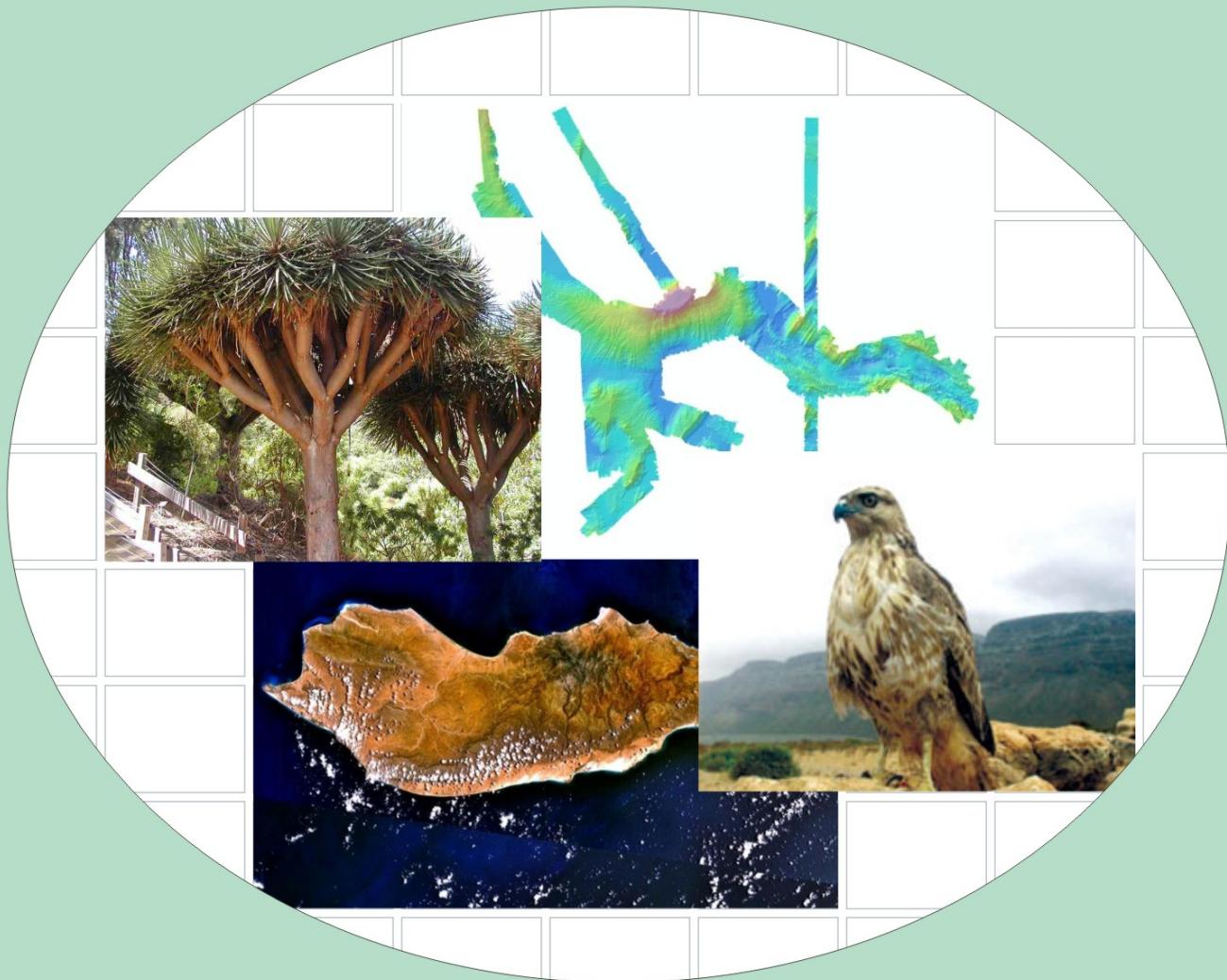


**Submission to the  
Commission on the Limits of the Continental Shelf  
pursuant to Article 76, paragraph 8  
of the  
United Nations Convention on the Law of the Sea 1982  
in respect of**

**South East of Socotra Island**



**Republic of Yemen**

**Executive Summary – Revised Amended**

# **Republic of Yemen**

## **Executive Summary – Revised Amended**

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## **1. Introduction**

This revised amended Submission to the Commission on the Limits of the Continental Shelf is made by the Republic of Yemen pursuant to Article 76, paragraph 8 of the Convention in support of the establishment of the outer limit of the continental shelf.

This submission represents a single and full case to be made by the Republic of Yemen to the Commission on the Limits of the Continental Shelf in respect of continental shelf area beyond 200M from the base lines from which the breadth of the territorial sea is measured.

The submission deals with the outer limit of the continental shelf appurtenant to the Republic of Yemen in the area south east of Socotra Island.

## **2. Provisions of Article 76 invoked**

The outer limits contained in this submission are based on the provisions of Article 76.4 (a)(ii), 76.4 (b), 76.7.

## **3. Names of any Commission members who provided advice during the preparation of the submission**

No advice was provided by any member of the Commission.

## **4. Absence of disputes**

In accordance with paragraph 2(a) of Annex 1 to the Commission's Rules of Procedure, the Republic of Yemen wishes to inform the Commission that the area of continental shelf that is the subject of this submission is not the subject of any dispute between them and any other state.

## **5. State bodies responsible for the preparation of the Submission**

This submission, together with all maps, figures, enclosures, appendices and digital databases was prepared by the Ministry of Transport, Yemen Geological Survey & Mineral Resources Board, Sanaa University, Yemen Remote Sensing Centre and the Oil Exploration and Production Board.

## **6. Revised amended submission**

This submission contains a number of revised amendments made following the examination of additional datasets available in the region. It replaces in its entirety any previous materials submitted in respect of the continental shelf of the Republic of Yemen.

## 7. Advisors to the Government of the Republic of Yemen

National Oceanography Centre, Southampton provided advice to the Republic of Yemen during the preparation of the original submission. Maritime Zone Solutions Limited provided advice during the preparation of this document.

