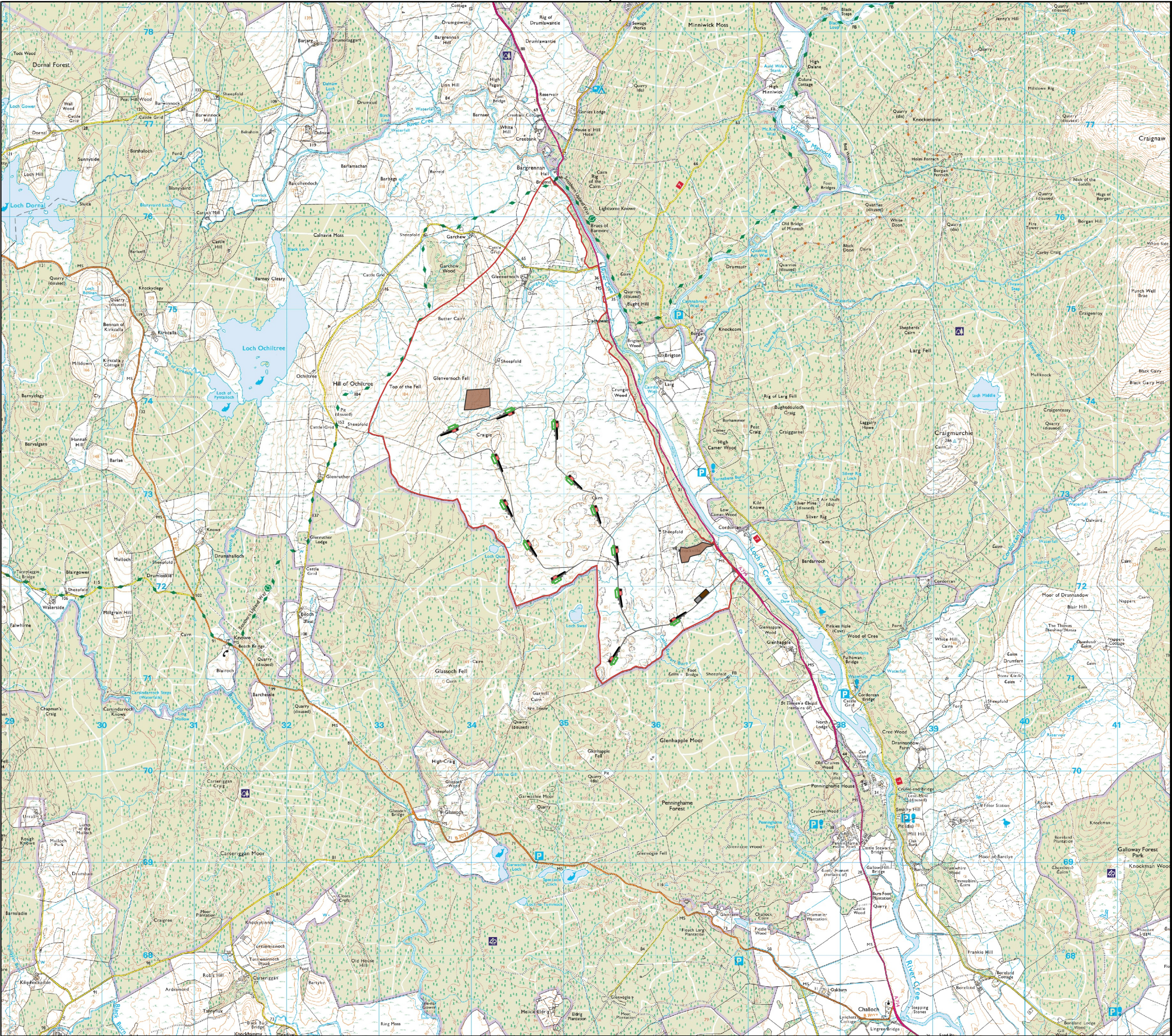




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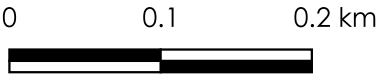
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Figure 3.1 Site Layout Plan

Key:

- Planning Application Area
- Wind Turbine Locations
- WTG Foundations
- Access Tracks
- Crane Pad
- Component Storage Area
- Hardstanding
- Cleared Working Area
- Construction Compound
- 132kV Substation
- Borrow Pit Search Area



Drawn by: GO Scale: 1:25,000 @ A3
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Figure 3.2: Typical Turbine Elevation

NOTES:

