

**Appendix 1 Grand Canal Lengths and Estimated Flood Volumes**

|                  | Level Name | Water Level | Length | Est embanked length         | Embankment Condition | Depth | Avge Width | Volume | Spread Radius | Overflows   | Receiving Water                 | Intakes to Canal                                     | Historic Flooding  |                                       |
|------------------|------------|-------------|--------|-----------------------------|----------------------|-------|------------|--------|---------------|---|---------------------------------|--|--|---------------------------------------|
|                  |            | mOD         |        |                             |                      | km    | (m)        |        | m             |   |                                 |  |  |                                       |
| Grand Canal Dock | GCD        | 3.39        | 1.2    | 0                           |                      | 4.5   | 80         | 432000 | 742           |   |                                 | DCC Stormwater outfall Ringsend                      |  | Ringsend Sea Lock & Grand Canal Docks |
| Circular Line    | C1         | 4.12        | 0.2    | 0                           |                      | 2.02  | 12         | 4836   | 78            |   |                                 |  |  | Maquay Br.                            |
| Circular Line    | C2         | 6.98        | 0.2    | 0                           |                      | 2.20  | 12         | 5268   | 82            |   |                                 |  |  | Lr. Mount Street                      |
| Circular Line    | C3         | 9.85        | 0.4    | 0                           |                      | 2.21  | 12         | 10613  | 116           |   |                                 |  |  | Upr. Mount Street                     |
| Circular Line    | C4         | 12.45       | 0.6    | 0                           |                      | 2.06  | 12         | 14803  | 137           |   |                                 |  |  | Baggot Street                         |
| Circular Line    | C5         | 15.13       | 0.6    | 0                           |                      | 1.96  | 12         | 14119  | 134           |   |                                 |  |  | Leeson Street                         |
| Circular Line    | C6         | 18.05       | 0.4    | 0                           |                      | 2.10  | 12         | 10094  | 113           |   |                                 |  |  | Charlemont St.                        |
| Circular Line    | C7         | 20.68       | 2.4    | 0                           |                      | 1.97  | 12         | 56707  | 269           |   |                                 |  |  | Portobello                            |
| Main Line        | 1          | 24.90       | 0.6    | 300 NB                      | Fair                 | 1.99  | 12         | 14328  | 135           |   |                                 |  |  | Suir Road Bridge                      |
| Main Line        | 2          | 28.90       | 1.0    | 90 NB                       | Fair                 | 2.65  | 12         | 31848  | 201           | Overflow below 3rd Lock   | Camac River                     |  |  | Goldenbridge                          |
| Main Line        | 3          | 34.87       | 0.4    | 0                           |                      | 1.98  | 12         | 9494   | 110           |   |                                 |  |  | Blackhorse Bridge                     |
| Main Line        | 4          | 38.80       | 0.4    | 400 NB Slightly embanked    | Fair                 | 1.96  | 12         | 9427   | 110           |   |                                 |  |  |                                       |
| Main Line        | 5          | 41.90       | 0.4    | 400 NB&SB Slightly embanked | Fair                 | 2.61  | 12         | 12504  | 126           | Take-off point Dublin City Council above 5th Lock. Take-off point for CIE | DCC / CIE                       |  |  |                                       |
| Main Line        | 6          | 45.21       | 0.8    | 600 slightly embanked SB    | Fair                 | 2.04  | 12         | 19613  | 158           |   |                                 |  | Flooding of 5 no. businesses occurred including some damage due to vandalism at locks and bank overtopping Nov 2005 - measures since taken to reduce risk of this re-occurring |                                       |
| Main Line        | 7          | 48.89       | 0.8    | 130 NB&SB                   | Fair                 | 1.97  | 12         | 18912  | 155           |   |                                 |  |  | Ballyfermot Bridge                    |
| Main Line        | 8          | 51.59       | 1.8    | 0                           |                      | 2.19  | 12         | 47347  | 246           | Take-off point Dublin City Council at Filter beds above 8th Lock          | DCC                             |  |  |                                       |
| Main Line        | 9          | 56.16       | 0.4    | 500                         | Fair                 | 2.05  | 12         | 9835   | 112           |   |                                 |  |  | Clondalkin Bridge                     |
| Main Line        | 10         | 59.32       | 0.4    | 180                         | Fair                 | 2.28  | 12         | 10925  | 118           |   |                                 |  |  |                                       |