## 8. Description of the outer limit of the continental shelf south east of Socotra Island

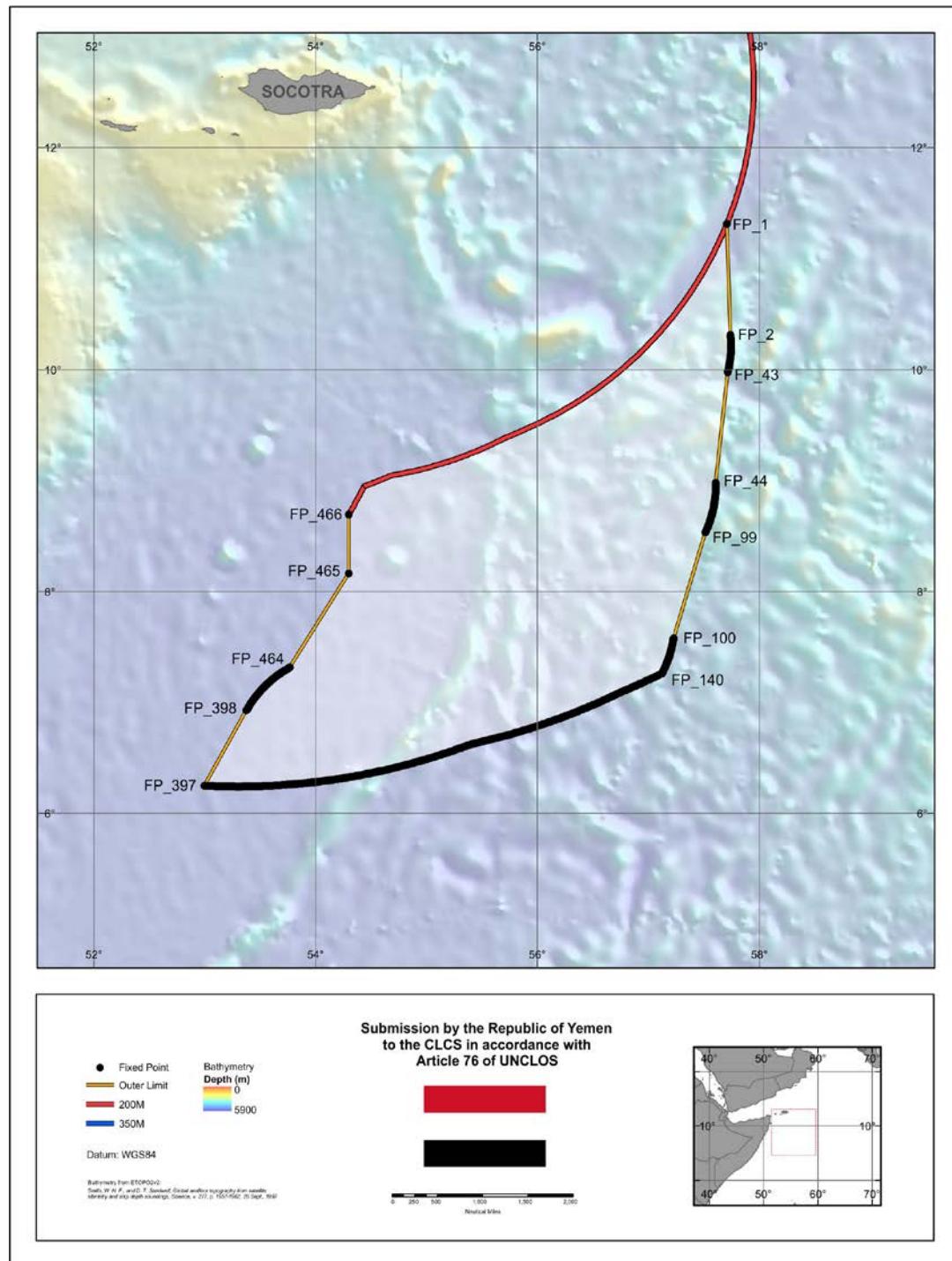


Figure 1 Outer limit of the continental shelf south east of Socotra Island.

The outer limit of Yemen's continental shelf, in accordance with Article 76, is defined by 466 fixed points (illustrated in Figure 1 and summarised in Table 1), of which 207 fixed points are defined by the distance formula [Article 76, paragraph 4 (a) (ii)], 257 fixed points are defined by the 350M and 2 fixed points defined by the 200M limit.

Table 1 List of coordinates and method of determination for each fixed point describing the outer limit. All coordinates relate to the WGS84 geodetic reference system.

| FP | Latitude (N) | Longitude (E) | Method of construction | Distance between FPs (M) |
|----|--------------|---------------|------------------------|--------------------------|
| 1  | 11.3127389   | 57.7075968    | 200M                   | 0                        |
| 2  | 10.3171206   | 57.7392469    | FOS + 60M              | 59.494                   |
| 3  | 10.3087886   | 57.7400701    | FOS + 60M              | 0.5                      |
| 4  | 10.3004501   | 57.7408231    | FOS + 60M              | 0.5                      |
| 5  | 10.2921057   | 57.7415059    | FOS + 60M              | 0.5                      |
| 6  | 10.2837559   | 57.7421185    | FOS + 60M              | 0.5                      |
| 7  | 10.2754014   | 57.7426607    | FOS + 60M              | 0.5                      |
| 8  | 10.2670426   | 57.7431326    | FOS + 60M              | 0.5                      |
| 9  | 10.2586803   | 57.7435341    | FOS + 60M              | 0.5                      |
| 10 | 10.2503149   | 57.7438653    | FOS + 60M              | 0.5                      |
| 11 | 10.2419471   | 57.7441260    | FOS + 60M              | 0.5                      |
| 12 | 10.2335774   | 57.7443164    | FOS + 60M              | 0.5                      |
| 13 | 10.2252064   | 57.7444363    | FOS + 60M              | 0.5                      |
| 14 | 10.2168348   | 57.7444858    | FOS + 60M              | 0.5                      |
| 15 | 10.2084630   | 57.7444648    | FOS + 60M              | 0.5                      |
| 16 | 10.2000917   | 57.7443735    | FOS + 60M              | 0.5                      |
| 17 | 10.1917214   | 57.7442117    | FOS + 60M              | 0.5                      |
| 18 | 10.1833527   | 57.7439796    | FOS + 60M              | 0.5                      |
| 19 | 10.1749862   | 57.7436771    | FOS + 60M              | 0.5                      |
| 20 | 10.1666225   | 57.7433042    | FOS + 60M              | 0.5                      |
| 21 | 10.1582622   | 57.7428611    | FOS + 60M              | 0.5                      |
| 22 | 10.1499058   | 57.7423476    | FOS + 60M              | 0.5                      |
| 23 | 10.1415540   | 57.7417640    | FOS + 60M              | 0.5                      |
| 24 | 10.1332072   | 57.7411101    | FOS + 60M              | 0.5                      |
| 25 | 10.1248662   | 57.7403861    | FOS + 60M              | 0.5                      |
| 26 | 10.1165313   | 57.7395921    | FOS + 60M              | 0.5                      |
| 27 | 10.1082034   | 57.7387280    | FOS + 60M              | 0.5                      |
| 28 | 10.0998828   | 57.7377940    | FOS + 60M              | 0.5                      |
| 29 | 10.0915703   | 57.7367901    | FOS + 60M              | 0.5                      |
| 30 | 10.0832663   | 57.7357164    | FOS + 60M              | 0.5                      |
| 31 | 10.0749714   | 57.7345729    | FOS + 60M              | 0.5                      |
| 32 | 10.0666863   | 57.7333598    | FOS + 60M              | 0.5                      |
| 33 | 10.0584115   | 57.7320772    | FOS + 60M              | 0.5                      |

