

## Appendix 10.8

### Construction Noise Predictions

**Table 16: Construction Plant Assumptions for Demolition Works**

| Equipment                    | Quantity | On time<br>(% of day) | Sound Power Level<br>dB(A) | Sound Pressure Level<br>Lp@10m dB(A) | Data Source | BS 5228-1 Description                                       |
|------------------------------|----------|-----------------------|----------------------------|--------------------------------------|-------------|-------------------------------------------------------------|
| 35T Excavator                | 2        | 90                    | 117                        | 86                                   | C1.13       | Tracked excavator, 205 kW, - 40t                            |
| Breaker on tracked excavator | 1        | 40                    | 114                        | 90                                   | C1.09       | Breaker mounted on excavator, 121kW, - (15t) 1650kg breaker |
| Crusher                      | 1        | 50                    | 109                        | 84                                   | C1.15       | Tracked Crusher                                             |

**Table 17: Construction Plant Assumptions for Earthworks and Site Infrastructure**

| Equipment              | Quantity | On time<br>(% of day) | Sound Power Level<br>dB(A) | Sound Pressure Level<br>Lp@10m dB(A) | Data Source | BS 5228-1 Description                            |
|------------------------|----------|-----------------------|----------------------------|--------------------------------------|-------------|--------------------------------------------------|
| 70T tracked excavator  | 1        | 90                    | 107                        | 79                                   | C2.14       | Tracked Excavator, 226 kW - 40t                  |
| 40T tracked excavator  | 2        | 90                    | 110                        | 79                                   | C2.14       | Tracked Excavator, 226 kW - 40t                  |
| 30T tracked excavator  | 2        | 90                    | 105                        | 75                                   | C2.16       | Tracked Excavator, 170 kW - 30t                  |
| 30T articulated dumper | 4        | 90                    | 115                        | 81                                   | C4.1        | Articulated dump truck*, 194 kW - 25t            |
| 18T tracked dozer      | 2        | 90                    | 111                        | 81                                   | C2.12       | Dozer, 142 kW - 20t                              |
| 20T single drum roller | 2        | 90                    | 110                        | 79                                   | C2.37       | Roller (rolling fill)*, 145 kW - 18t             |
| Tractor                | 2        | 40                    | 117                        | 90                                   | 0           | Tractor (adjusted, C4.04 Dumper Spectrum +10 dB) |
| Road paver             | 1        | 60                    | 102                        | 77                                   | C5.31       | Asphalt paver (+tipper lorry), 94 kW - 18t       |

**Table 18: Construction Plant Assumptions for Groundworks**

| Equipment                   | Quantity | On time<br>(% of day) | Sound Power Level<br>dB(A) | Sound Pressure Level<br>Lp@10m dB(A) | Data<br>Source | BS 5228-1 Description                                          |
|-----------------------------|----------|-----------------------|----------------------------|--------------------------------------|----------------|----------------------------------------------------------------|
| 20T Tracked Excavator       | 2        | 60                    | 107                        | 78                                   | C2.3           | Tracked Excavator, 102 kW - 22t                                |
| 12T Tracked Excavator       | 2        | 60                    | 105                        | 76                                   | C2.5           | Tracked Excavator, 72 kW - 16t                                 |
| 12T Dumper                  | 4        | 40                    | 98                         | 74                                   | C2.32          | Articulated dump truck (tipping fill), 187 kW - 23t            |
| Twin roller                 | 2        | 30                    | 105                        | 79                                   | C2.37          | Roller (rolling fill)*, 145 kW - 18t                           |
| Disc cutter                 | 5        | 5                     | 109                        | 87                                   | C5.36          | Hand-held circular saw (petrol), 3 kW - 300mm diameter / 9.2kg |
| Delivery vehicles (lorries) | 10       | 3                     | 106                        | 83                                   | C11.20         | Lorry*, 160 kW - 18t                                           |

**Table 19: Construction Plant Assumptions for Groundworks**

| Equipment              | Quantity | On time<br>(% of day) | Sound Power Level<br>dB(A) | Sound Pressure Level<br>Lp@10m dB(A) | Data<br>Source | BS 5228-1 Description                                          |
|------------------------|----------|-----------------------|----------------------------|--------------------------------------|----------------|----------------------------------------------------------------|
| 35T excavator          | 2        | 90                    | 110                        | 79                                   | C2.14          | Tracked Excavator, 226 kW - 40t                                |
| 35T Dumpers            | 4        | 90                    | 115                        | 81                                   | C4.01          | Articulated dump truck*, 194 kW - 25t                          |
| D6 Dozer               | 1        | 70                    | 107                        | 81                                   | C2.12          | Dozer, 142 kW - 20t                                            |
| 20T vibrating rollers  | 2        | 70                    | 110                        | 81                                   | C5.22          | Vibratory roller*, 92 kW - 12t                                 |
| 20T tracked excavators | 3        | 60                    | 108                        | 78                                   | C2.03          | Tracked Excavator, 102 kW - 22t                                |
| twin drum rollers      | 2        | 30                    | 105                        | 80                                   | C2.37          | Roller (rolling fill)*, 145 kW - 18t                           |
| 9T dumpers             | 4        | 30                    | 104                        | 76                                   | C4.04          | Dumper*, 75 kW - 9t                                            |
| Disc Cutters           | 2        | 5                     | 105                        | 87                                   | C5.36          | Hand-held circular saw (petrol), 3 kW - 300mm diameter / 9.2kg |
| Asphalt paver          | 1        | 60                    | 102                        | 77                                   | C5.31          | Asphalt paver (+tipper lorry), 94 kW - 18t                     |
| 10T rollers            | 2        | 50                    | 108                        | 80                                   | C2.37          | Roller (rolling fill)*, 145 kW - 18t                           |
| Floor saw              | 1        | 5                     | 100                        | 85                                   | C4.71          | Circular bench saw (petrol-cutting concrete blocks)            |
| Hand held breaker      | 1        | 5                     | 102                        | 87                                   | C5.04          | Road breaker (hand-held pneumatic)                             |