

T02071j1  
26 AUG 1993



**ITE** has administrative headquarters north and south, and the geographical distribution of its 250 staff in six Research Stations throughout Britain allows efficient use of resources for regional studies and provides an understanding of local ecological and land use characteristics.

**This report is an official document prepared under contract between the customer and the Natural Environment Research Council. It should not be quoted without the permission of both the Institute of Terrestrial Ecology and the customer.**

#### **ITE NORTH**

**Edinburgh Research Station**  
and ITE(N) Directorate  
Bush Estate  
Penicuik  
Midlothian EH26 0QB  
Tel: 031 445 4343; Telex 72579  
Fax: 031 445 3943

**Banchory Research Station**  
Hill of Brathens  
Glassel  
Banchory  
Kincardineshire AB31 4BY  
Tel: 033 02 3434  
Fax: 033 02 3303

**Merlewood Research Station**  
Grange-over-Sands  
Cumbria LA11 6JU  
Tel: 05395 32264; Telex 65102  
Fax: 05395 34705

#### **ITE SOUTH**

**Monks Wood**  
and ITE(S) Directorate  
Abbots Ripton  
Huntingdon  
Cambs PE17 2LS  
Tel: 048 73 381; Telex 32416  
Fax: 048 73 467

**Bangor Research Unit**  
University College of North Wales  
Deiniol Road  
Bangor  
Gwynedd LL57 2UP  
Tel: 0248 370045; Telex 61224  
Fax: 0248 355365

**Furzebrook Research Station**  
Wareham  
Dorset BH20 5AS  
Tel: 0929 551518  
Fax: 0929 551087

The ITE Research Marketing Officers for ITE North and South are based at Banchory and Monks Wood, respectively.

**INSTITUTE OF TERRESTRIAL ECOLOGY  
(NATURAL ENVIRONMENT RESEARCH COUNCIL)**

**Project No T02071j1**

**ITE Land Classification for the  
county of Avon**

**D C Howard and R G H Bunce**

**Merlewood Research Station  
Grange-over-Sands  
Cumbria LA11 6JU**

**August 1993**

## Land Use Research Group

### IITE Land Classification for Avon

The following table holds the land class of each square in Avon. The format of the table is easting (a three digit number), northing (a three digit number) and land class (one or two digits). The data is ordered by easting as primary key and northing as secondary.

The grid reference follows the Ordnance Survey National Grid, using the numeric convention (Harley 1975). Should a grid reference be held in the alpha-numeric format it can be converted into numeric by removing the two letters and modifying the digits. Avon occupies part of one 100 kilometre (km) square, ST. In terms of a 1 km grid, square ST starts with easting 300 and northing 100, respectively. Having removed the letters, the remaining digits can be split equally into two parts; the first part is the easting the second northing. The easting and northing equivalents are added to the digits to produce the final grid reference, eg ST1234 becomes 312 134 (ST is 300, 100 so 300+12 and 100+34). The six figure grid reference describes a complete 1 km square and on a large scale map (eg 1:50 000) it can be identified by reading the easting value off the horizontal axis and the northing off the vertical. The intersection of lines defines the south west (bottom left) corner of the square.

The IITE land Classification was produced in the late 1970's by multivariate analysis of a number of environmental factors (Bunce *et al.* 1981). It stratifies Great Britain into 32 different groups called land classes; every 1 km square in Great Britain has been allocated to it's land class. Three national surveys (the Countryside Surveys) have been performed to characterise the different land classes (Barr 1990), and the classification is being used to model the consequences of a variety of different changes (eg Bunce *et al.* 1992).

### References

Barr, C.J. (1990) Mapping the changing face of Britain. Geographic magazine October 1990.

Bunce, R.G.H., Barr, C.J. and Whittaker, H.A. (1981) Land Classes in Great Britain: preliminary description for users of the method of land classification. Merlewood Research and Development paper no. 86. Institute of Terrestrial Ecology; Grange-over-Sands.

Bunce, R.G.H., Howard, D.C., Hallam, C.J., Barr, C.J. and Benefield, C.B. (1992). The ecological consequences of land use change. Report to the Department of the Environment.

Harley, J.B. (1975) Ordnance Survey Maps: a descriptive manual. Ordnance Survey: Southampton.