| <b>FP</b> | <b>Latitude<br/>(N)</b> | <b>Longitude<br/>(E)</b> | <b>Method of<br/>construction</b> | <b>Distance<br/>between<br/>FPs (M)</b> |
|-----------|-------------------------|--------------------------|-----------------------------------|---|
| 34        | 10.0501475              | 57.7307251               | FOS + 60M                         | 0.5                                     |
| 35        | 10.0418950              | 57.7293036               | FOS + 60M                         | 0.5                                     |
| 36        | 10.0336545              | 57.7278129               | FOS + 60M                         | 0.5                                     |
| 37        | 10.0254266              | 57.7262530               | FOS + 60M                         | 0.5                                     |
| 38        | 10.0172118              | 57.7246241               | FOS + 60M                         | 0.5                                     |
| 39        | 10.0090108              | 57.7229263               | FOS + 60M                         | 0.5                                     |
| 40        | 10.0008241              | 57.7211597               | FOS + 60M                         | 0.5                                     |
| 41        | 9.9926522               | 57.7193244               | FOS + 60M                         | 0.5                                     |
| 42        | 9.9844957               | 57.7174206               | FOS + 60M                         | 0.5                                     |
| 43        | 9.9763553               | 57.7154484               | FOS + 60M                         | 0.5                                     |
| 44        | 8.9804673               | 57.6079406               | FOS + 60M                         | 59.817                                  |
| 45        | 8.9720961               | 57.6080851               | FOS + 60M                         | 0.5                                     |
| 46        | 8.9637240               | 57.6081595               | FOS + 60M                         | 0.5                                     |
| 47        | 8.9553516               | 57.6081636               | FOS + 60M                         | 0.5                                     |
| 48        | 8.9469794               | 57.6080977               | FOS + 60M                         | 0.5                                     |
| 49        | 8.9386081               | 57.6079615               | FOS + 60M                         | 0.5                                     |
| 50        | 8.9302381               | 57.6077553               | FOS + 60M                         | 0.5                                     |
| 51        | 8.9218702               | 57.6074789               | FOS + 60M                         | 0.5                                     |
| 52        | 8.9135049               | 57.6071324               | FOS + 60M                         | 0.5                                     |
| 53        | 8.9051427               | 57.6067159               | FOS + 60M                         | 0.5                                     |
| 54        | 8.8967842               | 57.6062293               | FOS + 60M                         | 0.5                                     |
| 55        | 8.8884301               | 57.6056727               | FOS + 60M                         | 0.5                                     |
| 56        | 8.8800808               | 57.6050462               | FOS + 60M                         | 0.5                                     |
| 57        | 8.8717371               | 57.6043498               | FOS + 60M                         | 0.5                                     |
| 58        | 8.8633994               | 57.6035835               | FOS + 60M                         | 0.5                                     |
| 59        | 8.8550683               | 57.6027475               | FOS + 60M                         | 0.5                                     |
| 60        | 8.8467444               | 57.6018417               | FOS + 60M                         | 0.5                                     |
| 61        | 8.8384284               | 57.6008662               | FOS + 60M                         | 0.5                                     |
| 62        | 8.8301207               | 57.5998212               | FOS + 60M                         | 0.5                                     |
| 63        | 8.8218219               | 57.5987066               | FOS + 60M                         | 0.5                                     |
| 64        | 8.8135327               | 57.5975227               | FOS + 60M                         | 0.5                                     |
| 65        | 8.8052535               | 57.5962693               | FOS + 60M                         | 0.5                                     |
| 66        | 8.7969850               | 57.5949468               | FOS + 60M                         | 0.5                                     |
| 67        | 8.7887278               | 57.5935551               | FOS + 60M                         | 0.5                                     |
| 68        | 8.7804823               | 57.5920943               | FOS + 60M                         | 0.5                                     |
| 69        | 8.7722493               | 57.5905646               | FOS + 60M                         | 0.5                                     |
| 70        | 8.7640292               | 57.5889660               | FOS + 60M                         | 0.5                                     |
| 71        | 8.7558226               | 57.5872987               | FOS + 60M                         | 0.5                                     |
| 72        | 8.7476302               | 57.5855628               | FOS + 60M                         | 0.5                                     |
| 73        | 8.7394524               | 57.5837585               | FOS + 60M                         | 0.5                                     |
| 74        | 8.7312898               | 57.5818857               | FOS + 60M                         | 0.5                                     |
| 75        | 8.7231430               | 57.5799448               | FOS + 60M                         | 0.5                                     |

| <b>FP</b> | <b>Latitude<br/>(N)</b> | <b>Longitude<br/>(E)</b> | <b>Method of<br/>construction</b> | <b>Distance<br/>between<br/>FPs (M)</b> |
|-----------|-------------------------|--------------------------|-----------------------------------|---|
| 76        | 8.7150126               | 57.5779358               | FOS + 60M                         | 0.5                                     |
| 77        | 8.7068991               | 57.5758589               | FOS + 60M                         | 0.5                                     |
| 78        | 8.6988031               | 57.5737142               | FOS + 60M                         | 0.5                                     |
| 79        | 8.6907251               | 57.5715018               | FOS + 60M                         | 0.5                                     |
| 80        | 8.6826657               | 57.5692220               | FOS + 60M                         | 0.5                                     |
| 81        | 8.6746255               | 57.5668749               | FOS + 60M                         | 0.5                                     |
| 82        | 8.6666050               | 57.5644606               | FOS + 60M                         | 0.5                                     |
| 83        | 8.6586048               | 57.5619794               | FOS + 60M                         | 0.5                                     |
| 84        | 8.6506255               | 57.5594313               | FOS + 60M                         | 0.5                                     |
| 85        | 8.6426675               | 57.5568167               | FOS + 60M                         | 0.5                                     |
| 86        | 8.6347314               | 57.5541356               | FOS + 60M                         | 0.5                                     |
| 87        | 8.6268179               | 57.5513883               | FOS + 60M                         | 0.5                                     |
| 88        | 8.6189273               | 57.5485749               | FOS + 60M                         | 0.5                                     |
| 89        | 8.6110604               | 57.5456957               | FOS + 60M                         | 0.5                                     |
| 90        | 8.6032175               | 57.5427508               | FOS + 60M                         | 0.5                                     |
| 91        | 8.5953994               | 57.5397405               | FOS + 60M                         | 0.5                                     |
| 92        | 8.5876064               | 57.5366650               | FOS + 60M                         | 0.5                                     |
| 93        | 8.5798392               | 57.5335245               | FOS + 60M                         | 0.5                                     |
| 94        | 8.5720983               | 57.5303192               | FOS + 60M                         | 0.5                                     |
| 95        | 8.5643842               | 57.5270493               | FOS + 60M                         | 0.5                                     |
| 96        | 8.5566974               | 57.5237151               | FOS + 60M                         | 0.5                                     |
| 97        | 8.5490386               | 57.5203168               | FOS + 60M                         | 0.5                                     |
| 98        | 8.5414081               | 57.5168546               | FOS + 60M                         | 0.5                                     |
| 99        | 8.5338067               | 57.5133289               | FOS + 60M                         | 0.5                                     |
| 100       | 7.5793213               | 57.2261007               | FOS + 60M                         | 59.508                                  |
| 101       | 7.5710477               | 57.2248111               | FOS + 60M                         | 0.5                                     |
| 102       | 7.5627852               | 57.2234525               | FOS + 60M                         | 0.5                                     |
| 103       | 7.5545343               | 57.2220251               | FOS + 60M                         | 0.5                                     |
| 104       | 7.5462954               | 57.2205289               | FOS + 60M                         | 0.5                                     |
| 105       | 7.5380694               | 57.2189639               | FOS + 60M                         | 0.5                                     |
| 106       | 7.5298566               | 57.2173304               | FOS + 60M                         | 0.5                                     |
| 107       | 7.5216576               | 57.2156285               | FOS + 60M                         | 0.5                                     |
| 108       | 7.5134731               | 57.2138582               | FOS + 60M                         | 0.5                                     |
| 109       | 7.5053036               | 57.2120197               | FOS + 60M                         | 0.5                                     |
| 110       | 7.4971496               | 57.2101131               | FOS + 60M                         | 0.5                                     |
| 111       | 7.4890118               | 57.2081386               | FOS + 60M                         | 0.5                                     |
| 112       | 7.4808906               | 57.2060963               | FOS + 60M                         | 0.5                                     |
| 113       | 7.4727867               | 57.2039864               | FOS + 60M                         | 0.5                                     |
| 114       | 7.4647007               | 57.2018089               | FOS + 60M                         | 0.5                                     |
| 115       | 7.4566330               | 57.1995641               | FOS + 60M                         | 0.5                                     |
| 116       | 7.4485842               | 57.1972521               | FOS + 60M                         | 0.5                                     |
| 117       | 7.4405549               | 57.1948731               | FOS + 60M                         | 0.5                                     |

