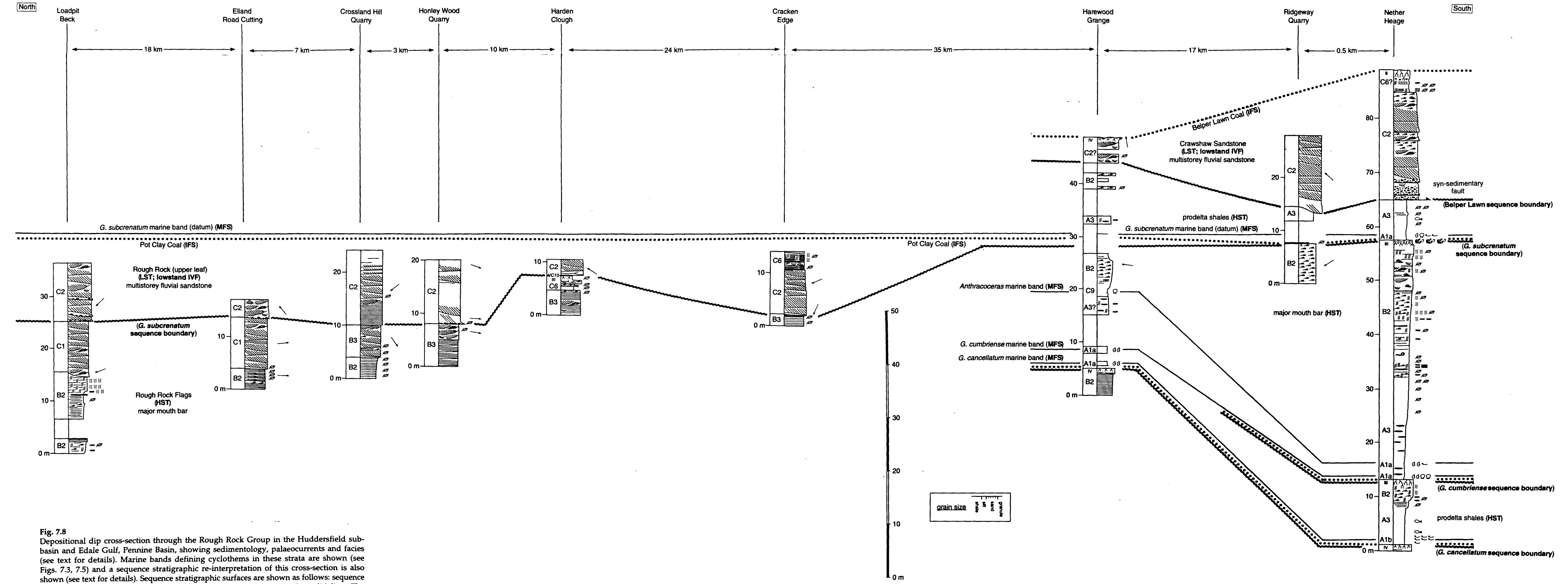
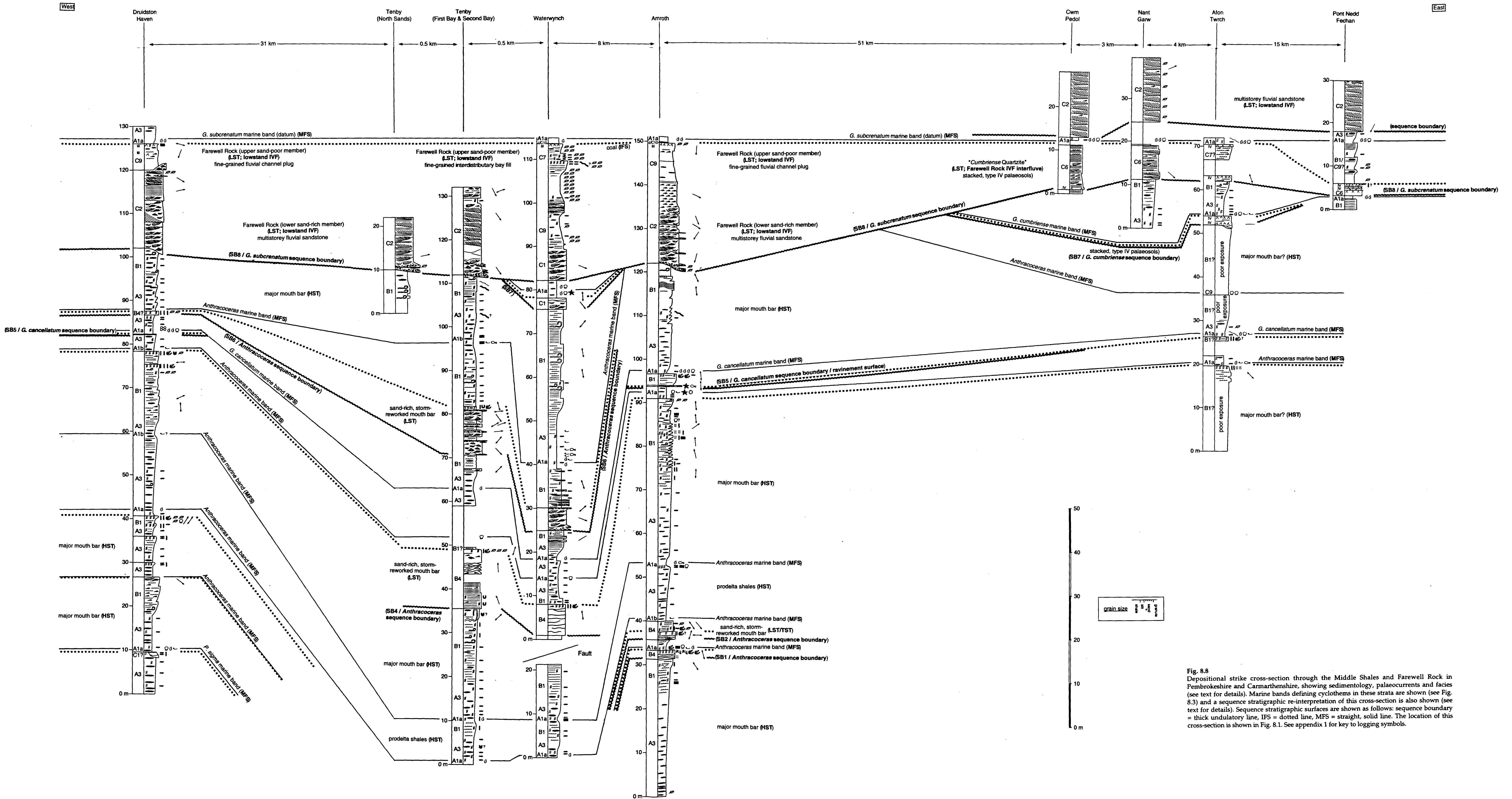


Fig. 7.8

Depositional dip cross-section through the Rough Rock Group in the Huddersfield sub-basin and Edale Gulf, Pennine Basin, showing sedimentology, palaeocurrents and facies (see text for details). Marine bands defining cyclothem in these strata are shown (see Figs. 7.3, 7.5) and a sequence stratigraphic re-interpretation of this cross-section is also shown (see text for details). Sequence stratigraphic surfaces are shown as follows: sequence boundary = thick undulatory line, IFS = dotted line, MFS = straight, solid line. The location of this cross-section is shown in Figs. 7.1 and 7.2. See appendix 1 for key to logging symbols.



8.8
positional strike cross-section through the Middle Shales and Farewell Rock in
bromeshire and Carmarthenshire, showing sedimentology, palaeocurrents and facies
text for details). Marine bands defining cyclothsems in these strata are shown (see Fig.
and a sequence stratigraphic re-interpretation of this cross-section is also shown (see
for details). Sequence stratigraphic surfaces are shown as follows: sequence boundary
ick undulatory line, IFS = dotted line, MFS = straight, solid line. The location of this
s-section is shown in Fig. 8.1. See appendix 1 for key to logging symbols.