

## Dolerite dyke, French Harbour, La Folie, St. Helier.

A new Board Walk is being built along the eastern wall of French Harbour, south of La Folie, St. Helier. The foundations of the supporting wall, the slipway and its surroundings were examined with R. Le Quesne (M.Sc). to determine the nature of the footings, the bedrock and the masonry rock types, during which, it is thought that a new dolerite dyke was found.

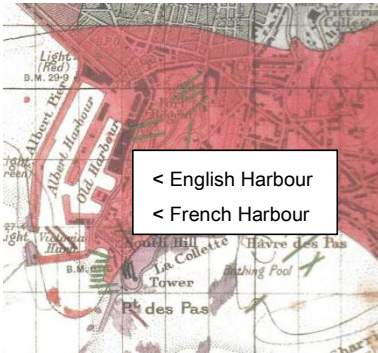


Fig. 1.

Sheet 2, Jersey (1982) (Figs. 1, 2); neither have any been found recorded in any publication.

The French and English harbours are on the eastern side of the Old Harbour (now St. Helier Harbour) and are separated by the small rectangle of granophyre/granite (red) of La Folie (Figs.1, 2).

Although various dykes are recorded to the south within the harbour area (Fig. 1), none is recorded at La Folie on the Ordnance (Geology) Survey map of Jersey (1934) or the IGS

Classical areas of British Geology

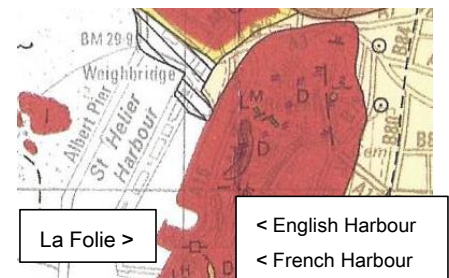


Fig. 2.



Fig. 3.

The granophyre/granite bedrock was examined at beach level, and the new dolerite dyke was found in the north - east corner wall of French Harbour. In section, the dyke strikes between N35° - 45°E, and is slightly curved, dipping between 85° to c. 315° in the lower half and at c. 76° to c.135° in the upper half. It varies in width from 12 - 14 cm wide in the lower half to 10 - 12 cm in the upper half (Figs. 3, 4) which is truncated by harbour wall masonry.

It is medium grey and fine - medium crystalline in most of the exposure, but is faintly brown and with selvages of a finer crystal size along some parts of the margins, formed during crystallisation against a colder country rock (Fig. 5).



Fig. 5.



Fig. 4.



Dissolution weathering has also caused the development of localised areas of small pits (**Fig. 6**).

**Fig. 6.**

The dyke exhibits well - defined joints across it at right angles to the margins. Basic magma may have been intruded during jointing and dilation of the granophyre/granite country rock and although joints with similar strikes occur in part, others may represent part of a conjugate set (**Fig. 7**).



**Fig. 7.**

It could not be followed along strike below the beach deposits south westwards into the Old Harbour or north eastwards under La Folie and into the English Harbour where any outcrops have been covered by harbour wall masonry.

The granophyre/granite cliff behind the Sea Cadet building, further NE along strike on the east side of Pier Road, was also examined but dykes or other minor intrusive structures could not be seen.

In summary, this basic dolerite dyke appears to belong to the NE - SW group of the Jersey Main Dyke Swarm in the SE Granite Complex (Lees, 1990, p. 275), having been intruded c. 550 Ma ago.

### **References.**

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- Bishop, A. C., Keen, D. H., Salmon, S. and Renouf, J. T. 2003.** Geology of Jersey, Channel Islands. Geologists' Association Guide No. 41.
- Lees, G. J. 1990.** The geochemical character of late Cadomian extensional magmatism in Jersey, Channel Islands, p. 273 - 291, in The Cadomian Orogeny, Geol. Soc. Spec. Publ. No. 51. (see D'Lemos et al. above).
- IGS Classical areas of British Geology Sheet 2, Jersey (1982).**
- Ordnance (Geology) Survey Map of Jersey (1934).**
- Photographs** were taken by R.A.H. Nichols, (Ph.D.) and R. Le Quesne (M.Sc.).