| <b>FP</b> | <b>Latitude<br/>(N)</b> | <b>Longitude<br/>(E)</b> | <b>Method of<br/>construction</b> | <b>Distance<br/>between<br/>FPs (M)</b> |
|-----------|-------------------------|--------------------------|-----------------------------------|---|
| 118       | 7.4325457               | 57.1924272               | FOS + 60M                         | 0.5                                     |
| 119       | 7.4245571               | 57.1899147               | FOS + 60M                         | 0.5                                     |
| 120       | 7.4165896               | 57.1873356               | FOS + 60M                         | 0.5                                     |
| 121       | 7.4086439               | 57.1846902               | FOS + 60M                         | 0.5                                     |
| 122       | 7.4007204               | 57.1819787               | FOS + 60M                         | 0.5                                     |
| 123       | 7.3928197               | 57.1792012               | FOS + 60M                         | 0.5                                     |
| 124       | 7.3849423               | 57.1763580               | FOS + 60M                         | 0.5                                     |
| 125       | 7.3770889               | 57.1734492               | FOS + 60M                         | 0.5                                     |
| 126       | 7.3692599               | 57.1704751               | FOS + 60M                         | 0.5                                     |
| 127       | 7.3614559               | 57.1674358               | FOS + 60M                         | 0.5                                     |
| 128       | 7.3536775               | 57.1643316               | FOS + 60M                         | 0.5                                     |
| 129       | 7.3459251               | 57.1611628               | FOS + 60M                         | 0.5                                     |
| 130       | 7.3381993               | 57.1579294               | FOS + 60M                         | 0.5                                     |
| 131       | 7.3305006               | 57.1546318               | FOS + 60M                         | 0.5                                     |
| 132       | 7.3228297               | 57.1512701               | FOS + 60M                         | 0.5                                     |
| 133       | 7.3151869               | 57.1478447               | FOS + 60M                         | 0.5                                     |
| 134       | 7.3075728               | 57.1443557               | FOS + 60M                         | 0.5                                     |
| 135       | 7.2999880               | 57.1408035               | FOS + 60M                         | 0.5                                     |
| 136       | 7.2924330               | 57.1371881               | FOS + 60M                         | 0.5                                     |
| 137       | 7.2849084               | 57.1335100               | FOS + 60M                         | 0.5                                     |
| 138       | 7.2774145               | 57.1297693               | FOS + 60M                         | 0.5                                     |
| 139       | 7.2699520               | 57.1259664               | FOS + 60M                         | 0.5                                     |
| 140       | 7.2621154               | 57.1218860               | 350M                              | 0.527                                   |
| 141       | 7.2485425               | 57.0934178               | 350M                              | 1.881                                   |
| 142       | 7.2413897               | 57.0782547               | 350M                              | 1                                       |
| 143       | 7.2342795               | 57.0630718               | 350M                              | 1                                       |
| 144       | 7.2272120               | 57.0478691               | 350M                              | 1                                       |
| 145       | 7.2201872               | 57.0326469               | 350M                              | 1                                       |
| 146       | 7.2132052               | 57.0174051               | 350M                              | 1                                       |
| 147       | 7.2062661               | 57.0021439               | 350M                              | 1                                       |
| 148       | 7.1999699               | 56.9881974               | 350M                              | 0.913                                   |
| 149       | 7.1960846               | 56.9799605               | 350M                              | 0.543                                   |
| 150       | 7.1889658               | 56.9647831               | 350M                              | 1                                       |
| 151       | 7.1818897               | 56.9495860               | 350M                              | 1                                       |
| 152       | 7.1748563               | 56.9343692               | 350M                              | 1                                       |
| 153       | 7.1678657               | 56.9191328               | 350M                              | 1                                       |
| 154       | 7.1609179               | 56.9038771               | 350M                              | 1                                       |
| 155       | 7.1540130               | 56.8886021               | 350M                              | 1                                       |
| 156       | 7.1471511               | 56.8733079               | 350M                              | 1                                       |
| 157       | 7.1403322               | 56.8579947               | 350M                              | 1                                       |
| 158       | 7.1335564               | 56.8426626               | 350M                              | 1                                       |
| 159       | 7.1268237               | 56.8273116               | 350M                              | 1                                       |