| East | North | LC | East | North | LC | East | North | LC |
|------|-------|----|------|-------|----|------|-------|----|
| 322  | 160   | 7  | 336  | 161   | 5  | 340  | 165   | 5  |
| 323  | 160   | 7  | 336  | 162   | 5  | 340  | 166   | 5  |
| 330  | 162   | 7  | 336  | 163   | 5  | 340  | 167   | 1  |
| 331  | 156   | 8  | 336  | 164   | 5  | 340  | 168   | 5  |
| 331  | 157   | 7  | 336  | 165   | 5  | 340  | 169   | 1  |
| 331  | 158   | 8  | 336  | 166   | 8  | 340  | 170   | 5  |
| 331  | 159   | 8  | 336  | 167   | 8  | 340  | 171   | 7  |
| 331  | 160   | 8  | 337  | 155   | 5  | 340  | 172   | 7  |
| 331  | 161   | 8  | 337  | 156   | 5  | 340  | 173   | 7  |
| 331  | 162   | 8  | 337  | 157   | 6  | 341  | 156   | 5  |
| 331  | 166   | 1  | 337  | 158   | 5  | 341  | 157   | 5  |
| 332  | 156   | 5  | 337  | 159   | 5  | 341  | 158   | 5  |
| 332  | 157   | 5  | 337  | 160   | 5  | 341  | 159   | 5  |
| 332  | 158   | 5  | 337  | 161   | 5  | 341  | 160   | 5  |
| 332  | 159   | 5  | 337  | 162   | 5  | 341  | 161   | 5  |
| 332  | 160   | 5  | 337  | 163   | 5  | 341  | 162   | 5  |
| 332  | 161   | 5  | 337  | 164   | 5  | 341  | 163   | 5  |
| 332  | 162   | 8  | 337  | 165   | 8  | 341  | 164   | 5  |
| 332  | 163   | 8  | 337  | 166   | 7  | 341  | 165   | 5  |
| 332  | 165   | 8  | 337  | 167   | 8  | 341  | 166   | 5  |
| 332  | 166   | 7  | 337  | 168   | 8  | 341  | 167   | 1  |
| 333  | 157   | 5  | 338  | 157   | 5  | 341  | 168   | 5  |
| 333  | 158   | 5  | 338  | 158   | 1  | 341  | 169   | 5  |
| 333  | 159   | 5  | 338  | 159   | 5  | 341  | 170   | 5  |
| 333  | 160   | 5  | 338  | 160   | 5  | 341  | 171   | 5  |
| 333  | 161   | 5  | 338  | 161   | 5  | 341  | 172   | 5  |
| 333  | 162   | 6  | 338  | 162   | 5  | 341  | 173   | 7  |
| 333  | 163   | 8  | 338  | 163   | 5  | 342  | 156   | 5  |
| 333  | 164   | 8  | 338  | 164   | 5  | 342  | 157   | 5  |
| 333  | 165   | 8  | 338  | 165   | 7  | 342  | 159   | 5  |
| 333  | 166   | 7  | 338  | 166   | 5  | 342  | 160   | 5  |
| 334  | 156   | 5  | 338  | 167   | 5  | 342  | 161   | 5  |
| 334  | 157   | 5  | 338  | 168   | 8  | 342  | 162   | 5  |
| 334  | 158   | 5  | 338  | 169   | 8  | 342  | 163   | 5  |
| 334  | 159   | 5  | 338  | 170   | 7  | 342  | 164   | 5  |
| 334  | 160   | 5  | 339  | 156   | 5  | 342  | 165   | 5  |
| 334  | 161   | 5  | 339  | 157   | 5  | 342  | 166   | 5  |
| 334  | 162   | 6  | 339  | 158   | 1  | 342  | 167   | 1  |
| 334  | 163   | 5  | 339  | 159   | 5  | 342  | 168   | 1  |
| 334  | 164   | 5  | 339  | 160   | 5  | 342  | 169   | 1  |
| 334  | 165   | 5  | 339  | 161   | 5  | 342  | 170   | 1  |
| 334  | 166   | 7  | 339  | 162   | 5  | 342  | 171   | 1  |
| 334  | 167   | 8  | 339  | 163   | 5  | 342  | 172   | 5  |
| 335  | 156   | 5  | 339  | 164   | 5  | 342  | 173   | 5  |
| 335  | 157   | 6  | 339  | 165   | 5  | 342  | 174   | 8  |
| 335  | 158   | 5  | 339  | 166   | 1  | 343  | 156   | 5  |
| 335  | 159   | 5  | 339  | 167   | 5  | 343  | 157   | 5  |
| 335  | 160   | 5  | 339  | 168   | 1  | 343  | 159   | 5  |
| 335  | 161   | 5  | 339  | 169   | 1  | 343  | 160   | 5  |
| 335  | 162   | 5  | 339  | 170   | 7  | 343  | 161   | 5  |
| 335  | 163   | 5  | 339  | 171   | 7  | 343  | 162   | 5  |
| 335  | 164   | 5  | 340  | 156   | 5  | 343  | 163   | 5  |
| 335  | 165   | 5  | 340  | 157   | 5  | 343  | 164   | 5  |
| 335  | 166   | 8  | 340  | 158   | 5  | 343  | 165   | 5  |
| 336  | 155   | 5  | 340  | 159   | 5  | 343  | 166   | 5  |
| 336  | 156   | 6  | 340  | 160   | 5  | 343  | 167   | 5  |
| 336  | 157   | 6  | 340  | 161   | 5  | 343  | 168   | 4  |
| 336  | 158   | 5  | 340  | 162   | 5  | 343  | 169   | 1  |
| 336  | 159   | 5  | 340  | 163   | 5  | 343  | 170   | 5  |
| 336  | 160   | 5  | 340  | 164   | 5  | 343  | 171   | 5  |

| East | North | LC | East | North | LC | East | North | LC |
|------|-------|----|------|-------|----|------|-------|----|
| 343  | 172   | 1  | 347  | 159   | 5  | 350  | 158   | 5  |
| 343  | 173   | 5  | 347  | 160   | 5  | 350  | 159   | 5  |
| 343  | 174   | 8  | 347  | 161   | 5  | 350  | 160   | 5  |
| 343  | 175   | 7  | 347  | 162   | 5  | 350  | 161   | 5  |
| 344  | 156   | 5  | 347  | 163   | 5  | 350  | 162   | 5  |
| 344  | 159   | 5  | 347  | 164   | 5  | 350  | 163   | 5  |
| 344  | 160   | 5  | 347  | 165   | 5  | 350  | 164   | 5  |
| 344  | 161   | 5  | 347  | 166   | 5  | 350  | 165   | 6  |
| 344  | 162   | 5  | 347  | 167   | 5  | 350  | 166   | 1  |
| 344  | 163   | 5  | 347  | 168   | 5  | 350  | 167   | 1  |
| 344  | 164   | 5  | 347  | 169   | 5  | 350  | 168   | 5  |
| 344  | 165   | 5  | 347  | 170   | 1  | 350  | 169   | 5  |
| 344  | 166   | 1  | 347  | 171   | 5  | 350  | 170   | 5  |
| 344  | 167   | 1  | 347  | 172   | 1  | 350  | 171   | 5  |
| 344  | 168   | 1  | 347  | 173   | 1  | 350  | 172   | 5  |
| 344  | 169   | 1  | 347  | 174   | 5  | 350  | 173   | 5  |
| 344  | 170   | 4  | 347  | 175   | 5  | 350  | 174   | 5  |
| 344  | 171   | 5  | 347  | 176   | 5  | 350  | 175   | 1  |
| 344  | 172   | 1  | 347  | 177   | 7  | 350  | 176   | 1  |
| 344  | 173   | 5  | 348  | 158   | 5  | 350  | 177   | 8  |
| 344  | 174   | 5  | 348  | 159   | 5  | 350  | 178   | 8  |
| 344  | 175   | 8  | 348  | 160   | 5  | 350  | 179   | 8  |
| 344  | 176   | 7  | 348  | 161   | 5  | 351  | 158   | 5  |
| 345  | 159   | 5  | 348  | 162   | 5  | 351  | 159   | 5  |
| 345  | 160   | 5  | 348  | 163   | 5  | 351  | 160   | 5  |
| 345  | 161   | 5  | 348  | 164   | 5  | 351  | 161   | 5  |
| 345  | 162   | 5  | 348  | 165   | 5  | 351  | 162   | 5  |
| 345  | 163   | 5  | 348  | 166   | 5  | 351  | 163   | 1  |
| 345  | 164   | 5  | 348  | 167   | 5  | 351  | 164   | 1  |
| 345  | 165   | 5  | 348  | 168   | 5  | 351  | 165   | 1  |
| 345  | 166   | 5  | 348  | 169   | 5  | 351  | 166   | 1  |
| 345  | 167   | 5  | 348  | 170   | 5  | 351  | 167   | 1  |
| 345  | 168   | 1  | 348  | 171   | 5  | 351  | 168   | 5  |
| 345  | 169   | 1  | 348  | 172   | 1  | 351  | 169   | 5  |
| 345  | 170   | 2  | 348  | 173   | 1  | 351  | 170   | 5  |
| 345  | 171   | 5  | 348  | 174   | 1  | 351  | 171   | 5  |
| 345  | 172   | 1  | 348  | 175   | 5  | 351  | 172   | 1  |
| 345  | 173   | 5  | 348  | 176   | 1  | 351  | 173   | 1  |
| 345  | 174   | 5  | 348  | 177   | 7  | 351  | 174   | 5  |
| 345  | 175   | 1  | 349  | 158   | 5  | 351  | 175   | 5  |
| 345  | 176   | 8  | 349  | 159   | 5  | 351  | 176   | 8  |
| 346  | 159   | 5  | 349  | 160   | 5  | 351  | 177   | 8  |
| 346  | 160   | 5  | 349  | 161   | 5  | 351  | 178   | 4  |
| 346  | 161   | 5  | 349  | 162   | 5  | 351  | 179   | 8  |
| 346  | 162   | 5  | 349  | 163   | 5  | 351  | 180   | 8  |
| 346  | 163   | 5  | 349  | 164   | 1  | 352  | 157   | 5  |
| 346  | 164   | 5  | 349  | 165   | 1  | 352  | 158   | 5  |
| 346  | 165   | 5  | 349  | 166   | 5  | 352  | 159   | 5  |
| 346  | 166   | 5  | 349  | 167   | 5  | 352  | 160   | 5  |
| 346  | 167   | 5  | 349  | 168   | 5  | 352  | 161   | 5  |
| 346  | 168   | 5  | 349  | 169   | 5  | 352  | 162   | 1  |
| 346  | 169   | 1  | 349  | 170   | 5  | 352  | 163   | 5  |
| 346  | 170   | 1  | 349  | 171   | 5  | 352  | 164   | 1  |
| 346  | 171   | 5  | 349  | 172   | 5  | 352  | 165   | 1  |
| 346  | 172   | 1  | 349  | 173   | 1  | 352  | 166   | 1  |
| 346  | 173   | 1  | 349  | 174   | 1  | 352  | 167   | 5  |
| 346  | 174   | 5  | 349  | 175   | 1  | 352  | 168   | 5  |
| 346  | 175   | 5  | 349  | 176   | 4  | 352  | 169   | 5  |
| 346  | 176   | 8  | 349  | 177   | 7  | 352  | 170   | 5  |
| 346  | 177   | 7  | 349  | 178   | 8  | 352  | 171   | 5  |