| Main Line        | 11         | 62.47       | 3.0    | 0                           |                      | 2.02  | 12         | 72648  | 304           | Griffeen Overflow   | Griffeen River                  |  |  |                                       |
| Main Line        | 12         | 66.05       | 7.4    | 1400 NB 450 SB              | Fair                 | 1.99  | 12         | 176534 | 474           | Behans overflow   | Shinkeen River                  |  |  | Lucan Road Bridge                     |
| Main Line        | 13         | 71.16       | 6.0    | 1250 NB 900 SB              | Fair                 | 2.05  | 12         | 147600 | 434           |   |                                 | Morrell below lock 14                                | Flooding occurred in Ardclough village in winter 2009, canal bank overtopping likely contributing to this - the bank has since been raised.                                    |                                       |
| Main Line        | 14         | 73.12       | 0.6    | 180 NB 0 SB                 | Fair                 | 2.06  | 12         | 14810  | 137           |   |                                 |  |  | Devonshire Bridge                     |
| Main Line        | 15         | 75.73       | 7.2    | 600 NB 320 SB               | Fair                 | 2.01  | 12         | 173837 | 470           | Lein Aqueduct overflow / overflow to Morrell @ 15th Lock                  | Liffey & Morrell Rivers         | Monread east of Sallins                              |  |                                       |
| Main Line        | 16         | 78.32       | 1.0    | 0                           |                      | 1.94  | 12         | 23340  | 172           |   |                                 |  |  | Digby Bridge                          |
| Main Line        | 17         | 81.07       | 1.4    | 90 NB                       | Fair                 | 2.07  | 12         | 34810  | 211           |   |                                 |  |  | Landenstown Bridge                    |
| Main Line        | 18         | 82.45       | 6.6    | 1100 NB 900 SB              | Poor                 | 1.93  | 12         | 152777 | 441           |   |                                 | Milltown Feeder                                      |  | Bog of Moods Roberstown               |
| Naas Branch      | Naas       | varies      | 5.0    | 0                           |                      | 2.00  | 12         | 120000 | 391           | Overflow Between Locks N2 & N3  | From bypass drain / Rathasker   | Rathasker in Naas Harbour                            |  |                                       |
| Corbally Branch  | Corbally   | n/k         | 8.0    | 1200WB 200 EB               |                      | 1.50  | 12         | 144000 | 428           | 2 Overflows   | Via drains to Liffey            | 2 Intakes - Corbally Harbour & Hoares Bridge         |  |                                       |
| Main Line        | 19         |             |        |                             |                      |       |            |        | 0             |   |                                 |  |  | Lowtown (Summit Level)                |
| Main Line        | 20         |             | 14.5   | 12500                       | 2500 Soft            | 2.00  | 12         | 348000 | 666           |   | Gravity Overflow to Slate River |  | Aug 93 Approx 20000 - 30000 cumecs flooding 3 houses inconvenienced during replacement of culvert  | Allenwood                             |
| Edenderry Branch |            |             |        |                             |                      |       |            |        | 0             |   |                                 |  |  | Edenderry Harbour                     |
| Main Line        | 21         |             | 31.5   | 25500                       | 22500 Soft           | 2.00  | 12         | 756000 | 981           | Overflows to Boyne, Barrow & Tullamore/Brosna                             |                                 | 7 Uncontrolled drains between Daingean & Ballycommon |  | Edenderry / Daingean                  |
| Main Line        | 22         |             | 1.4    | 1400                        | Solid                | 2.00  | 12         | 33600  | 207           | Overflow to Tullamore / Brosna Rivers                                     |                                 |  |  | Ballycommon                           |
| Main Line        | 23         |             | 0.6    | 600                         | Solid                | 2.00  | 12         | 14400  | 135           | Overflow to Tullamore / Brosna Rivers                                     |                                 |  |  | Capperoe Bridge                       |
| Main Line        | 24         |             | 3      | 300                         | Solid                | 2.00  | 12         | 72000  | 303           | Overflow to Tullamore / Brosna Rivers                                     |                                 |  |  |                                       |
| Main Line        | 25         |             | 0.6    | 600                         | Solid                | 2.00  | 12         | 14400  | 135           | Overflow to Tullamore / Brosna Rivers                                     |                                 |  |  |                                       |
| Main Line        | 26         |             | 0.8    | 800                         | Soft                 | 2.00  | 12         | 19200  | 156           | Overflow to Tullamore / Brosna Rivers                                     |                                 |  |  | Cappincur Bridge                      |
