



APPENDIX 7.2 - CONSTRUCTION PLANT AND MACHINERY

Not updated



Assumed Plant – Site Clearance

| PLANT DESCRIPTION | PLANT TYPE (BS 5228) | REF. BS 5228 | L _{AEQ} @ 10M (DB) |
|------------------------------------|--|-----------------|--------------------------------|
| Breaker mounted on wheeled backhoe | Breaking up concrete : Pulverizer mounted on excavator C.1 #4 | C.01 #4 | 76 |
| Diesel water pump | Pumping surface water: Diesel water pump C.11 #1 | C.11 #1 | 81 |
| Dozer | Ground excavation/earthworks: Dozer C.2 #12 | C.02 #12 | 81 |
| Articulated dump truck | Distribution of materials : Articulated dump truck ж C.4 #1 | C.04 #1 | 81 |
| Tracked excavator (idling) | Ground excavation/earthworks: Tracked excavator (idling) C.2 #20 | C.02 #20 | 68 |
| Tracked excavator | Ground excavation/earthworks: Tracked excavator C.2 #19 | C.02 #19 | 77.0 |

Assumed Plant – Earthworks

| PLANT DESCRIPTION | PLANT TYPE (BS 5228) | REF. BS 5228 | L _{AEQ} @ 10M (DB) |
|---|--|-----------------|--------------------------------|
| Dozer | Ground excavation/earthworks: Dozer C.2 #12 | C.02 #12 | 81 |
| Articulated dump truck (tipping fill) | Distribution of material : Articulated dump truck (tipping fill) C.2 #32 | C.02 #32 | 74 |
| Articulated dump truck | Distribution of material : Articulated dump truck ж C.2 #33 | C.02 #33 | 81 |
| Hydraulic vibratory compactor (tracked excavator) | Rolling and compaction : Hydraulic vibratory compactor (tracked excavator) C.2 #42 | C.02 #42 | 78 |
| Tracked excavator (idling) | Ground excavation/earthworks: Tracked excavator (idling) C.2 #20 | C.02 #20 | 68 |



Assumed Plant – Road and Junction Construction

| PLANT DESCRIPTION | PLANT TYPE (BS 5228) | REF. BS 5228 | L _{AEQ} @ 10M (DB) |
|---------------------------------------|--|-----------------|--------------------------------|
| Tracked excavator | Earthworks : Tracked excavator C.5 #18 | C.05 #18 | 80.0 |
| Vibratory compactor (asphalt) | Rolling and compaction : Vibratory compacter (asphalt) C.5 #29 | C.05 #29 | 82 |
| Asphalt paver (+ tipper lorry) | Paving : Asphalt paver (+ tipper lorry) C.5 #31 | C.05 #31 | 77 |
| Dozer | Spreading chipping/fill : Dozer C.5 #13 | C.05 #13 | 82 |
| Road planer | Road planing : Road planer C.5 #7 | C.05 #7 | 82 |
| Road planer (idling) | Road planing : Road planer (idling) C.5 #8 | C.05 #8 | 62 |
| Diesel water pump | Pumping surface water: Diesel water pump C.11 #2 | C.11 #2 | 71 |
| Articulated dump truck (tipping fill) | Distribution of material : Articulated dump truck (tipping fill) C.2 #32 | C.02 #32 | 74 |
| Articulated dump truck | Distribution of material : Articulated dump truck x C.2 #33 | C.02 #33 | 81 |

Assumed Plant – Site Compound Setup

| PLANT DESCRIPTION | PLANT TYPE (BS 5228) | REF. BS 5228 | L _{AEQ} @ 10M (DB) |
|--|--|-----------------|--------------------------------|
| Tracked excavator (idling) | Ground excavation/earthworks: Tracked excavator (idling) C.2 #20 | C.02 #20 | 68 |
| Tracked excavator | Ground excavation/earthworks: Tracked excavator C.2 #19 | C.02 #19 | 77 |
| Roller | Rolling and compaction : Roller x C.2 #38 | C.02 #38 | 73 |
| 8 wheeler lorry | Distribution of material : Lorry x C.2 #34 | C.02 #34 | 80 |
| Small dumper (9T) | Distribution of materials : Dumper x C.4 #4 | C.04 #4 | 76 |
| Small dumper (9T) (idling) | Distribution of materials : Dumper (idling) C.4 #5 | C.04 #5 | 63 |
| Generator* | Generator | M.01 #2 | 66 |
| * Library data for 100kVA generator used | | | |



SOAEL and LOAEL Construction Noise Assessment Thresholds at Receptors

| RECEPTOR | SOAEL | LOAEL |
|---|---|-------------------------------------|
| | ABC THRESHOLD VALUE, DB $L_{AEQ,T}$ AND ABC CATEGORY (IN BRACKETS) | AMBIENT NOISE LEVEL, DB $L_{AEQ,T}$ |
| R1 - Farrenden | 75 (C) | 66 |
| R2 - Greenfields Farm | 70 (B) | 63 |
| R3 - Lyndhurst | 70 (B) | 61 |
| R4 - Downview Road | 65 (A) | 46 |
| R5 - Chantry Mead | 65 (A) | 46 |
| R6 - Murrell Gardens | 65 (A) | 50 |
| R7 - Greenoaks | 65 (A) | 60 |
| Day (weekdays 07:00 – 19:00 and Saturday 07:00 – 13:00) | | |

Predicted Construction Noise Levels at Receptors

| RECEPTOR | PREDICTED NOISE LEVEL, $L_{AEQ,T}$ DB FREE-FIELD | | | |
|-----------------------|--|------------|------------------------------|---------------------|
| | Site Clearance | Earthworks | Road + Junction Construction | Site Compound Setup |
| R1 - Farrenden | 81 | 80 | 81 | 60 |
| R2 - Greenfields Farm | 75 | 74 | 76 | 54 |
| R3 - Lyndhurst | 69 | 68 | 70 | 52 |
| R4 - Downview Road | 66 | 65 | 67 | 37 |
| R5 - Chantry Mead | 77 | 76 | 77 | 45 |
| R6 - Murrell Gardens | 79 | 78 | 79 | 50 |
| R7 - Greenoaks | 77 | 76 | 77 | 53 |



Predicted Maximum PPV Levels from vibratory rollers or compactors

| RECEPTOR | VIBRATORY ROLLERS OR COMPACTORS - STEADY STATE OPERATION, MAXIMUM PPV MMS⁻¹ | VIBRATORY ROLLERS OR COMPACTORS - START UP AND RUNDOWN, MAXIMUM PPV MMS⁻¹ |
|-----------------------|---|---|
| R1 - Farrenden | 1.74 | 2.39 |
| R2 - Greenfields Farm | 0.79 | 1.20 |
| R3 - Lyndhurst | 0.32 | 0.55 |
| R4 - Downview Road | 0.20 | 0.37 |
| R5 - Chantry Mead | 0.98 | 1.46 |
| R6 - Murrell Gardens | 1.27 | 1.82 |
| R7 - Greenoaks | 0.98 | 1.46 |
| 50m from plant | 0.47 | 0.77 |