For indicative purposes only

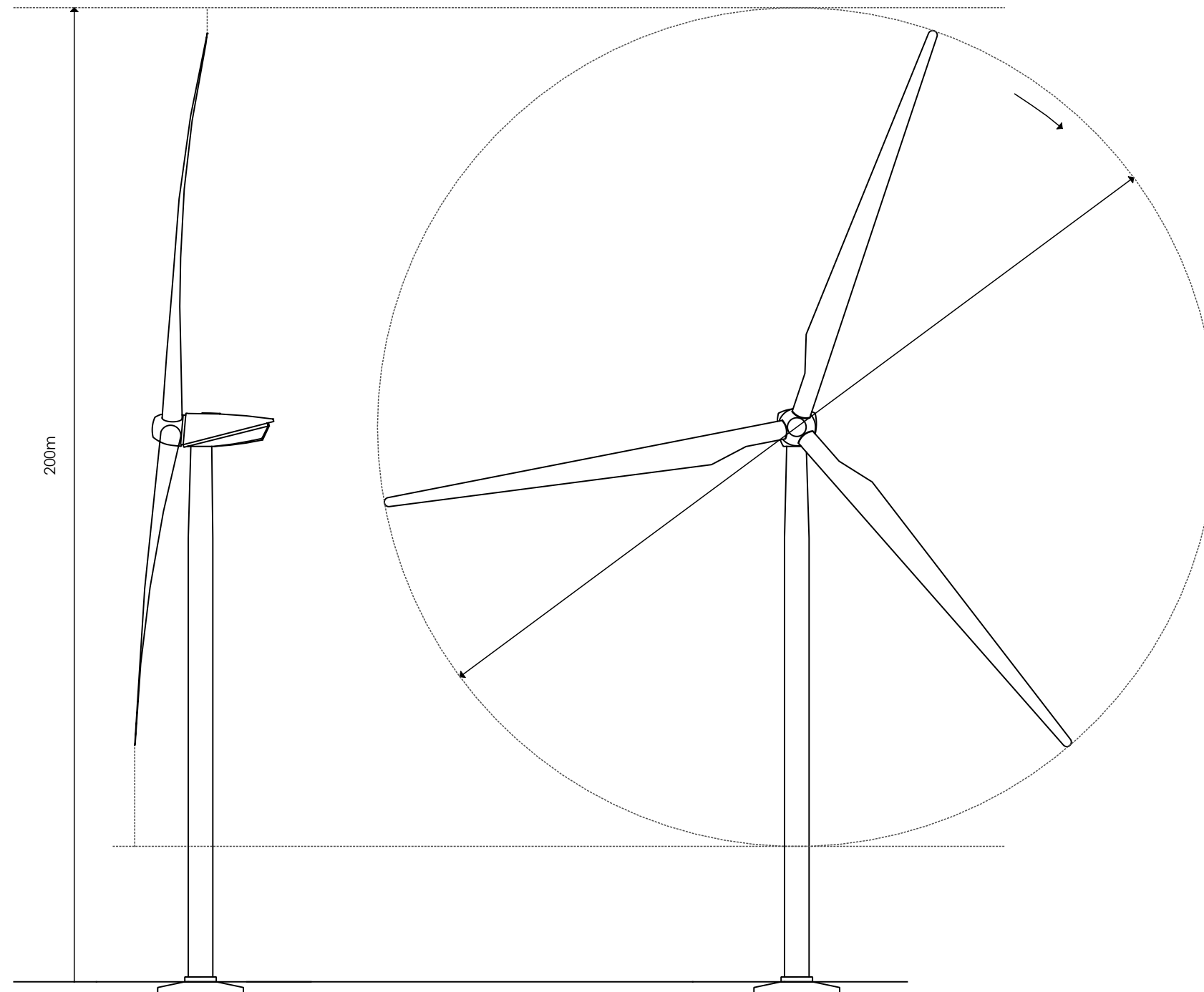


Figure 3.3: Typical Turbine Foundations

KEY:

-  Turbine Base
-  Area accessible to Vehicles
-  Assumed Foundation
-  Ramp
-  Hardstanding
-  Undisturbed ground
-  Infill
-  Selected Top soil

NOTES:

For indicative purposes only



Hardstanding

Ramp

Area accessible
to vehicles

20m

4m

Ramp

max 1.1m

Selected top soil

Selected infill material

Undisturbed ground

Figure 3.4: Typical Track Cross Sections

KEY:

-  Access Track
-  Geotextile Membrane
-  Graded Gravel
-  Subgrade
-  Structural Fill
-  Landscaping
-  Gradient
-  Cable Trench

NOTES:

1. Track width will vary depending on turbine choice, local ground conditions and at corners and crossing points.
2. The proximity of cable trenches to tracks will vary.
3. Landscaping will utilise excavated material where suitable. Spoil management will be in line with best practice.
4. Swale design will vary.