| Tullamore Branch |            |             |        |                             |                      |       |            |        | 0             |   |                                 |  |  | Tullamore Harbour                     |
| Main Line        | 27         |             | 3      | 2500                        | 1500 Soft            | 2.00  | 12         | 72000  | 303           | Overflow to Tullamore / Brosna Rivers                                     |                                 |  |  | Tullamore                             |
| Main Line        | 28         |             | 0.4    | 400                         | Solid                | 2.00  | 12         | 9600   | 111           |   |                                 |  |  |                                       |
| Main Line        | 29         |             | 3.4    | 3400                        | Solid                | 2.00  | 12         | 81600  | 322           | Overflow to Tullamore / Brosna Rivers                                     |                                 |  |  | Ballycowan Bridge                     |
| Main Line        | 30         |             | 7      | 7000                        | Solid                | 2.00  | 12         | 168000 | 462           | Overflows to Tullamore, Clodiagh/Brosna Rivers                            |                                 | Newtown Supply                                       |  | Ballinloughin Bridge                  |
| Main Line        | 31         |             | 0.8    | 800                         | Solid                | 2.00  | 12         | 19200  | 156           | Overflow to Brosna  |                                 |  |  | Cornalour Bridge                      |
| Main Line        | 32         |             | 15.6   | 14800                       | 14000 Soft           | 2.00  | 12         | 374400 | 690           | Overflow to Silver Brosna Rivers  |                                 | Derrycooley Supply                                   |  | Pollagh                               |
| Main Line        | 33         |             | 2      | 2000                        | Solid                | 2.00  | 12         | 48000  | 247           | Gravity Overflow to Brosna  |                                 |  |  | Belmont Bridge                        |
| Main Line        | 34         |             | 3.6    | 2800                        | Solid                | 2.00  | 12         | 86400  | 332           | Brosna River  |                                 |  |  | Clononey Bridge                       |
| Main Line        | 35         |             | 2      | 800                         | Solid                | 2.00  | 12         | 48000  | 247           | Brosna / Shannon Rivers   |                                 |  |  | Shannon Harbour                       |
| Main Line        | 36         |             | 0.4    | 200                         |                      | 2.00  | 12         | 9600   | 111           |   |                                 |  |  | Junction with Shannon                 |
| Barrow Line      | 19         |             | 2.6    | 500                         | Fair                 | 2.0   | 12         | 62400  | 282           |   |                                 |  |  | Lowtown                               |
| Barrow Line      | 20         |             | 3.4    | 800                         | Fair                 | 2.0   | 12         | 81600  | 322           |   |                                 |  |  |                                       |
| Barrow Line      | 21         |             | 0.2    | 200                         | Fair                 | 2.0   | 12         | 4800   | 78            |   |                                 |  |  |                                       |
| Barrow Line      | 22         |             | 4.8    | 4800                        | Fair                 | 2.0   | 12         | 115200 | 383           |   |                                 | White Eye Supply                                     |  |                                       |
| Barrow Line      | 23         |             | 4.8    | 2600                        | Fair                 | 2.0   | 12         | 115200 | 383           |   |                                 |  |  | Rathangan                             |
| Barrow Line      | 24         |             | 7.6    | 3600                        | Fair                 | 2.0   | 12         | 182400 | 482           |   |                                 |  |  |                                       |
| Barrow Line      | 25         |             | 2.4    | 1000                        | Fair                 | 2.0   | 12         | 57600  | 271           |   |                                 |  |  | Monasterevin                          |
| Barrow Line      | 26         |             | 21.0   | 8000                        | Fair                 | 2.0   | 12         | 504000 | 801           |   |                                 | Annaknock Supply                                     |  |                                       |
| Barrow Line      | 27         |             | 0.8    | 0                           |                      | 2.0   | 12         | 19200  | 156           |   |                                 |  |  |                                       |
| Barrow Line      | 28         |             | 0.4    | 0                           |                      | 2.0   | 12         | 9600   | 111           |   |                                 |  |  | Athy                                  |

Notes: NB - North Bank SB - South Bank Occasional ponding around at locks during boat movements - not considered as flooding