| <b>FP</b> | <b>Latitude<br/>(N)</b> | <b>Longitude<br/>(E)</b> | <b>Method of<br/>construction</b> | <b>Distance<br/>between<br/>FPs (M)</b> |
|-----------|-------------------------|--------------------------|-----------------------------------|---|
| 160       | 7.1201341               | 56.8119420               | 350M                              | 1                                       |
| 161       | 7.1134878               | 56.7965538               | 350M                              | 1                                       |
| 162       | 7.1068848               | 56.7811472               | 350M                              | 1                                       |
| 163       | 7.1003251               | 56.7657222               | 350M                              | 1                                       |
| 164       | 7.0938088               | 56.7502791               | 350M                              | 1                                       |
| 165       | 7.0902869               | 56.7418819               | 350M                              | 0.543                                   |
| 166       | 7.0836296               | 56.7281457               | 350M                              | 0.911                                   |
| 167       | 7.0763603               | 56.7130437               | 350M                              | 1                                       |
| 168       | 7.0691335               | 56.6979215               | 350M                              | 1                                       |
| 169       | 7.0619492               | 56.6827792               | 350M                              | 1                                       |
| 170       | 7.0548075               | 56.6676170               | 350M                              | 1                                       |
| 171       | 7.0477085               | 56.6524349               | 350M                              | 1                                       |
| 172       | 7.0406522               | 56.6372332               | 350M                              | 1                                       |
| 173       | 7.0336387               | 56.6220118               | 350M                              | 1                                       |
| 174       | 7.0266679               | 56.6067710               | 350M                              | 1                                       |
| 175       | 7.0197401               | 56.5915108               | 350M                              | 1                                       |
| 176       | 7.0128552               | 56.5762314               | 350M                              | 1                                       |
| 177       | 7.0060134               | 56.5609329               | 350M                              | 1                                       |
| 178       | 6.9992145               | 56.5456153               | 350M                              | 1                                       |
| 179       | 6.9924588               | 56.5302789               | 350M                              | 1                                       |
| 180       | 6.9857462               | 56.5149238               | 350M                              | 1                                       |
| 181       | 6.9790768               | 56.4995500               | 350M                              | 1                                       |
| 182       | 6.9724507               | 56.4841578               | 350M                              | 1                                       |
| 183       | 6.9658679               | 56.4687471               | 350M                              | 1                                       |
| 184       | 6.9593284               | 56.4533182               | 350M                              | 1                                       |
| 185       | 6.9528324               | 56.4378711               | 350M                              | 1                                       |
| 186       | 6.9463799               | 56.4224060               | 350M                              | 1                                       |
| 187       | 6.9399708               | 56.4069230               | 350M                              | 1                                       |
| 188       | 6.9336054               | 56.3914222               | 350M                              | 1                                       |
| 189       | 6.9272835               | 56.3759037               | 350M                              | 1                                       |
| 190       | 6.9210053               | 56.3603677               | 350M                              | 1                                       |
| 191       | 6.9147709               | 56.3448143               | 350M                              | 1                                       |
| 192       | 6.9085802               | 56.3292436               | 350M                              | 1                                       |
| 193       | 6.9024333               | 56.3136558               | 350M                              | 1                                       |
| 194       | 6.8963303               | 56.2980509               | 350M                              | 1                                       |
| 195       | 6.8902712               | 56.2824290               | 350M                              | 1                                       |
| 196       | 6.8842561               | 56.2667904               | 350M                              | 1                                       |
| 197       | 6.8782849               | 56.2511350               | 350M                              | 1                                       |
| 198       | 6.8723579               | 56.2354631               | 350M                              | 1                                       |
| 199       | 6.8664749               | 56.2197748               | 350M                              | 1                                       |
| 200       | 6.8606361               | 56.2040702               | 350M                              | 1                                       |
| 201       | 6.8548415               | 56.1883493               | 350M                              | 1                                       |

| <b>FP</b> | <b>Latitude<br/>(N)</b> | <b>Longitude<br/>(E)</b> | <b>Method of<br/>construction</b> | <b>Distance<br/>between<br/>FPs (M)</b> |
|-----------|-------------------------|--------------------------|-----------------------------------|---|
| 202       | 6.8490911               | 56.1726124               | 350M                              | 1                                       |
| 203       | 6.8433850               | 56.1568596               | 350M                              | 1                                       |
| 204       | 6.8377233               | 56.1410909               | 350M                              | 1                                       |
| 205       | 6.8321059               | 56.1253066               | 350M                              | 1                                       |
| 206       | 6.8265330               | 56.1095067               | 350M                              | 1                                       |
| 207       | 6.8210045               | 56.0936913               | 350M                              | 1                                       |
| 208       | 6.8155205               | 56.0778606               | 350M                              | 1                                       |
| 209       | 6.8100811               | 56.0620147               | 350M                              | 1                                       |
| 210       | 6.8046863               | 56.0461537               | 350M                              | 1                                       |
| 211       | 6.7993361               | 56.0302778               | 350M                              | 1                                       |
| 212       | 6.7940306               | 56.0143871               | 350M                              | 1                                       |
| 213       | 6.7887698               | 55.9984816               | 350M                              | 1                                       |
| 214       | 6.7835538               | 55.9825616               | 350M                              | 1                                       |
| 215       | 6.7783826               | 55.9666271               | 350M                              | 1                                       |
| 216       | 6.7732562               | 55.9506783               | 350M                              | 1                                       |
| 217       | 6.7681747               | 55.9347153               | 350M                              | 1                                       |
| 218       | 6.7631382               | 55.9187382               | 350M                              | 1                                       |
| 219       | 6.7581466               | 55.9027472               | 350M                              | 1                                       |
| 220       | 6.7532001               | 55.8867423               | 350M                              | 1                                       |
| 221       | 6.7482986               | 55.8707237               | 350M                              | 1                                       |
| 222       | 6.7434421               | 55.8546916               | 350M                              | 1                                       |
| 223       | 6.7386308               | 55.8386460               | 350M                              | 1                                       |
| 224       | 6.7338647               | 55.8225871               | 350M                              | 1                                       |
| 225       | 6.7291437               | 55.8065150               | 350M                              | 1                                       |
| 226       | 6.7244680               | 55.7904298               | 350M                              | 1                                       |
| 227       | 6.7198376               | 55.7743317               | 350M                              | 1                                       |
| 228       | 6.7152524               | 55.7582207               | 350M                              | 1                                       |
| 229       | 6.7107127               | 55.7420971               | 350M                              | 1                                       |
| 230       | 6.7062183               | 55.7259609               | 350M                              | 1                                       |
| 231       | 6.7017693               | 55.7098122               | 350M                              | 1                                       |
| 232       | 6.6973658               | 55.6936512               | 350M                              | 1                                       |
| 233       | 6.6930077               | 55.6774781               | 350M                              | 1                                       |
| 234       | 6.6886952               | 55.6612929               | 350M                              | 1                                       |
| 235       | 6.6844283               | 55.6450957               | 350M                              | 1                                       |
| 236       | 6.6802069               | 55.6288868               | 350M                              | 1                                       |
| 237       | 6.6760312               | 55.6126661               | 350M                              | 1                                       |
| 238       | 6.6719011               | 55.5964340               | 350M                              | 1                                       |
| 239       | 6.6678167               | 55.5801903               | 350M                              | 1                                       |
| 240       | 6.6637780               | 55.5639354               | 350M                              | 1                                       |
| 241       | 6.6597851               | 55.5476693               | 350M                              | 1                                       |
| 242       | 6.6558380               | 55.5313922               | 350M                              | 1                                       |
| 243       | 6.6519367               | 55.5151042               | 350M                              | 1                                       |