| East | North | LC | East | North | LC | East | North | LC |
|------|-------|----|------|-------|----|------|-------|----|
| 352  | 172   | 1  | 354  | 174   | 5  | 356  | 166   | 2  |
| 352  | 173   | 5  | 354  | 175   | 8  | 356  | 167   | 5  |
| 352  | 174   | 5  | 354  | 176   | 8  | 356  | 168   | 5  |
| 352  | 175   | 8  | 354  | 177   | 5  | 356  | 169   | 5  |
| 352  | 176   | 8  | 354  | 178   | 1  | 356  | 170   | 5  |
| 352  | 177   | 5  | 354  | 179   | 1  | 356  | 171   | 5  |
| 352  | 178   | 5  | 354  | 180   | 4  | 356  | 172   | 8  |
| 352  | 179   | 4  | 354  | 181   | 4  | 356  | 173   | 8  |
| 352  | 180   | 8  | 354  | 182   | 4  | 356  | 174   | 8  |
| 352  | 181   | 8  | 354  | 183   | 4  | 356  | 175   | 5  |
| 352  | 182   | 8  | 354  | 184   | 1  | 356  | 176   | 5  |
| 352  | 186   | 1  | 354  | 185   | 8  | 356  | 177   | 5  |
| 353  | 157   | 5  | 354  | 186   | 7  | 356  | 178   | 5  |
| 353  | 158   | 5  | 355  | 155   | 5  | 356  | 179   | 5  |
| 353  | 159   | 5  | 355  | 156   | 5  | 356  | 180   | 5  |
| 353  | 160   | 5  | 355  | 157   | 5  | 356  | 181   | 1  |
| 353  | 161   | 5  | 355  | 158   | 5  | 356  | 182   | 4  |
| 353  | 162   | 5  | 355  | 159   | 5  | 356  | 183   | 4  |
| 353  | 163   | 1  | 355  | 160   | 5  | 356  | 184   | 4  |
| 353  | 164   | 1  | 355  | 161   | 5  | 356  | 185   | 4  |
| 353  | 165   | 1  | 355  | 162   | 5  | 356  | 186   | 4  |
| 353  | 166   | 1  | 355  | 163   | 5  | 356  | 187   | 4  |
| 353  | 167   | 1  | 355  | 164   | 5  | 356  | 188   | 8  |
| 353  | 168   | 5  | 355  | 165   | 6  | 356  | 189   | 7  |
| 353  | 169   | 5  | 355  | 166   | 2  | 356  | 190   | 4  |
| 353  | 170   | 5  | 355  | 167   | 5  | 357  | 154   | 5  |
| 353  | 171   | 1  | 355  | 168   | 5  | 357  | 155   | 5  |
| 353  | 172   | 1  | 355  | 169   | 5  | 357  | 156   | 5  |
| 353  | 173   | 5  | 355  | 170   | 5  | 357  | 157   | 5  |
| 353  | 174   | 5  | 355  | 171   | 5  | 357  | 158   | 5  |
| 353  | 175   | 8  | 355  | 172   | 5  | 357  | 159   | 1  |
| 353  | 176   | 8  | 355  | 173   | 5  | 357  | 160   | 1  |
| 353  | 177   | 5  | 355  | 174   | 8  | 357  | 161   | 1  |
| 353  | 178   | 4  | 355  | 175   | 8  | 357  | 162   | 5  |
| 353  | 179   | 4  | 355  | 176   | 5  | 357  | 163   | 5  |
| 353  | 180   | 1  | 355  | 177   | 5  | 357  | 164   | 5  |
| 353  | 181   | 4  | 355  | 178   | 5  | 357  | 165   | 6  |
| 353  | 182   | 8  | 355  | 179   | 1  | 357  | 166   | 2  |
| 353  | 183   | 8  | 355  | 180   | 1  | 357  | 167   | 5  |
| 353  | 184   | 7  | 355  | 181   | 4  | 357  | 168   | 5  |
| 353  | 185   | 8  | 355  | 182   | 4  | 357  | 169   | 5  |
| 353  | 186   | 1  | 355  | 183   | 4  | 357  | 170   | 5  |
| 354  | 156   | 5  | 355  | 184   | 4  | 357  | 171   | 5  |
| 354  | 157   | 5  | 355  | 185   | 4  | 357  | 172   | 8  |
| 354  | 158   | 5  | 355  | 186   | 1  | 357  | 173   | 5  |
| 354  | 159   | 5  | 355  | 187   | 8  | 357  | 174   | 5  |
| 354  | 160   | 5  | 355  | 188   | 8  | 357  | 175   | 5  |
| 354  | 161   | 5  | 355  | 190   | 7  | 357  | 176   | 5  |
| 354  | 162   | 5  | 356  | 154   | 5  | 357  | 177   | 5  |
| 354  | 163   | 1  | 356  | 155   | 5  | 357  | 178   | 5  |
| 354  | 164   | 5  | 356  | 156   | 5  | 357  | 179   | 5  |
| 354  | 165   | 5  | 356  | 157   | 5  | 357  | 180   | 5  |
| 354  | 166   | 2  | 356  | 158   | 5  | 357  | 181   | 1  |
| 354  | 167   | 1  | 356  | 159   | 1  | 357  | 182   | 5  |
| 354  | 168   | 5  | 356  | 160   | 1  | 357  | 183   | 5  |
| 354  | 169   | 5  | 356  | 161   | 5  | 357  | 184   | 4  |
| 354  | 170   | 5  | 356  | 162   | 5  | 357  | 185   | 4  |
| 354  | 171   | 5  | 356  | 163   | 5  | 357  | 186   | 4  |
| 354  | 172   | 5  | 356  | 164   | 5  | 357  | 187   | 4  |
| 354  | 173   | 5  | 356  | 165   | 6  | 357  | 188   | 1  |