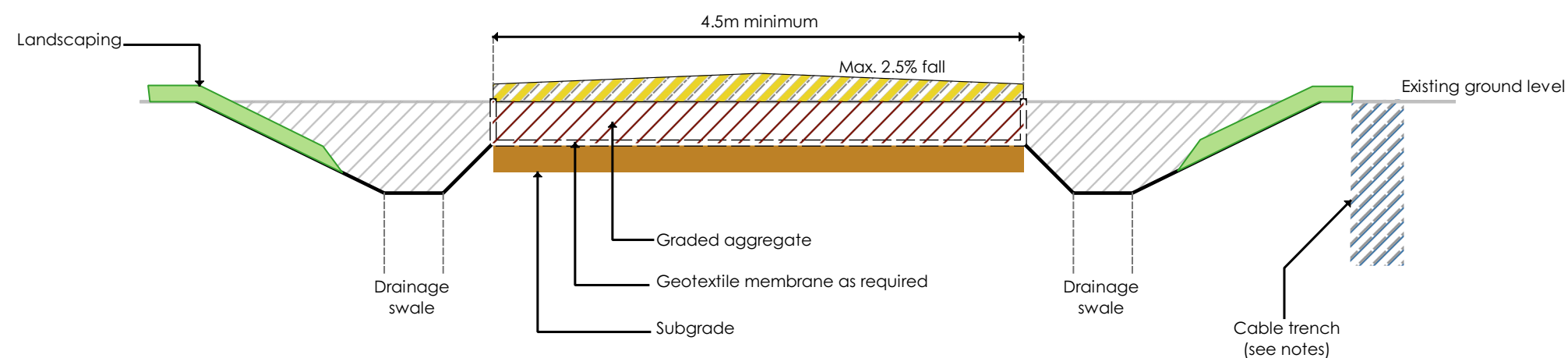
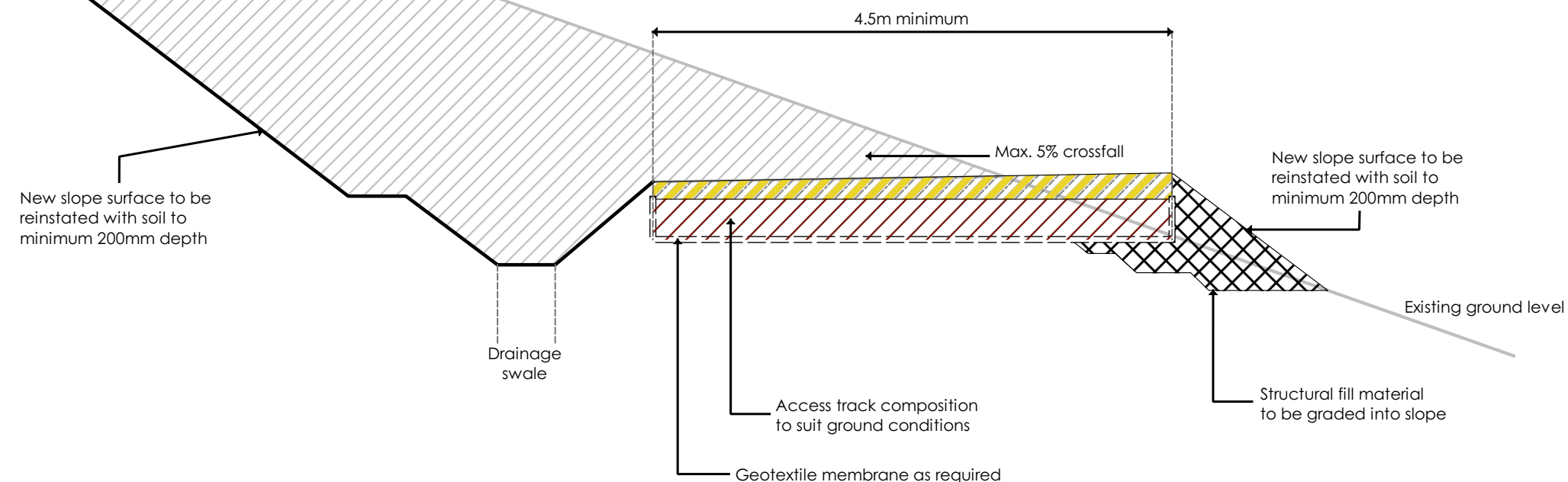
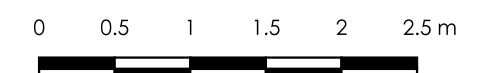
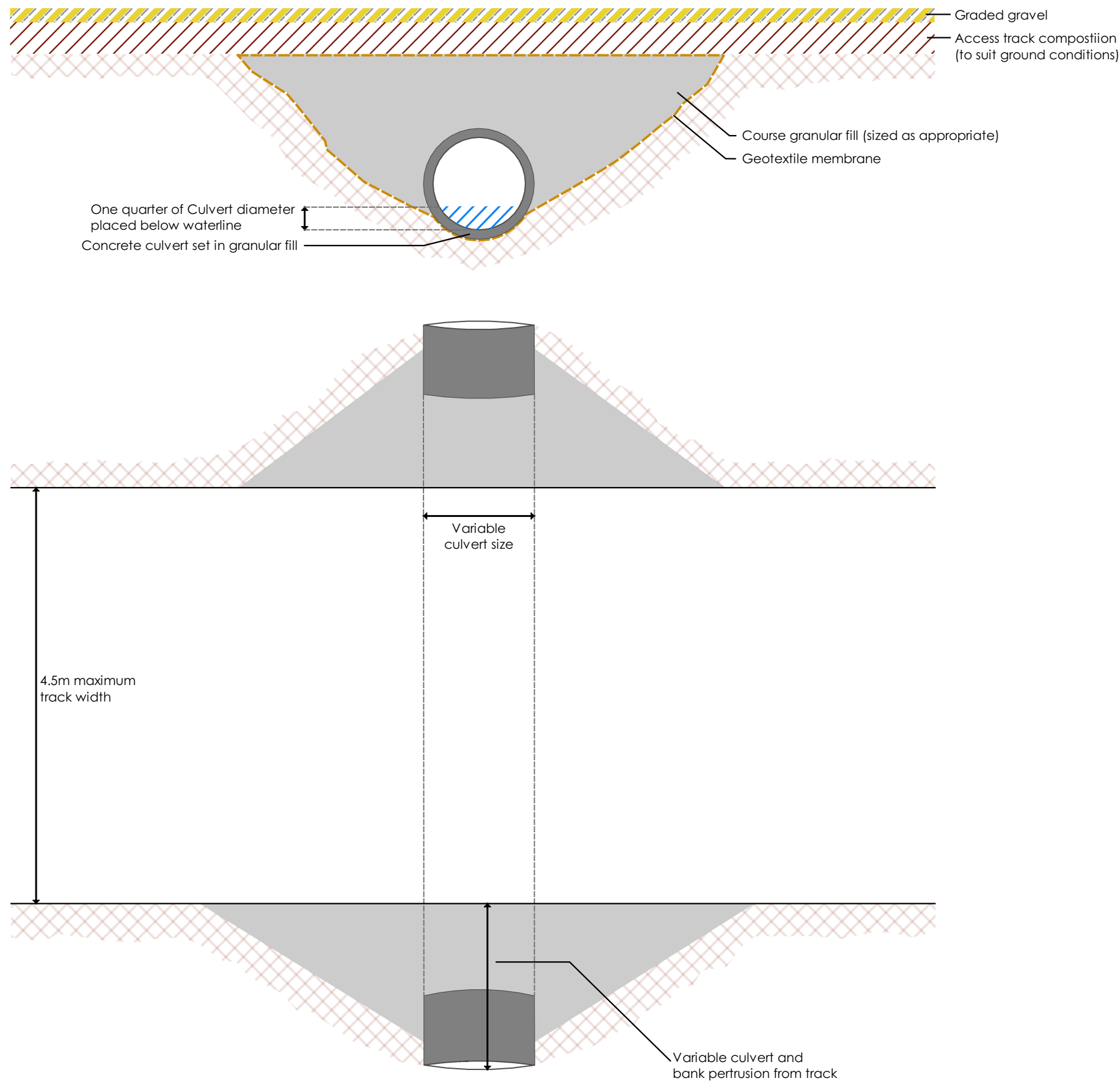


Figure 3.5: Typical Watercourse Corssing

KEY:

-  Geotextile Membrane line
-  Water
-  Culvert
-  Geotextile Membrane
-  Soil
-  Granular Fill
-  Access Track
-  Graded Gravel