| <b>FP</b> | <b>Latitude<br/>(N)</b> | <b>Longitude<br/>(E)</b> | <b>Method of<br/>construction</b> | <b>Distance<br/>between<br/>FPs (M)</b> |
|-----------|-------------------------|--------------------------|-----------------------------------|---|
| 244       | 6.6480812               | 55.4988053               | 350M                              | 1                                       |
| 245       | 6.6442716               | 55.4824959               | 350M                              | 1                                       |
| 246       | 6.6405079               | 55.4661758               | 350M                              | 1                                       |
| 247       | 6.6367902               | 55.4498454               | 350M                              | 1                                       |
| 248       | 6.6331184               | 55.4335047               | 350M                              | 1                                       |
| 249       | 6.6294927               | 55.4171538               | 350M                              | 1                                       |
| 250       | 6.6262306               | 55.4022540               | 350M                              | 0.911                                   |
| 251       | 6.6230919               | 55.3939008               | 350M                              | 0.533                                   |
| 252       | 6.6172348               | 55.3782108               | 350M                              | 1                                       |
| 253       | 6.6114219               | 55.3625046               | 350M                              | 1                                       |
| 254       | 6.6056532               | 55.3467822               | 350M                              | 1                                       |
| 255       | 6.5999288               | 55.3310438               | 350M                              | 1                                       |
| 256       | 6.5942488               | 55.3152895               | 350M                              | 1                                       |
| 257       | 6.5886131               | 55.2995195               | 350M                              | 1                                       |
| 258       | 6.5830219               | 55.2837339               | 350M                              | 1                                       |
| 259       | 6.5774751               | 55.2679328               | 350M                              | 1                                       |
| 260       | 6.5719729               | 55.2521162               | 350M                              | 1                                       |
| 261       | 6.5665152               | 55.2362845               | 350M                              | 1                                       |
| 262       | 6.5611020               | 55.2204375               | 350M                              | 1                                       |
| 263       | 6.5557336               | 55.2045756               | 350M                              | 1                                       |
| 264       | 6.5504098               | 55.1886988               | 350M                              | 1                                       |
| 265       | 6.5451308               | 55.1728073               | 350M                              | 1                                       |
| 266       | 6.5398965               | 55.1569011               | 350M                              | 1                                       |
| 267       | 6.5347070               | 55.1409804               | 350M                              | 1                                       |
| 268       | 6.5295624               | 55.1250453               | 350M                              | 1                                       |
| 269       | 6.5244626               | 55.1090960               | 350M                              | 1                                       |
| 270       | 6.5194078               | 55.0931325               | 350M                              | 1                                       |
| 271       | 6.5143980               | 55.0771550               | 350M                              | 1                                       |
| 272       | 6.5094332               | 55.0611637               | 350M                              | 1                                       |
| 273       | 6.5045134               | 55.0451585               | 350M                              | 1                                       |
| 274       | 6.4996387               | 55.0291398               | 350M                              | 1                                       |
| 275       | 6.4948092               | 55.0131075               | 350M                              | 1                                       |
| 276       | 6.4900248               | 54.9970619               | 350M                              | 1                                       |
| 277       | 6.4852856               | 54.9810030               | 350M                              | 1                                       |
| 278       | 6.4805917               | 54.9649310               | 350M                              | 1                                       |
| 279       | 6.4759430               | 54.9488460               | 350M                              | 1                                       |
| 280       | 6.4713397               | 54.9327481               | 350M                              | 1                                       |
| 281       | 6.4667817               | 54.9166375               | 350M                              | 1                                       |
| 282       | 6.4622691               | 54.9005142               | 350M                              | 1                                       |
| 283       | 6.4578019               | 54.8843784               | 350M                              | 1                                       |
| 284       | 6.4533802               | 54.8682303               | 350M                              | 1                                       |
| 285       | 6.4490040               | 54.8520699               | 350M                              | 1                                       |

| <b>FP</b> | <b>Latitude<br/>(N)</b> | <b>Longitude<br/>(E)</b> | <b>Method of<br/>construction</b> | <b>Distance<br/>between<br/>FPs (M)</b> |
|-----------|-------------------------|--------------------------|-----------------------------------|---|
| 286       | 6.4446733               | 54.8358974               | 350M                              | 1                                       |
| 287       | 6.4403882               | 54.8197130               | 350M                              | 1                                       |
| 288       | 6.4361487               | 54.8035166               | 350M                              | 1                                       |
| 289       | 6.4319548               | 54.7873086               | 350M                              | 1                                       |
| 290       | 6.4278065               | 54.7710889               | 350M                              | 1                                       |
| 291       | 6.4237040               | 54.7548577               | 350M                              | 1                                       |
| 292       | 6.4196472               | 54.7386152               | 350M                              | 1                                       |
| 293       | 6.4156361               | 54.7223615               | 350M                              | 1                                       |
| 294       | 6.4116709               | 54.7060966               | 350M                              | 1                                       |
| 295       | 6.4077515               | 54.6898208               | 350M                              | 1                                       |
| 296       | 6.4038779               | 54.6735342               | 350M                              | 1                                       |
| 297       | 6.4000502               | 54.6572368               | 350M                              | 1                                       |
| 298       | 6.3962685               | 54.6409288               | 350M                              | 1                                       |
| 299       | 6.3925326               | 54.6246104               | 350M                              | 1                                       |
| 300       | 6.3888428               | 54.6082817               | 350M                              | 1                                       |
| 301       | 6.3851990               | 54.5919427               | 350M                              | 1                                       |
| 302       | 6.3816012               | 54.5755937               | 350M                              | 1                                       |
| 303       | 6.3780494               | 54.5592347               | 350M                              | 1                                       |
| 304       | 6.3745438               | 54.5428659               | 350M                              | 1                                       |
| 305       | 6.3710843               | 54.5264874               | 350M                              | 1                                       |
| 306       | 6.3676709               | 54.5100994               | 350M                              | 1                                       |
| 307       | 6.3643037               | 54.4937019               | 350M                              | 1                                       |
| 308       | 6.3609827               | 54.4772951               | 350M                              | 1                                       |
| 309       | 6.3577079               | 54.4608792               | 350M                              | 1                                       |
| 310       | 6.3544794               | 54.4444542               | 350M                              | 1                                       |
| 311       | 6.3512972               | 54.4280202               | 350M                              | 1                                       |
| 312       | 6.3481612               | 54.4115775               | 350M                              | 1                                       |
| 313       | 6.3450716               | 54.3951261               | 350M                              | 1                                       |
| 314       | 6.3420284               | 54.3786662               | 350M                              | 1                                       |
| 315       | 6.3390315               | 54.3621979               | 350M                              | 1                                       |
| 316       | 6.3360810               | 54.3457213               | 350M                              | 1                                       |
| 317       | 6.3331770               | 54.3292366               | 350M                              | 1                                       |
| 318       | 6.3303194               | 54.3127438               | 350M                              | 1                                       |
| 319       | 6.3275082               | 54.2962432               | 350M                              | 1                                       |
| 320       | 6.3247436               | 54.2797348               | 350M                              | 1                                       |
| 321       | 6.3220255               | 54.2632188               | 350M                              | 1                                       |
| 322       | 6.3193539               | 54.2466953               | 350M                              | 1                                       |
| 323       | 6.3167288               | 54.2301644               | 350M                              | 1                                       |
| 324       | 6.3141504               | 54.2136263               | 350M                              | 1                                       |
| 325       | 6.3116185               | 54.1970811               | 350M                              | 1                                       |
| 326       | 6.3091333               | 54.1805289               | 350M                              | 1                                       |
| 327       | 6.3066947               | 54.1639698               | 350M                              | 1                                       |