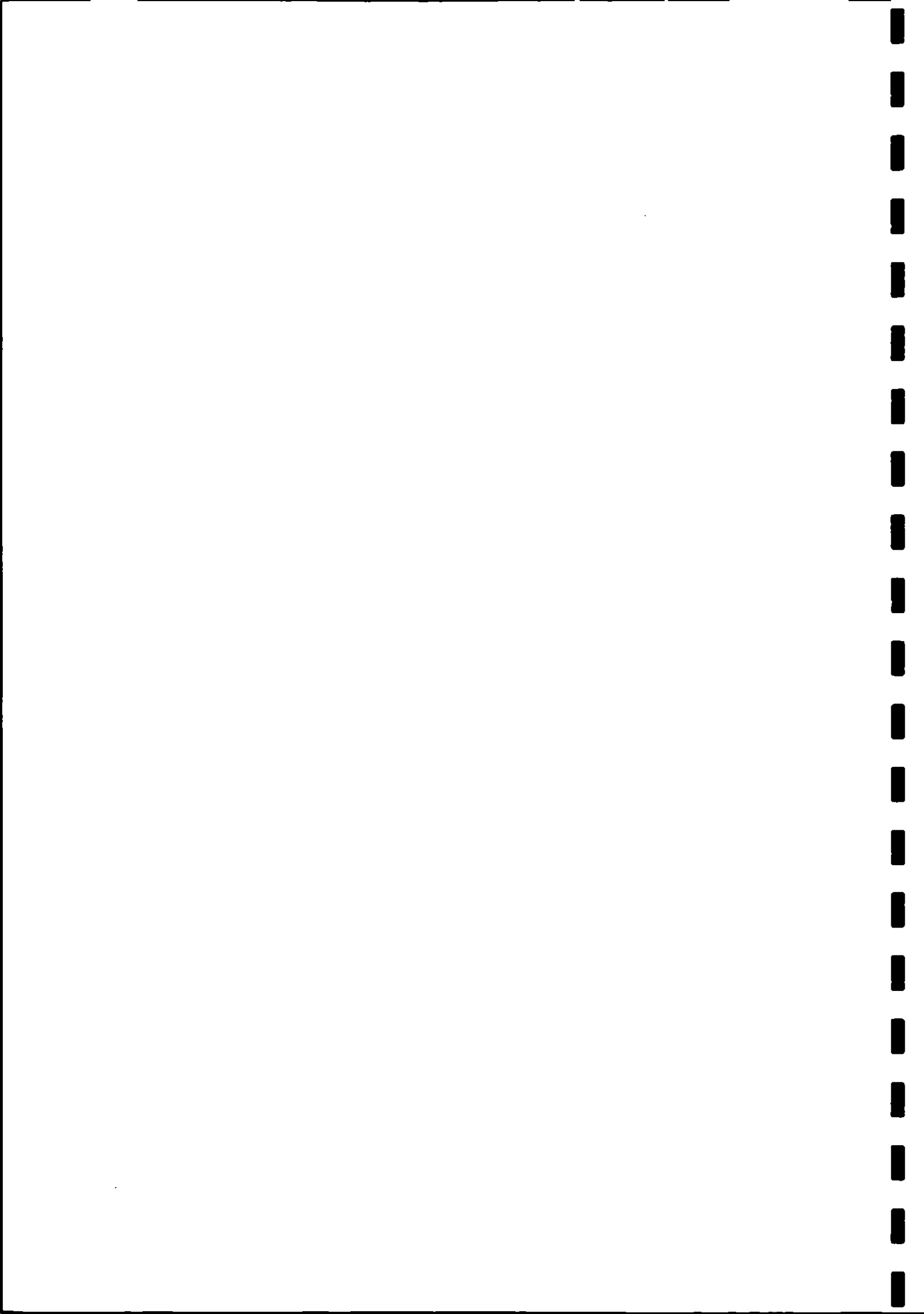
| East | North | LC | East | North | LC | East | North | LC |
|------|-------|----|------|-------|----|------|-------|----|
| 357  | 189   | 8  | 359  | 176   | 5  | 360  | 196   | 4  |
| 357  | 190   | 8  | 359  | 177   | 5  | 361  | 156   | 5  |
| 358  | 155   | 5  | 359  | 178   | 5  | 361  | 157   | 5  |
| 358  | 156   | 5  | 359  | 179   | 5  | 361  | 158   | 5  |
| 358  | 157   | 5  | 359  | 180   | 1  | 361  | 159   | 5  |
| 358  | 158   | 5  | 359  | 181   | 5  | 361  | 160   | 1  |
| 358  | 159   | 5  | 359  | 182   | 5  | 361  | 161   | 5  |
| 358  | 160   | 5  | 359  | 183   | 1  | 361  | 162   | 5  |
| 358  | 161   | 5  | 359  | 184   | 1  | 361  | 163   | 5  |
| 358  | 162   | 5  | 359  | 185   | 4  | 361  | 164   | 5  |
| 358  | 163   | 5  | 359  | 186   | 4  | 361  | 165   | 5  |
| 358  | 164   | 5  | 359  | 187   | 1  | 361  | 166   | 1  |
| 358  | 165   | 6  | 359  | 188   | 1  | 361  | 167   | 5  |
| 358  | 166   | 2  | 359  | 189   | 1  | 361  | 168   | 5  |
| 358  | 167   | 5  | 359  | 190   | 4  | 361  | 169   | 5  |
| 358  | 168   | 5  | 359  | 191   | 8  | 361  | 170   | 5  |
| 358  | 169   | 5  | 359  | 192   | 8  | 361  | 171   | 8  |
| 358  | 170   | 5  | 359  | 194   | 4  | 361  | 172   | 8  |
| 358  | 171   | 5  | 359  | 195   | 4  | 361  | 173   | 5  |
| 358  | 172   | 8  | 360  | 155   | 5  | 361  | 174   | 5  |
| 358  | 173   | 5  | 360  | 156   | 5  | 361  | 175   | 5  |
| 358  | 174   | 5  | 360  | 157   | 5  | 361  | 176   | 5  |
| 358  | 175   | 5  | 360  | 158   | 5  | 361  | 177   | 5  |
| 358  | 176   | 5  | 360  | 159   | 5  | 361  | 178   | 5  |
| 358  | 177   | 5  | 360  | 160   | 5  | 361  | 179   | 5  |
| 358  | 178   | 5  | 360  | 161   | 5  | 361  | 180   | 5  |
| 358  | 179   | 5  | 360  | 162   | 5  | 361  | 181   | 5  |
| 358  | 180   | 1  | 360  | 163   | 5  | 361  | 182   | 5  |
| 358  | 181   | 5  | 360  | 164   | 5  | 361  | 183   | 1  |
| 358  | 182   | 5  | 360  | 165   | 1  | 361  | 184   | 1  |
| 358  | 183   | 5  | 360  | 166   | 5  | 361  | 185   | 1  |
| 358  | 184   | 4  | 360  | 167   | 5  | 361  | 186   | 5  |
| 358  | 185   | 4  | 360  | 168   | 5  | 361  | 187   | 1  |
| 358  | 186   | 4  | 360  | 169   | 5  | 361  | 188   | 1  |
| 358  | 187   | 1  | 360  | 170   | 5  | 361  | 189   | 1  |
| 358  | 188   | 1  | 360  | 171   | 8  | 361  | 190   | 1  |
| 358  | 189   | 1  | 360  | 172   | 8  | 361  | 191   | 1  |
| 358  | 190   | 8  | 360  | 173   | 5  | 361  | 192   | 4  |
| 358  | 191   | 7  | 360  | 174   | 5  | 361  | 193   | 4  |
| 359  | 155   | 1  | 360  | 175   | 5  | 361  | 194   | 4  |
| 359  | 156   | 5  | 360  | 176   | 5  | 361  | 195   | 8  |
| 359  | 157   | 5  | 360  | 177   | 5  | 361  | 196   | 7  |
| 359  | 158   | 1  | 360  | 178   | 5  | 362  | 155   | 5  |
| 359  | 159   | 5  | 360  | 179   | 5  | 362  | 156   | 5  |
| 359  | 160   | 5  | 360  | 180   | 5  | 362  | 157   | 5  |
| 359  | 161   | 5  | 360  | 181   | 5  | 362  | 158   | 5  |
| 359  | 162   | 5  | 360  | 182   | 5  | 362  | 159   | 6  |
| 359  | 163   | 5  | 360  | 183   | 5  | 362  | 160   | 1  |
| 359  | 164   | 5  | 360  | 184   | 5  | 362  | 161   | 5  |
| 359  | 165   | 6  | 360  | 185   | 1  | 362  | 162   | 5  |
| 359  | 166   | 2  | 360  | 186   | 1  | 362  | 163   | 5  |
| 359  | 167   | 5  | 360  | 187   | 1  | 362  | 164   | 5  |
| 359  | 168   | 5  | 360  | 188   | 1  | 362  | 165   | 1  |
| 359  | 169   | 5  | 360  | 189   | 1  | 362  | 166   | 1  |
| 359  | 170   | 5  | 360  | 190   | 1  | 362  | 167   | 5  |
| 359  | 171   | 8  | 360  | 191   | 4  | 362  | 168   | 5  |
| 359  | 172   | 8  | 360  | 192   | 4  | 362  | 169   | 5  |
| 359  | 173   | 8  | 360  | 193   | 8  | 362  | 170   | 5  |
| 359  | 174   | 5  | 360  | 194   | 8  | 362  | 171   | 5  |
| 359  | 175   | 5  | 360  | 195   | 7  | 362  | 172   | 5  |