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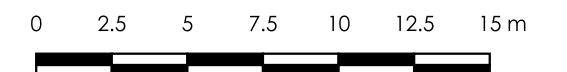
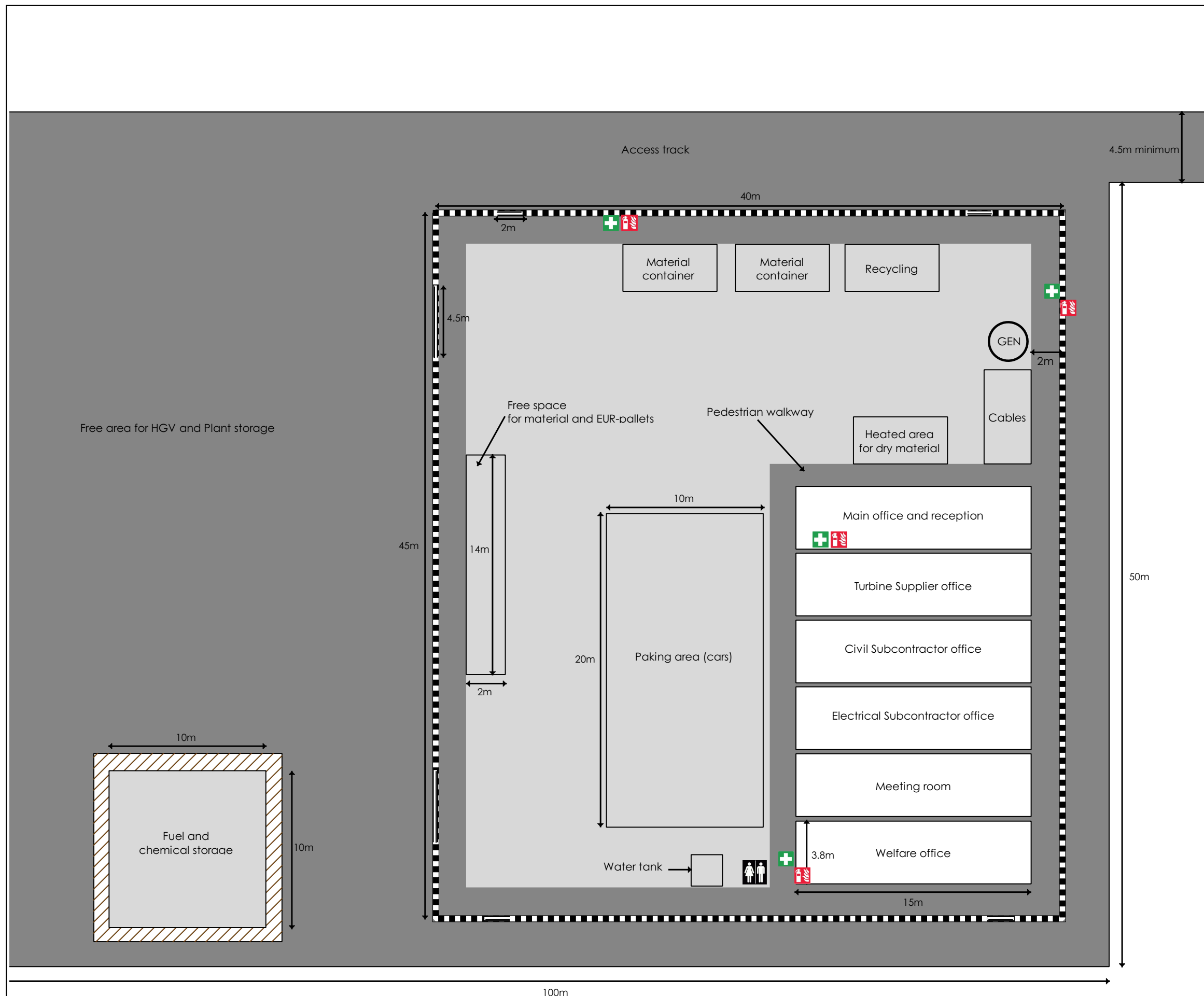
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Figure 3.6: Typical Construction Compound

KEY:

-  GEN
-  Entrance Gates
-  Compound areas
-  Areas for construction compound
-  Bunding
-  Perimeter Fence
-  Parking Area
-  Free area





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Figure 3.7: Typical Crane Hardstanding

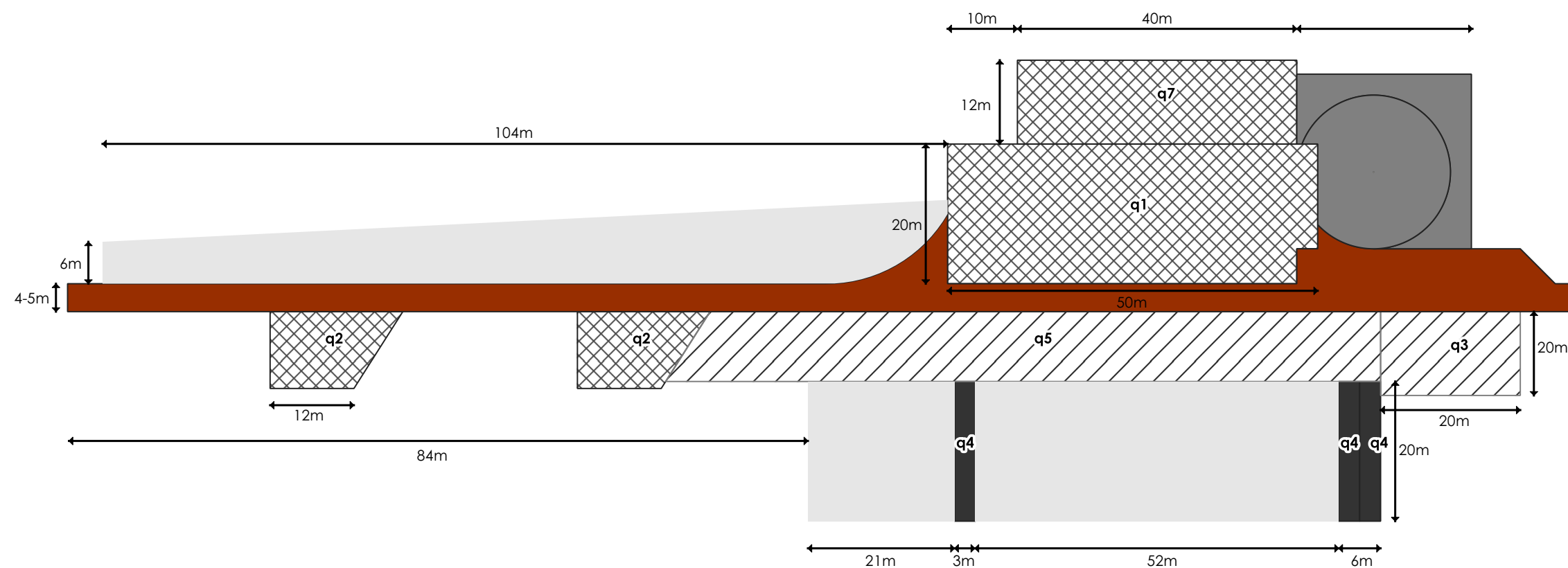
KEY:

- Foundation area
- Hardstanding
- Site road
- Storage areas for components & containers
- Trestle area for blades
- Cleared area prepared as working area