| <b>FP</b> | <b>Latitude<br/>(N)</b> | <b>Longitude<br/>(E)</b> | <b>Method of<br/>construction</b> | <b>Distance<br/>between<br/>FPs (M)</b> |
|-----------|-------------------------|--------------------------|-----------------------------------|---|
| 328       | 6.3043027               | 54.1474040               | 350M                              | 1                                       |
| 329       | 6.3019575               | 54.1308316               | 350M                              | 1                                       |
| 330       | 6.2996589               | 54.1142528               | 350M                              | 1                                       |
| 331       | 6.2974070               | 54.0976677               | 350M                              | 1                                       |
| 332       | 6.2952019               | 54.0810763               | 350M                              | 1                                       |
| 333       | 6.2930435               | 54.0644789               | 350M                              | 1                                       |
| 334       | 6.2909319               | 54.0478755               | 350M                              | 1                                       |
| 335       | 6.2888671               | 54.0312663               | 350M                              | 1                                       |
| 336       | 6.2868490               | 54.0146515               | 350M                              | 1                                       |
| 337       | 6.2848778               | 53.9980311               | 350M                              | 1                                       |
| 338       | 6.2829534               | 53.9814052               | 350M                              | 1                                       |
| 339       | 6.2810759               | 53.9647741               | 350M                              | 1                                       |
| 340       | 6.2792452               | 53.9481379               | 350M                              | 1                                       |
| 341       | 6.2774614               | 53.9314966               | 350M                              | 1                                       |
| 342       | 6.2757245               | 53.9148504               | 350M                              | 1                                       |
| 343       | 6.2740344               | 53.8981994               | 350M                              | 1                                       |
| 344       | 6.2723913               | 53.8815438               | 350M                              | 1                                       |
| 345       | 6.2707952               | 53.8648837               | 350M                              | 1                                       |
| 346       | 6.2692459               | 53.8482192               | 350M                              | 1                                       |
| 347       | 6.2677437               | 53.8315505               | 350M                              | 1                                       |
| 348       | 6.2662884               | 53.8148777               | 350M                              | 1                                       |
| 349       | 6.2648800               | 53.7982008               | 350M                              | 1                                       |
| 350       | 6.2635187               | 53.7815202               | 350M                              | 1                                       |
| 351       | 6.2622043               | 53.7648358               | 350M                              | 1                                       |
| 352       | 6.2609370               | 53.7481478               | 350M                              | 1                                       |
| 353       | 6.2597167               | 53.7314563               | 350M                              | 1                                       |
| 354       | 6.2585434               | 53.7147615               | 350M                              | 1                                       |
| 355       | 6.2574172               | 53.6980636               | 350M                              | 1                                       |
| 356       | 6.2563380               | 53.6813625               | 350M                              | 1                                       |
| 357       | 6.2553058               | 53.6646586               | 350M                              | 1                                       |
| 358       | 6.2543208               | 53.6479518               | 350M                              | 1                                       |
| 359       | 6.2533828               | 53.6312423               | 350M                              | 1                                       |
| 360       | 6.2524918               | 53.6145303               | 350M                              | 1                                       |
| 361       | 6.2516480               | 53.5978159               | 350M                              | 1                                       |
| 362       | 6.2508513               | 53.5810992               | 350M                              | 1                                       |
| 363       | 6.2501016               | 53.5643803               | 350M                              | 1                                       |
| 364       | 6.2493991               | 53.5476595               | 350M                              | 1                                       |
| 365       | 6.2487437               | 53.5309367               | 350M                              | 1                                       |
| 366       | 6.2481354               | 53.5142122               | 350M                              | 1                                       |
| 367       | 6.2475742               | 53.4974861               | 350M                              | 1                                       |
| 368       | 6.2470601               | 53.4807584               | 350M                              | 1                                       |
| 369       | 6.2465932               | 53.4640294               | 350M                              | 1                                       |

| <b>FP</b> | <b>Latitude<br/>(N)</b> | <b>Longitude<br/>(E)</b> | <b>Method of<br/>construction</b> | <b>Distance<br/>between<br/>FPs (M)</b> |
|-----------|-------------------------|--------------------------|-----------------------------------|---|
| 370       | 6.2461734               | 53.4472992               | 350M                              | 1                                       |
| 371       | 6.2458008               | 53.4305678               | 350M                              | 1                                       |
| 372       | 6.2454752               | 53.4138355               | 350M                              | 1                                       |
| 373       | 6.2451969               | 53.3971024               | 350M                              | 1                                       |
| 374       | 6.2449656               | 53.3803685               | 350M                              | 1                                       |
| 375       | 6.2447816               | 53.3636341               | 350M                              | 1                                       |
| 376       | 6.2446446               | 53.3468992               | 350M                              | 1                                       |
| 377       | 6.2445548               | 53.3301640               | 350M                              | 1                                       |
| 378       | 6.2445122               | 53.3134286               | 350M                              | 1                                       |
| 379       | 6.2445167               | 53.2966932               | 350M                              | 1                                       |
| 380       | 6.2445684               | 53.2799578               | 350M                              | 1                                       |
| 381       | 6.2446672               | 53.2632227               | 350M                              | 1                                       |
| 382       | 6.2448132               | 53.2464879               | 350M                              | 1                                       |
| 383       | 6.2450063               | 53.2297535               | 350M                              | 1                                       |
| 384       | 6.2452465               | 53.2130198               | 350M                              | 1                                       |
| 385       | 6.2455340               | 53.1962868               | 350M                              | 1                                       |
| 386       | 6.2458685               | 53.1795547               | 350M                              | 1                                       |
| 387       | 6.2462502               | 53.1628235               | 350M                              | 1                                       |
| 388       | 6.2466790               | 53.1460935               | 350M                              | 1                                       |
| 389       | 6.2471550               | 53.1293648               | 350M                              | 1                                       |
| 390       | 6.2476780               | 53.1126374               | 350M                              | 1                                       |
| 391       | 6.2482483               | 53.0959116               | 350M                              | 1                                       |
| 392       | 6.2488656               | 53.0791874               | 350M                              | 1                                       |
| 393       | 6.2495300               | 53.0624650               | 350M                              | 1                                       |
| 394       | 6.2502416               | 53.0457445               | 350M                              | 1                                       |
| 395       | 6.2510003               | 53.0290260               | 350M                              | 1                                       |
| 396       | 6.2518060               | 53.0123098               | 350M                              | 1                                       |
| 397       | 6.2526002               | 52.9967462               | FOS + 60M                         | 0.931                                   |
| 398       | 6.9321557               | 53.3786050               | FOS + 60M                         | 46.546                                  |
| 399       | 6.9394282               | 53.3827581               | FOS + 60M                         | 0.5                                     |
| 400       | 6.9466657               | 53.3869718               | FOS + 60M                         | 0.5                                     |
| 401       | 6.9538679               | 53.3912458               | FOS + 60M                         | 0.5                                     |
| 402       | 6.9610342               | 53.3955799               | FOS + 60M                         | 0.5                                     |
| 403       | 6.9681641               | 53.3999737               | FOS + 60M                         | 0.5                                     |
| 404       | 6.9752571               | 53.4044270               | FOS + 60M                         | 0.5                                     |
| 405       | 6.9823128               | 53.4089394               | FOS + 60M                         | 0.5                                     |
| 406       | 6.9893306               | 53.4135106               | FOS + 60M                         | 0.5                                     |
| 407       | 6.9963100               | 53.4181403               | FOS + 60M                         | 0.5                                     |
| 408       | 7.0032507               | 53.4228282               | FOS + 60M                         | 0.5                                     |
| 409       | 7.0101520               | 53.4275739               | FOS + 60M                         | 0.5                                     |
| 410       | 7.0170135               | 53.4323772               | FOS + 60M                         | 0.5                                     |
| 411       | 7.0238347               | 53.4372377               | FOS + 60M                         | 0.5                                     |