| East | North | LC | East | North | LC | East | North | LC |
|------|-------|----|------|-------|----|------|-------|----|
| 362  | 173   | 5  | 363  | 190   | 1  | 365  | 164   | 5  |
| 362  | 174   | 5  | 363  | 191   | 1  | 365  | 165   | 5  |
| 362  | 175   | 6  | 363  | 192   | 4  | 365  | 166   | 5  |
| 362  | 176   | 5  | 363  | 193   | 4  | 365  | 167   | 5  |
| 362  | 177   | 1  | 363  | 194   | 4  | 365  | 168   | 5  |
| 362  | 178   | 1  | 363  | 195   | 4  | 365  | 169   | 5  |
| 362  | 179   | 1  | 363  | 196   | 4  | 365  | 170   | 5  |
| 362  | 180   | 1  | 364  | 155   | 5  | 365  | 171   | 5  |
| 362  | 181   | 5  | 364  | 156   | 5  | 365  | 172   | 5  |
| 362  | 182   | 5  | 364  | 157   | 5  | 365  | 173   | 6  |
| 362  | 183   | 5  | 364  | 158   | 5  | 365  | 174   | 6  |
| 362  | 184   | 1  | 364  | 159   | 1  | 365  | 175   | 6  |
| 362  | 185   | 1  | 364  | 160   | 5  | 365  | 176   | 6  |
| 362  | 186   | 5  | 364  | 161   | 5  | 365  | 177   | 6  |
| 362  | 187   | 1  | 364  | 162   | 5  | 365  | 178   | 1  |
| 362  | 188   | 1  | 364  | 163   | 5  | 365  | 179   | 1  |
| 362  | 189   | 1  | 364  | 164   | 5  | 365  | 180   | 1  |
| 362  | 190   | 1  | 364  | 165   | 5  | 365  | 181   | 1  |
| 362  | 191   | 1  | 364  | 166   | 1  | 365  | 182   | 1  |
| 362  | 192   | 1  | 364  | 167   | 5  | 365  | 183   | 1  |
| 362  | 193   | 1  | 364  | 168   | 5  | 365  | 184   | 1  |
| 362  | 194   | 4  | 364  | 169   | 5  | 365  | 185   | 1  |
| 362  | 195   | 4  | 364  | 170   | 5  | 365  | 186   | 1  |
| 362  | 196   | 8  | 364  | 171   | 5  | 365  | 187   | 1  |
| 362  | 197   | 7  | 364  | 172   | 6  | 365  | 188   | 1  |
| 363  | 155   | 5  | 364  | 173   | 6  | 365  | 189   | 1  |
| 363  | 156   | 5  | 364  | 174   | 6  | 365  | 190   | 1  |
| 363  | 157   | 5  | 364  | 175   | 6  | 365  | 191   | 1  |
| 363  | 158   | 6  | 364  | 176   | 6  | 365  | 192   | 1  |
| 363  | 159   | 1  | 364  | 177   | 5  | 365  | 193   | 4  |
| 363  | 160   | 5  | 364  | 178   | 5  | 365  | 194   | 1  |
| 363  | 161   | 5  | 364  | 179   | 5  | 365  | 195   | 1  |
| 363  | 162   | 5  | 364  | 180   | 1  | 366  | 153   | 5  |
| 363  | 163   | 5  | 364  | 181   | 1  | 366  | 154   | 5  |
| 363  | 164   | 5  | 364  | 182   | 5  | 366  | 155   | 5  |
| 363  | 165   | 1  | 364  | 183   | 1  | 366  | 156   | 1  |
| 363  | 166   | 1  | 364  | 184   | 1  | 366  | 157   | 5  |
| 363  | 167   | 5  | 364  | 185   | 1  | 366  | 158   | 5  |
| 363  | 168   | 5  | 364  | 186   | 1  | 366  | 159   | 1  |
| 363  | 169   | 1  | 364  | 187   | 1  | 366  | 160   | 5  |
| 363  | 170   | 5  | 364  | 188   | 1  | 366  | 161   | 5  |
| 363  | 171   | 5  | 364  | 189   | 1  | 366  | 162   | 5  |
| 363  | 172   | 5  | 364  | 190   | 1  | 366  | 163   | 1  |
| 363  | 173   | 6  | 364  | 191   | 1  | 366  | 164   | 5  |
| 363  | 174   | 6  | 364  | 192   | 1  | 366  | 165   | 1  |
| 363  | 175   | 6  | 364  | 193   | 4  | 366  | 166   | 1  |
| 363  | 176   | 5  | 364  | 194   | 4  | 366  | 167   | 5  |
| 363  | 177   | 5  | 364  | 195   | 4  | 366  | 168   | 5  |
| 363  | 178   | 1  | 364  | 196   | 4  | 366  | 169   | 5  |
| 363  | 179   | 1  | 365  | 153   | 5  | 366  | 170   | 5  |
| 363  | 180   | 5  | 365  | 154   | 5  | 366  | 171   | 5  |
| 363  | 181   | 5  | 365  | 155   | 5  | 366  | 172   | 5  |
| 363  | 182   | 1  | 365  | 156   | 5  | 366  | 173   | 5  |
| 363  | 183   | 5  | 365  | 157   | 5  | 366  | 174   | 1  |
| 363  | 184   | 1  | 365  | 158   | 5  | 366  | 175   | 1  |
| 363  | 185   | 1  | 365  | 159   | 5  | 366  | 176   | 5  |
| 363  | 186   | 1  | 365  | 160   | 5  | 366  | 177   | 1  |
| 363  | 187   | 1  | 365  | 161   | 5  | 366  | 178   | 5  |
| 363  | 188   | 1  | 365  | 162   | 5  | 366  | 179   | 1  |
| 363  | 189   | 5  | 365  | 163   | 5  | 366  | 180   | 1  |