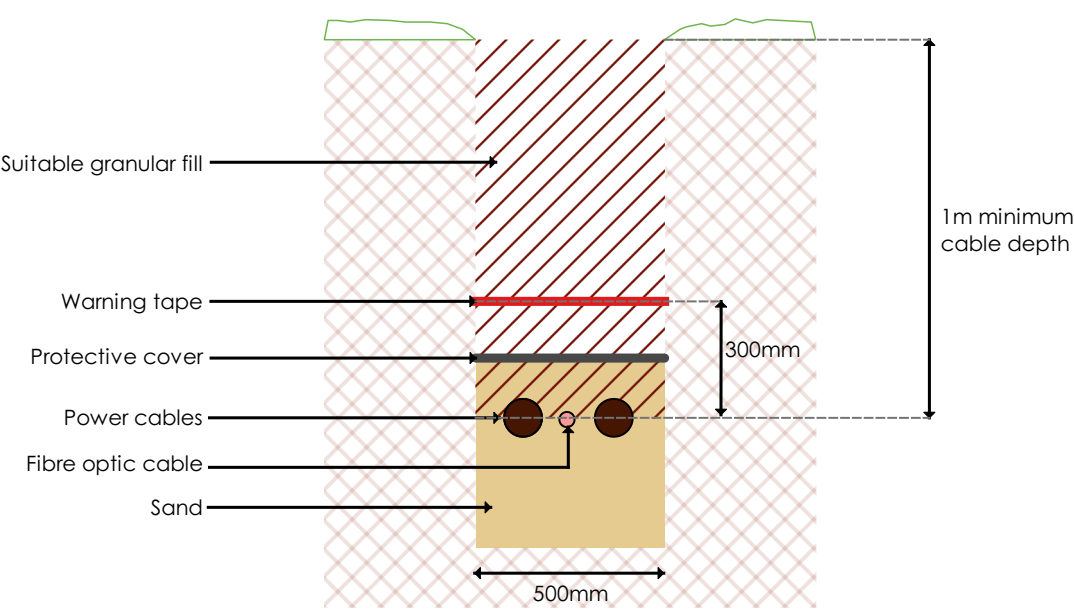
NOTES:

- q1: Hardstand for Main Crane
- q2: Hardstand for Assist Crane
- q3: Storage/Assembly Area
- q4: Trestle area for blades
- q5: Storage area for components
- q6: Hardstand for Boom Assembly
- q7: Hardstand for Superlift ballast

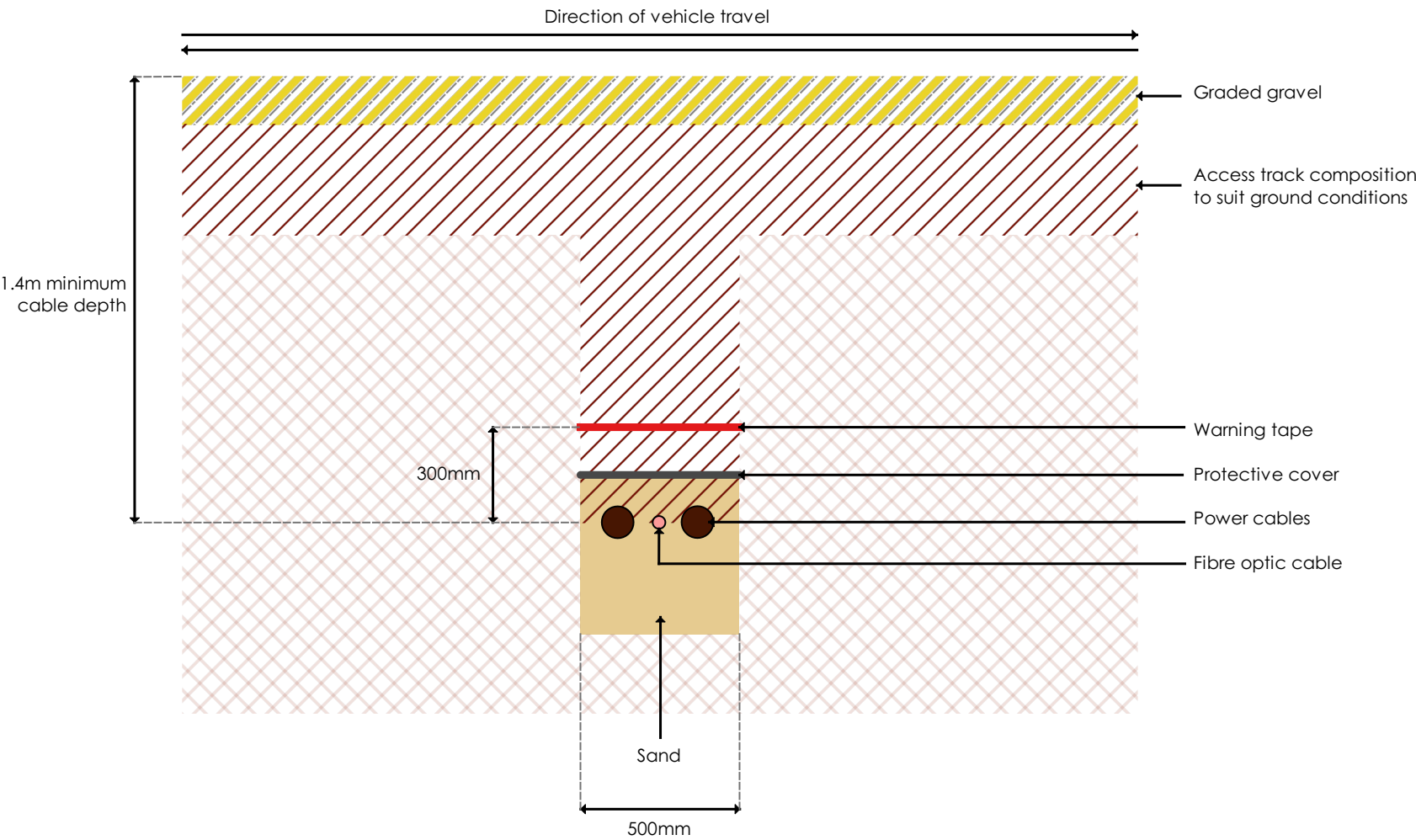
All measurements are for indicative purposes only



TYPICAL PARALLEL TRENCH



TYPICAL PARALLEL TRENCH



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Figure 3.8: Typical Trench Design

