



**ROUTE and ROUTE CLEARANCE SURVEYS**

**SHALLOW GEOLOGY, SHIP'S TRACK and SURVEY ROUTES**

Proposed cable route showing After Course (AC) position  
BAS route (R.P.L. post route survey - Issue 7)  
Route survey vessel track showing fix number and position  
Depth to base of surficial sediments in metres below seabed  
Gradiational sediment or feature boundary

**BATHYMETRIC and GEOLOGICAL PROFILE** (Profile refers to original survey route only)

Seabed  
Interface (inferred if dashed)  
Significant interface (inferred if dashed)

**BATHYMETRY, SEABED FEATURES and AS-LAID CABLE**

Bathymetric contours in metres below Lowest Astronomical Tide (LAT)  
Rock/void outcrops  
Rock/void exposures  
Telecommunications cable in service (position from France Telecom except where noted)  
Telecommunications cable out of service (position from France Telecom except where noted)  
Telecommunications cable, Cleared for TAT-14 with dump weight (DW) position indicated where deployed  
Telecommunications cable, Clearance for TAT-14 attempted but no cable recovered  
Telecommunications cable, Cleared for previous operations  
Orientation of sediment ribbon (with megapipies if available)  
Orientation of seabed crest (tick indicates direction of sediment transport), H=height in metres, W=waveheight in metres  
Gradiational sediment or feature boundary  
Approximate limit of side scan sonar coverage

Seabed gradient in degrees  
Seabed slope  
Prominent scarp (with description)  
Regional orientation of rock ridges  
Wreck with reference number, dimensions in metres where shown, H=height in metres where measurable  
Sonar contact with reference number, H=height in metres where measurable  
Seabed depression with diameter or dimensions in metres, D=depth in metres where measurable  
Magnetometer contact  
Exposed cable, position as found  
Buried cable, position as found  
Pipeline  
Power cable in service  
Route clearance track

**BURIAL ASSESSMENT SURVEY**

BAS Report km - based on post route survey position list Issue 10 (14/12/98) supplied by RRG  
SPF Shear pin failure with shear tension in tonnes where measurable

**TOW TENSION** - measured in tonnes and displayed at 10m intervals  
0.5m Fluke  
0.6m Fluke  
0.8m Fluke

**GRAVEL PENETRATION** - Measured in metres below seabed  
Shading indicates gravel penetration range. Grade of shading indicates proportion of penetration within the penetration range  
<50% 50% - 100% 100%

**BURIAL AND RISK CATEGORIES**

**BURIAL**

A Full depth burial to plough trench setting of 0.7m recommended. Grappling with 0.8m fluke possible.  
B(i) Plough trench setting 0.5m recommended. Seabed too strong for 0.8m grapnel, but possible with 0.6m.  
B(ii) Continuous and consistent burial expected.  
B(iii) Plough trench setting of 0.7m recommended but continuous full depth burial not expected. No cable exposure expected.  
B(iv) Plough trench setting of 0.5m recommended where variable seabed or this sediment will prevent consistent trench depth of 0.5m or greater. Sufficient sediment for continuous burial. Areas of high strength seabed are indicated.  
C Plough trench setting of 0.5m or 0.7m recommended but areas of cable exposure likely.  
Z Ploughing not recommended as burial impossible with standard plough due to exposed rock seabed or steep gradients.  
X No plough burial due to coarsening of in service cable or pipeline.  
U BAS data inadequate. Unable to provide a confident burial classification.

**RISK**

1 No damage to plough due to seabed likely  
2 Areas where damage to plough due to seabed is possible but is repairable on ship within 24 hours. No need to return to port  
3 Areas where excessive damage to plough due to seabed is possible and which requires a return to port

**CABLE INSTALLATION**

**AS-LAID CABLE**

As-Laid Cable showing After Course position  
Repeater  
Joint Box - factory splice  
Joint Box - vessel splice  
Equaliser  
Initial / Final Splice

Ducted cable  
Transition  
Plough Down / Plough Up (Limits of Burial)  
50 Water Depth  
Kilometre Post - Positions from Installation Vessel data files (direction as R.P.L.)

**CABLE BURIAL**

As-Laid Burial Profile  
Burial status of cable following completion of PLIB operations  
Suspension

**NOTES**

Navigation Control : DGPS  
Water Depths: The 'As-Laid' depths may differ from the bathymetry recorded during the route survey due to the use of different data acquisition systems.  
Installation Vessel: ex BOLD ENDEAVOUR Date: March-July 2000  
P.L.I.B. Vessel: mv TORBA CREST Date: April-July 2000

**GEODETTIC PARAMETERS and POSITIONING**

PROJECTION: UTM SPHEROID: International ED50 CENTRAL MERIDIAN 3° West  
Route Survey positioning: Multiple Reference Station Solution using: STARFIX Differential GPS ABERDEEN, H. HEMPSTEAD, HAARLEM, ROGALAND, SHANNON, TORSHAVN

**SCALE 1:10,000**  
(at original drawing size A0 - 1189mm x 841mm)  
200 0 200 400 600 800 1,000 metres

**LOCATION MAP**

Deutsche Telekom AG  
British Telecommunications plc  
France Telecom

KPN Telecom  
Sprint Communications Company Limited partnership  
MCI International, Inc.

**TAT-14 OPTICAL FIBRE SUBMARINE CABLE SYSTEM**

SEGMENT K1  
WGS84/ED50 DEMARKATION to BLAABJERG (DENMARK)  
**AS-LAID CABLE ROUTE**  
SHEET K-057  
KP 0767 to KP 0776

**KDD-SCS** **Global Marine**

Issue No. 1 Date Sept. 01 Cable as installed Produced by M.D. Ltd

Approved Date Sheet No. K-057