| <b>FP</b> | <b>Latitude<br/>(N)</b> | <b>Longitude<br/>(E)</b> | <b>Method of<br/>construction</b> | <b>Distance<br/>between<br/>FPs (M)</b> |
|-----------|-------------------------|--------------------------|-----------------------------------|---|
| 412       | 7.0306152               | 53.4421551               | FOS + 60M                         | 0.5                                     |
| 413       | 7.0373544               | 53.4471289               | FOS + 60M                         | 0.5                                     |
| 414       | 7.0440520               | 53.4521590               | FOS + 60M                         | 0.5                                     |
| 415       | 7.0507074               | 53.4572448               | FOS + 60M                         | 0.5                                     |
| 416       | 7.0573202               | 53.4623862               | FOS + 60M                         | 0.5                                     |
| 417       | 7.0638898               | 53.4675827               | FOS + 60M                         | 0.5                                     |
| 418       | 7.0704160               | 53.4728339               | FOS + 60M                         | 0.5                                     |
| 419       | 7.0768981               | 53.4781395               | FOS + 60M                         | 0.5                                     |
| 420       | 7.0833358               | 53.4834992               | FOS + 60M                         | 0.5                                     |
| 421       | 7.0897286               | 53.4889125               | FOS + 60M                         | 0.5                                     |
| 422       | 7.0960760               | 53.4943791               | FOS + 60M                         | 0.5                                     |
| 423       | 7.1023777               | 53.4998987               | FOS + 60M                         | 0.5                                     |
| 424       | 7.1086331               | 53.5054707               | FOS + 60M                         | 0.5                                     |
| 425       | 7.1148419               | 53.5110949               | FOS + 60M                         | 0.5                                     |
| 426       | 7.1210035               | 53.5167708               | FOS + 60M                         | 0.5                                     |
| 427       | 7.1271177               | 53.5224981               | FOS + 60M                         | 0.5                                     |
| 428       | 7.1331838               | 53.5282763               | FOS + 60M                         | 0.5                                     |
| 429       | 7.1392017               | 53.5341051               | FOS + 60M                         | 0.5                                     |
| 430       | 7.1451707               | 53.5399841               | FOS + 60M                         | 0.5                                     |
| 431       | 7.1510905               | 53.5459128               | FOS + 60M                         | 0.5                                     |
| 432       | 7.1569606               | 53.5518908               | FOS + 60M                         | 0.5                                     |
| 433       | 7.1627808               | 53.5579177               | FOS + 60M                         | 0.5                                     |
| 434       | 7.1685504               | 53.5639931               | FOS + 60M                         | 0.5                                     |
| 435       | 7.1742693               | 53.5701167               | FOS + 60M                         | 0.5                                     |
| 436       | 7.1799369               | 53.5762878               | FOS + 60M                         | 0.5                                     |
| 437       | 7.1855529               | 53.5825062               | FOS + 60M                         | 0.5                                     |
| 438       | 7.1911168               | 53.5887714               | FOS + 60M                         | 0.5                                     |
| 439       | 7.1966283               | 53.5950829               | FOS + 60M                         | 0.5                                     |
| 440       | 7.2020870               | 53.6014404               | FOS + 60M                         | 0.5                                     |
| 441       | 7.2074926               | 53.6078433               | FOS + 60M                         | 0.5                                     |
| 442       | 7.2128445               | 53.6142912               | FOS + 60M                         | 0.5                                     |
| 443       | 7.2181426               | 53.6207838               | FOS + 60M                         | 0.5                                     |
| 444       | 7.2233863               | 53.6273204               | FOS + 60M                         | 0.5                                     |
| 445       | 7.2285754               | 53.6339008               | FOS + 60M                         | 0.5                                     |
| 446       | 7.2337094               | 53.6405243               | FOS + 60M                         | 0.5                                     |
| 447       | 7.2387880               | 53.6471906               | FOS + 60M                         | 0.5                                     |
| 448       | 7.2438109               | 53.6538992               | FOS + 60M                         | 0.5                                     |
| 449       | 7.2487777               | 53.6606497               | FOS + 60M                         | 0.5                                     |
| 450       | 7.2536881               | 53.6674415               | FOS + 60M                         | 0.5                                     |
| 451       | 7.2585416               | 53.6742741               | FOS + 60M                         | 0.5                                     |
| 452       | 7.2633381               | 53.6811472               | FOS + 60M                         | 0.5                                     |
| 453       | 7.2680771               | 53.6880602               | FOS + 60M                         | 0.5                                     |

| <b>FP</b> | <b>Latitude<br/>(N)</b> | <b>Longitude<br/>(E)</b> | <b>Method of<br/>construction</b> | <b>Distance<br/>between<br/>FPs (M)</b> |
|-----------|-------------------------|--------------------------|-----------------------------------|---|
| 454       | 7.2727583               | 53.6950127               | FOS + 60M                         | 0.5                                     |
| 455       | 7.2773813               | 53.7020041               | FOS + 60M                         | 0.5                                     |
| 456       | 7.2819460               | 53.7090340               | FOS + 60M                         | 0.5                                     |
| 457       | 7.2864519               | 53.7161019               | FOS + 60M                         | 0.5                                     |
| 458       | 7.2908987               | 53.7232073               | FOS + 60M                         | 0.5                                     |
| 459       | 7.2952861               | 53.7303497               | FOS + 60M                         | 0.5                                     |
| 460       | 7.2996138               | 53.7375286               | FOS + 60M                         | 0.5                                     |
| 461       | 7.3038816               | 53.7447435               | FOS + 60M                         | 0.5                                     |
| 462       | 7.3080890               | 53.7519938               | FOS + 60M                         | 0.5                                     |
| 463       | 7.3122359               | 53.7592792               | FOS + 60M                         | 0.5                                     |
| 464       | 7.3163219               | 53.7665991               | FOS + 60M                         | 0.5                                     |
| 465       | 8.1651646               | 54.2978825               | FOS + 60M                         | 59.757                                  |
| 466       | 8.6955406               | 54.3010491               | 200M                              | 31.674                                  |