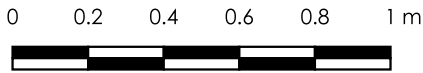
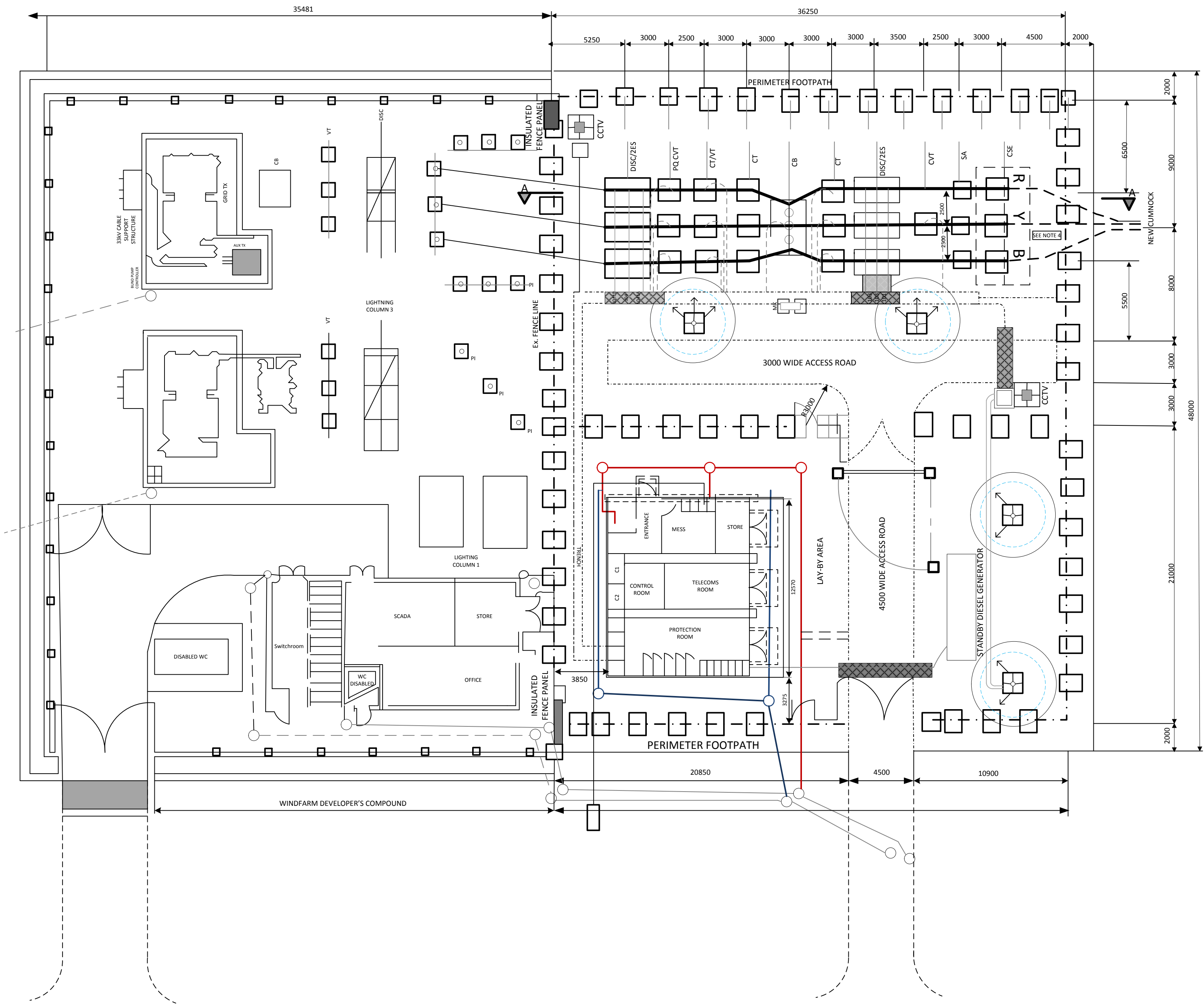


Figure 3.9 : Typical 132kV Substation Floor Plan



MINIMUM CLEARANCES:
ALL CLEARANCES SHOULD BE IN ACCORDANCE WITH THE REQUIREMENTS OF NGTS 2.1

NOMINAL SYSTEM VOLTAGE- 132kV
PHASE TO EARTH CLEARANCE 'E'
PHASE TO PHASE CLEARANCE 'P'
SECTION CLEARANCE 'S'
SURGE ARRESTER CLEARANCE 'D'
INSULATION HEIGHT (PEDESTRIAN ACCESS)

ALL EQUIPMENT MUST BE DESIGNED TO COMPLY WITH SAFETY DISTANCES AS DETAILED IN SECTION A2.3 OF SCOTTISH POWER SAFETY RULES (ELECTRICAL AND MECHANICAL HANDBOOK)

NOTES:
1. WINDFARM DEVELOPERS COMPOUND IS INDICATIVE ONLY
2. ALL DIMENSIONS ARE IN MILLIMETRES (MM) UNLESS OTHERWISE STATED
3. AN ADDITIONAL CLEARANCE OF 300MM SHALL BE MAINTAINED FROM THE BOTTOM OF THE INSULATORS SUPPORTING EXPOSED HV CONDUCTORS TO THE MINIMUM INSULATION HEIGHT GIVEN ABOVE
4. 132kV CABLE SEALING END AND STRUCTURE TO BE SUPPLIED AND INSTALLED BY THE CABLE CONTRACTOR
5. 132kV BUSBARS FROM DISCONNECTOR 104 TO WF DEVELOPERS COMPOUND TO BE SUPPLIED AND INSTALLED BY THE WF DEVELOPER (REFER TO POWER SYSTEMS DRG No. 15975-20)