| East | North | LC | East | North | LC | East | North | LC |
|------|-------|----|------|-------|----|------|-------|----|
| 366  | 181   | 1  | 368  | 158   | 6  | 369  | 177   | 1  |
| 366  | 182   | 5  | 368  | 159   | 5  | 369  | 178   | 1  |
| 366  | 183   | 5  | 368  | 160   | 5  | 369  | 179   | 1  |
| 366  | 184   | 5  | 368  | 161   | 5  | 369  | 180   | 1  |
| 366  | 185   | 1  | 368  | 162   | 5  | 369  | 181   | 1  |
| 366  | 186   | 1  | 368  | 163   | 5  | 369  | 182   | 5  |
| 366  | 187   | 1  | 368  | 164   | 5  | 369  | 183   | 1  |
| 366  | 188   | 1  | 368  | 165   | 5  | 369  | 184   | 1  |
| 366  | 189   | 1  | 368  | 166   | 5  | 369  | 185   | 1  |
| 366  | 190   | 1  | 368  | 167   | 5  | 369  | 186   | 1  |
| 366  | 191   | 1  | 368  | 168   | 5  | 369  | 187   | 5  |
| 366  | 192   | 1  | 368  | 169   | 5  | 369  | 188   | 1  |
| 366  | 193   | 1  | 368  | 170   | 5  | 369  | 189   | 1  |
| 366  | 194   | 1  | 368  | 171   | 5  | 369  | 190   | 1  |
| 367  | 153   | 5  | 368  | 172   | 1  | 369  | 191   | 1  |
| 367  | 154   | 5  | 368  | 173   | 5  | 369  | 192   | 1  |
| 367  | 155   | 1  | 368  | 174   | 5  | 369  | 193   | 3  |
| 367  | 156   | 2  | 368  | 175   | 1  | 369  | 194   | 3  |
| 367  | 157   | 5  | 368  | 176   | 1  | 370  | 154   | 2  |
| 367  | 158   | 5  | 368  | 177   | 1  | 370  | 155   | 1  |
| 367  | 159   | 5  | 368  | 178   | 5  | 370  | 156   | 2  |
| 367  | 160   | 1  | 368  | 179   | 1  | 370  | 157   | 6  |
| 367  | 161   | 5  | 368  | 180   | 1  | 370  | 158   | 5  |
| 367  | 162   | 5  | 368  | 181   | 1  | 370  | 159   | 6  |
| 367  | 163   | 1  | 368  | 182   | 5  | 370  | 160   | 6  |
| 367  | 164   | 5  | 368  | 183   | 1  | 370  | 161   | 6  |
| 367  | 165   | 1  | 368  | 184   | 1  | 370  | 162   | 5  |
| 367  | 166   | 1  | 368  | 185   | 1  | 370  | 163   | 5  |
| 367  | 167   | 5  | 368  | 186   | 1  | 370  | 164   | 1  |
| 367  | 168   | 5  | 368  | 187   | 1  | 370  | 165   | 5  |
| 367  | 169   | 5  | 368  | 188   | 1  | 370  | 166   | 5  |
| 367  | 170   | 5  | 368  | 189   | 1  | 370  | 167   | 5  |
| 367  | 171   | 5  | 368  | 190   | 1  | 370  | 168   | 5  |
| 367  | 172   | 5  | 368  | 191   | 1  | 370  | 169   | 5  |
| 367  | 173   | 5  | 368  | 192   | 3  | 370  | 170   | 5  |
| 367  | 174   | 5  | 368  | 193   | 3  | 370  | 171   | 5  |
| 367  | 175   | 5  | 368  | 194   | 3  | 370  | 172   | 5  |
| 367  | 176   | 1  | 369  | 154   | 5  | 370  | 173   | 1  |
| 367  | 177   | 1  | 369  | 155   | 5  | 370  | 174   | 1  |
| 367  | 178   | 5  | 369  | 156   | 2  | 370  | 175   | 1  |
| 367  | 179   | 1  | 369  | 157   | 2  | 370  | 176   | 1  |
| 367  | 180   | 1  | 369  | 158   | 5  | 370  | 177   | 1  |
| 367  | 181   | 1  | 369  | 159   | 6  | 370  | 178   | 1  |
| 367  | 182   | 1  | 369  | 160   | 5  | 370  | 179   | 1  |
| 367  | 183   | 5  | 369  | 161   | 5  | 370  | 180   | 1  |
| 367  | 184   | 1  | 369  | 162   | 1  | 370  | 181   | 1  |
| 367  | 185   | 1  | 369  | 163   | 5  | 370  | 182   | 5  |
| 367  | 186   | 1  | 369  | 164   | 5  | 370  | 183   | 5  |
| 367  | 187   | 1  | 369  | 165   | 5  | 370  | 184   | 1  |
| 367  | 188   | 1  | 369  | 166   | 5  | 370  | 185   | 1  |
| 367  | 189   | 1  | 369  | 167   | 5  | 370  | 186   | 1  |
| 367  | 190   | 1  | 369  | 168   | 5  | 370  | 187   | 1  |
| 367  | 191   | 5  | 369  | 169   | 5  | 370  | 188   | 1  |
| 367  | 192   | 1  | 369  | 170   | 5  | 370  | 189   | 1  |
| 367  | 193   | 1  | 369  | 171   | 5  | 370  | 190   | 1  |
| 368  | 153   | 1  | 369  | 172   | 5  | 370  | 191   | 1  |
| 368  | 154   | 5  | 369  | 173   | 1  | 370  | 192   | 1  |
| 368  | 155   | 6  | 369  | 174   | 1  | 370  | 193   | 3  |
| 368  | 156   | 2  | 369  | 175   | 1  | 371  | 156   | 2  |
| 368  | 157   | 5  | 369  | 176   | 5  | 371  | 157   | 2  |