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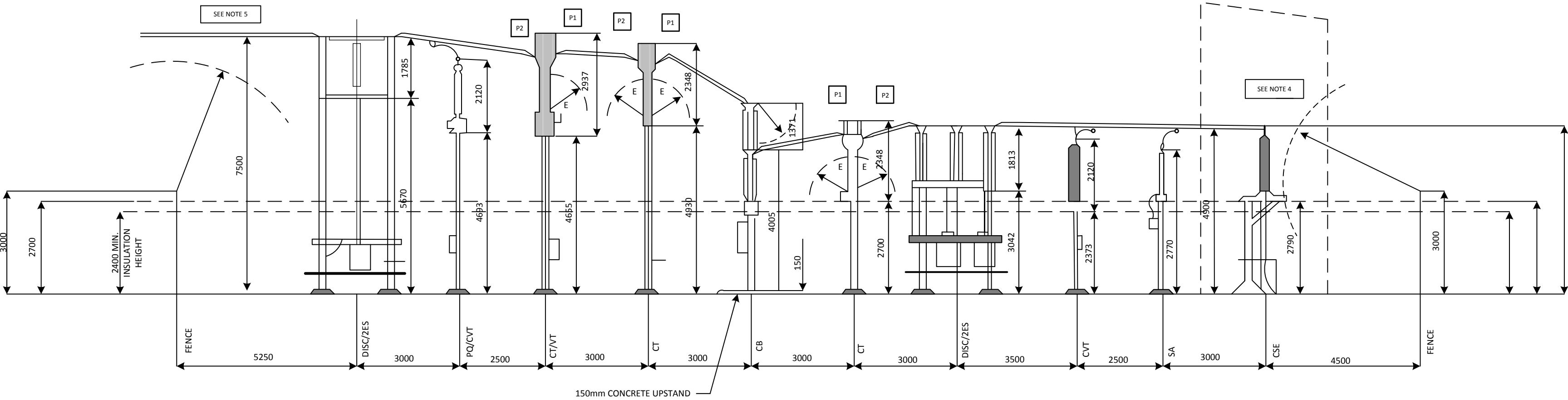


Figure 3.10: Typical 132kV Substation Section A-A

MINIMUM CLEARANCES:
ALL CLEARANCES SHOULD BE IN ACCORDANCE WITH THE REQUIREMENTS OF NGTS 2.1

NOMINAL SYSTEM VOLTAGE- 132kV
PHASE TO EARTH CLEARANCE ‘E’
PHASE TO PHASE CLEARANCE ‘P’
SECTION CLEARANCE ‘S’
SURGE ARRESTER CLEARANCE ‘D’
INSULATION HEIGHT (PEDESTRIAN ACCESS)

ALL EQUIPMENT MUST BE DESIGNED TO COMPLY WITH SAFETY DISTANCES AS DETAILED IN SECTION A2.3 OF SCOTTISH POWER SAFETY RULES (ELECTRICAL AND MECHANICAL HANDBOOK)

- NOTES:
- 1. WINDFARM DEVELOPERS COMPOUND IS INDICATIVE ONLY
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 - 3. AN ADDITIONAL CLEARANCE OF 300MM SHALL BE MAINTAINED FROM THE BOTTOM OF THE INSULATORS SUPPORTING EXPOSED Hv CONDUCTORS TO THE MINIMUM INSULATION HEIGHT GIVEN ABOVE
 - 4. 132kV CABLE SEALING END AND STRUCTURE TO BE SUPPLIED AND INSTALLED BY THE CABLE CONTRACTOR
 - 5. 132kV BUSBARS FROM DISCONNECTOR 104 TO WF DEVELOPERS COMPOUND TO BE SUPPLIED AND INSTALLED BY THE WF DEVELOPER (REFER TO POWER SYSTEMS DRG No. 15975-20



Figure 3.11: Typical Substation Elevations

MINIMUM CLEARANCES:

ALL CLEARANCES SHOULD BE IN ACCORDANCE WITH THE REQUIREMENTS OF NGTS 2.1

NOMINAL SYSTEM VOLTAGE- 132kV

PHASE TO EARTH CLEARANCE 'E'

PHASE TO PHASE CLEARANCE 'P'

SECTION CLEARANCE 'S'

SURGE ARRESTER CLEARANCE 'D'

INSULATION HEIGHT (PEDESTRIAN ACCESS)

ALL EQUIPMENT MUST BE DESIGNED TO COMPLY WITH SAFETY DISTANCES AS DETAILED IN SECTION A2.3 OF SCOTTISH POWER SAFETY RULES (ELECTRICAL AND MECHANICAL HANDBOOK)

NOTES:

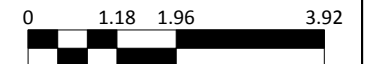
1. WINDFARM DEVELOPERS COMPOUND IS INDICATIVE ONLY

2. ALL DIMENSIONS ARE IN MILLIMETRES (MM) UNLESS OTHERWISE STATED

3. AN ADDITIONAL CLEARANCE OF 300MM SHALL BE MAINTAINED FROM THE BOTTOM OF THE INSULATORS SUPPORTING EXPOSED HV CONDUCTORS TO THE MINIMUM INSULATION HEIGHT GIVEN ABOVE

4. 132kV CABLE SEALING END AND STRUCTURE TO BE SUPPLIED AND INSTALLED BY THE CABLE CONTRACTOR

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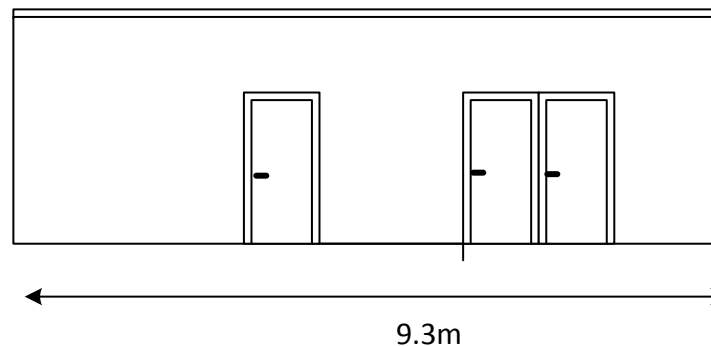
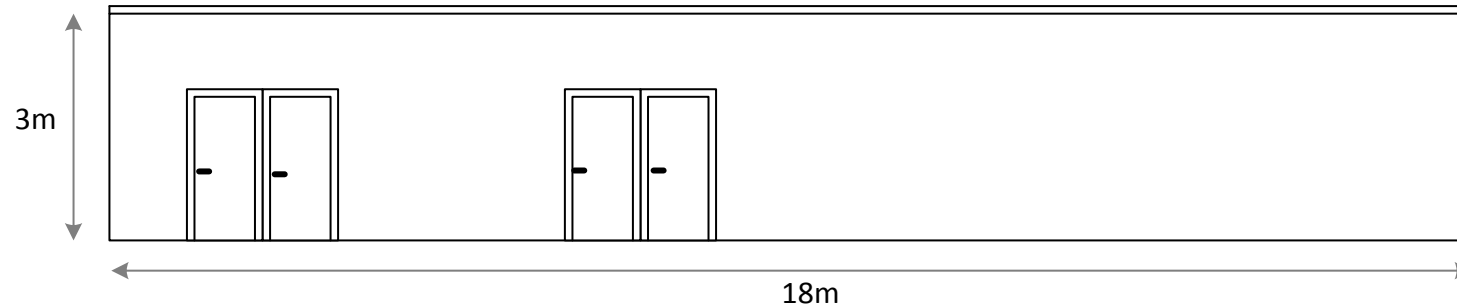