| East | North | LC | East | North | LC | East | North | LC |
|------|-------|----|------|-------|----|------|-------|----|
| 371  | 158   | 2  | 372  | 180   | 1  | 374  | 169   | 6  |
| 371  | 159   | 6  | 372  | 181   | 5  | 374  | 170   | 2  |
| 371  | 160   | 6  | 372  | 182   | 5  | 374  | 171   | 2  |
| 371  | 161   | 2  | 372  | 183   | 1  | 374  | 172   | 2  |
| 371  | 162   | 6  | 372  | 184   | 1  | 374  | 173   | 2  |
| 371  | 163   | 5  | 372  | 185   | 1  | 374  | 174   | 6  |
| 371  | 164   | 5  | 372  | 186   | 1  | 374  | 175   | 2  |
| 371  | 165   | 5  | 372  | 187   | 1  | 374  | 176   | 2  |
| 371  | 166   | 5  | 372  | 188   | 5  | 374  | 177   | 2  |
| 371  | 167   | 5  | 372  | 189   | 1  | 374  | 178   | 1  |
| 371  | 168   | 5  | 372  | 190   | 1  | 374  | 179   | 1  |
| 371  | 169   | 5  | 372  | 191   | 1  | 374  | 180   | 1  |
| 371  | 170   | 1  | 372  | 192   | 1  | 374  | 181   | 5  |
| 371  | 171   | 5  | 372  | 193   | 1  | 374  | 182   | 1  |
| 371  | 172   | 5  | 373  | 156   | 6  | 374  | 183   | 1  |
| 371  | 173   | 5  | 373  | 157   | 6  | 374  | 184   | 1  |
| 371  | 174   | 5  | 373  | 158   | 2  | 374  | 185   | 1  |
| 371  | 175   | 1  | 373  | 159   | 6  | 374  | 186   | 1  |
| 371  | 176   | 1  | 373  | 160   | 2  | 374  | 187   | 5  |
| 371  | 177   | 1  | 373  | 161   | 2  | 374  | 188   | 1  |
| 371  | 178   | 1  | 373  | 162   | 2  | 375  | 156   | 2  |
| 371  | 179   | 1  | 373  | 163   | 5  | 375  | 157   | 2  |
| 371  | 180   | 5  | 373  | 164   | 5  | 375  | 158   | 2  |
| 371  | 181   | 5  | 373  | 165   | 5  | 375  | 159   | 2  |
| 371  | 182   | 6  | 373  | 166   | 5  | 375  | 160   | 2  |
| 371  | 183   | 1  | 373  | 167   | 1  | 375  | 161   | 6  |
| 371  | 184   | 1  | 373  | 168   | 1  | 375  | 162   | 6  |
| 371  | 185   | 1  | 373  | 169   | 5  | 375  | 163   | 5  |
| 371  | 186   | 1  | 373  | 170   | 5  | 375  | 164   | 5  |
| 371  | 187   | 1  | 373  | 171   | 6  | 375  | 165   | 5  |
| 371  | 188   | 1  | 373  | 172   | 2  | 375  | 166   | 5  |
| 371  | 189   | 1  | 373  | 173   | 2  | 375  | 167   | 1  |
| 371  | 190   | 1  | 373  | 174   | 6  | 375  | 168   | 6  |
| 371  | 191   | 1  | 373  | 175   | 1  | 375  | 169   | 2  |
| 371  | 192   | 1  | 373  | 176   | 1  | 375  | 170   | 1  |
| 371  | 193   | 1  | 373  | 177   | 5  | 375  | 171   | 1  |
| 372  | 156   | 5  | 373  | 178   | 5  | 375  | 172   | 2  |
| 372  | 157   | 2  | 373  | 179   | 5  | 375  | 173   | 2  |
| 372  | 158   | 2  | 373  | 180   | 1  | 375  | 174   | 2  |
| 372  | 159   | 6  | 373  | 181   | 5  | 375  | 175   | 2  |
| 372  | 160   | 2  | 373  | 182   | 5  | 375  | 176   | 2  |
| 372  | 161   | 6  | 373  | 183   | 1  | 375  | 177   | 2  |
| 372  | 162   | 6  | 373  | 184   | 1  | 375  | 178   | 2  |
| 372  | 163   | 5  | 373  | 185   | 1  | 375  | 179   | 1  |
| 372  | 164   | 5  | 373  | 186   | 1  | 375  | 180   | 1  |
| 372  | 165   | 5  | 373  | 187   | 5  | 375  | 181   | 1  |
| 372  | 166   | 5  | 373  | 188   | 1  | 375  | 182   | 1  |
| 372  | 167   | 5  | 374  | 156   | 2  | 375  | 183   | 1  |
| 372  | 168   | 1  | 374  | 157   | 2  | 375  | 184   | 1  |
| 372  | 169   | 1  | 374  | 158   | 2  | 375  | 185   | 1  |
| 372  | 170   | 1  | 374  | 159   | 2  | 375  | 186   | 1  |
| 372  | 171   | 6  | 374  | 160   | 2  | 375  | 187   | 1  |
| 372  | 172   | 1  | 374  | 161   | 6  | 375  | 188   | 1  |
| 372  | 173   | 5  | 374  | 162   | 6  | 375  | 189   | 1  |
| 372  | 174   | 5  | 374  | 163   | 5  | 376  | 157   | 2  |
| 372  | 175   | 5  | 374  | 164   | 5  | 376  | 158   | 2  |
| 372  | 176   | 5  | 374  | 165   | 5  | 376  | 159   | 6  |
| 372  | 177   | 5  | 374  | 166   | 15 | 376  | 160   | 2  |
| 372  | 178   | 1  | 374  | 167   | 1  | 376  | 161   | 6  |
| 372  | 179   | 1  | 374  | 168   | 5  | 376  | 162   | 2  |

| East | North | LC | East | North | LC | East | North | LC |
|------|-------|----|------|-------|----|------|-------|----|
| 376  | 163   | 2  | 378  | 163   | 5  | 380  | 184   | 2  |
| 376  | 164   | 2  | 378  | 164   | 6  | 380  | 185   | 2  |
| 376  | 165   | 5  | 378  | 165   | 5  | 380  | 186   | 2  |
| 376  | 166   | 5  | 378  | 166   | 1  | 380  | 190   | 2  |
| 376  | 167   | 6  | 378  | 167   | 6  | 380  | 191   | 2  |
| 376  | 168   | 6  | 378  | 168   | 2  | 381  | 180   | 2  |
| 376  | 169   | 6  | 378  | 169   | 6  | 381  | 181   | 1  |
| 376  | 170   | 1  | 378  | 170   | 2  | 381  | 182   | 2  |
| 376  | 171   | 6  | 378  | 171   | 2  | 381  | 183   | 6  |
| 376  | 172   | 2  | 378  | 172   | 2  | 381  | 184   | 2  |
| 376  | 173   | 6  | 378  | 173   | 2  | 381  | 185   | 2  |
| 376  | 174   | 2  | 378  | 174   | 2  |      |       |    |
| 376  | 175   | 2  | 378  | 175   | 2  |      |       |    |
| 376  | 176   | 2  | 378  | 176   | 2  |      |       |    |
| 376  | 177   | 2  | 378  | 178   | 2  |      |       |    |
| 376  | 178   | 2  | 378  | 179   | 2  |      |       |    |
| 376  | 179   | 2  | 378  | 180   | 2  |      |       |    |
| 376  | 180   | 2  | 378  | 181   | 2  |      |       |    |
| 376  | 181   | 2  | 378  | 182   | 2  |      |       |    |
| 376  | 182   | 2  | 378  | 183   | 2  |      |       |    |
| 376  | 183   | 1  | 378  | 184   | 2  |      |       |    |
| 376  | 184   | 1  | 378  | 185   | 2  |      |       |    |
| 376  | 185   | 1  | 378  | 186   | 2  |      |       |    |
| 376  | 186   | 1  | 378  | 187   | 2  |      |       |    |
| 376  | 187   | 1  | 378  | 188   | 1  |      |       |    |
| 376  | 188   | 1  | 378  | 189   | 2  |      |       |    |
| 376  | 189   | 1  | 378  | 191   | 2  |      |       |    |
| 376  | 190   | 1  | 379  | 158   | 2  |      |       |    |
| 377  | 157   | 6  | 379  | 163   | 2  |      |       |    |
| 377  | 158   | 2  | 379  | 164   | 6  |      |       |    |
| 377  | 159   | 2  | 379  | 166   | 2  |      |       |    |
| 377  | 160   | 6  | 379  | 167   | 5  |      |       |    |
| 377  | 162   | 2  | 379  | 168   | 2  |      |       |    |
| 377  | 163   | 2  | 379  | 169   | 2  |      |       |    |
| 377  | 164   | 2  | 379  | 170   | 2  |      |       |    |
| 377  | 165   | 5  | 379  | 171   | 2  |      |       |    |
| 377  | 166   | 5  | 379  | 172   | 2  |      |       |    |
| 377  | 167   | 5  | 379  | 173   | 6  |      |       |    |
| 377  | 168   | 5  | 379  | 174   | 2  |      |       |    |
| 377  | 169   | 1  | 379  | 175   | 2  |      |       |    |
| 377  | 170   | 1  | 379  | 176   | 2  |      |       |    |
| 377  | 171   | 2  | 379  | 179   | 2  |      |       |    |
| 377  | 172   | 2  | 379  | 180   | 2  |      |       |    |
| 377  | 173   | 2  | 379  | 181   | 1  |      |       |    |
| 377  | 174   | 2  | 379  | 182   | 2  |      |       |    |
| 377  | 175   | 2  | 379  | 183   | 2  |      |       |    |
| 377  | 178   | 2  | 379  | 184   | 2  |      |       |    |
| 377  | 179   | 2  | 379  | 185   | 2  |      |       |    |
| 377  | 180   | 2  | 379  | 186   | 2  |      |       |    |
| 377  | 181   | 2  | 379  | 187   | 2  |      |       |    |
| 377  | 182   | 2  | 379  | 188   | 2  |      |       |    |
| 377  | 183   | 2  | 379  | 189   | 2  |      |       |    |
| 377  | 184   | 2  | 379  | 190   | 2  |      |       |    |
| 377  | 185   | 2  | 379  | 191   | 2  |      |       |    |
| 377  | 186   | 2  | 379  | 192   | 1  |      |       |    |
| 377  | 187   | 2  | 380  | 168   | 5  |      |       |    |
| 377  | 188   | 1  | 380  | 180   | 2  |      |       |    |
| 377  | 189   | 1  | 380  | 181   | 1  |      |       |    |
| 378  | 158   | 2  | 380  | 182   | 6  |      |       |    |
| 378  | 159   | 2  | 380  | 183   | 2  |      |       |    |





# Library Service

To: **Chief Librarian**  
**ITE Merlewood**

TFSD15

Details of a new publication for addition to the ~~TFSD15~~ database

1. Subproject number T
2. Author(s)
3. Date
4. Title
5. Has this publication been refereed? Yes / No

*If 4 is title of a chapter, go to 8*

*If 4 is title of a contract report, go to 13*

6. Journal
7. Vol. and page nos
8. Book title
9. Is 8 the proceedings of a conference or symposium? Yes/No
10. Editor(s)
11. Publisher
12. Page nos of chapter
13. Customer

14. Disclosure Please indicate category and sign statement  
overleaf

**Please attach, or forward later, one reprint/photocopy of a publication or one copy of a contract report. A reprint/photocopy (of publication, not contract reports) should be given to your Station Librarian.**

# Library Service

**A** Must not be released: *STRICTLY CONFIDENTIAL*

**B** Must be referred to the customer for written approval

Contact name:

Address:

Telephone number:

**C** Must be referred to the author

**D** May be lent or photocopied without the need to seek approval

Signed:

D. Chinn

Date:

17 | 8 | 93