Figure 3.12: Typical Substation
Elevations

MINIMUM CLEARANCES:
ALL CLEARANCES SHOULD BE IN ACCORDANCE WITH THE REQUIREMENTS OF NGTS 2.1

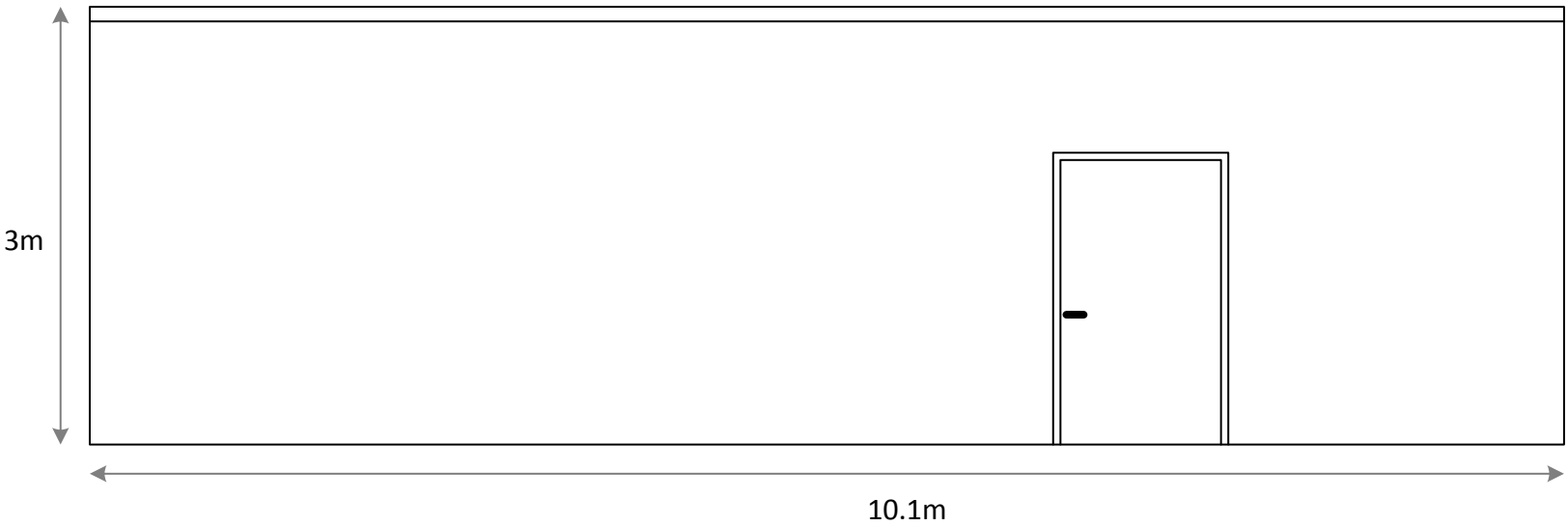
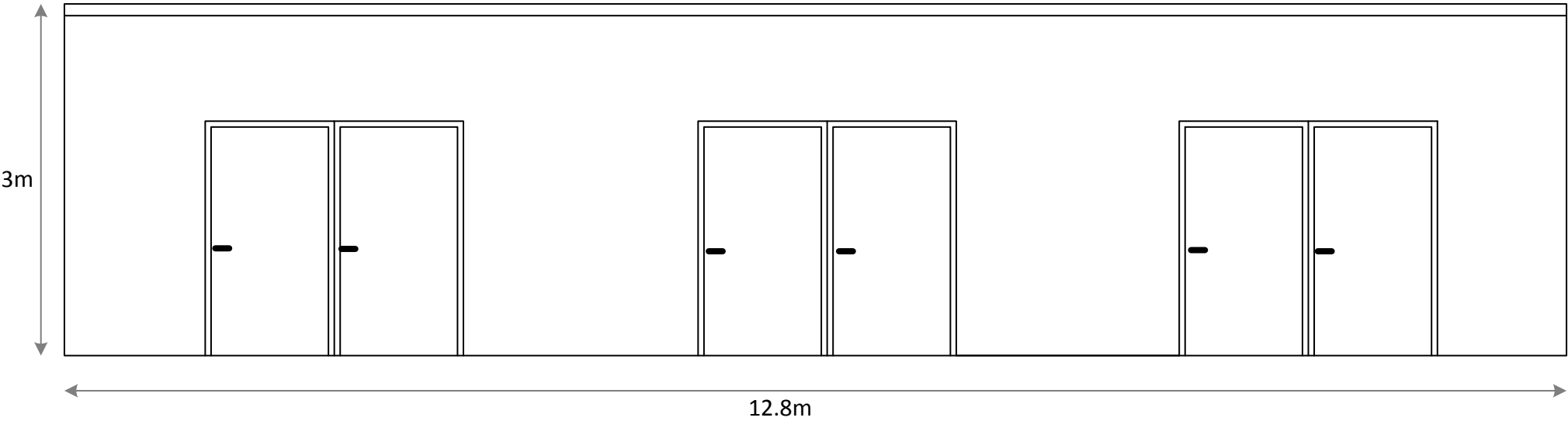
NOMINAL SYSTEM VOLTAGE- 132kV
PHASE TO EARTH CLEARANCE ‘E’
PHASE TO PHASE CLEARANCE ‘P’
SECTION CLEARANCE ‘S’
SURGE ARRESTER CLEARANCE ‘D’
INSULATION HEIGHT (PEDESTRIAN ACCESS)

ALL EQUIPMENT MUST BE DESIGNED TO COMPLY WITH SAFETY DISTANCES AS DETAILED IN SECTION A2.3 OF SCOTTISH POWER SAFETY RULES (ELECTRICAL AND MECHANICAL HANDBOOK)

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Figure 3.13

Typical Battery Storage Compound Plan

KEY:

 GALVANISED STEEL PALISADE
FENCE 2.4m HIGH

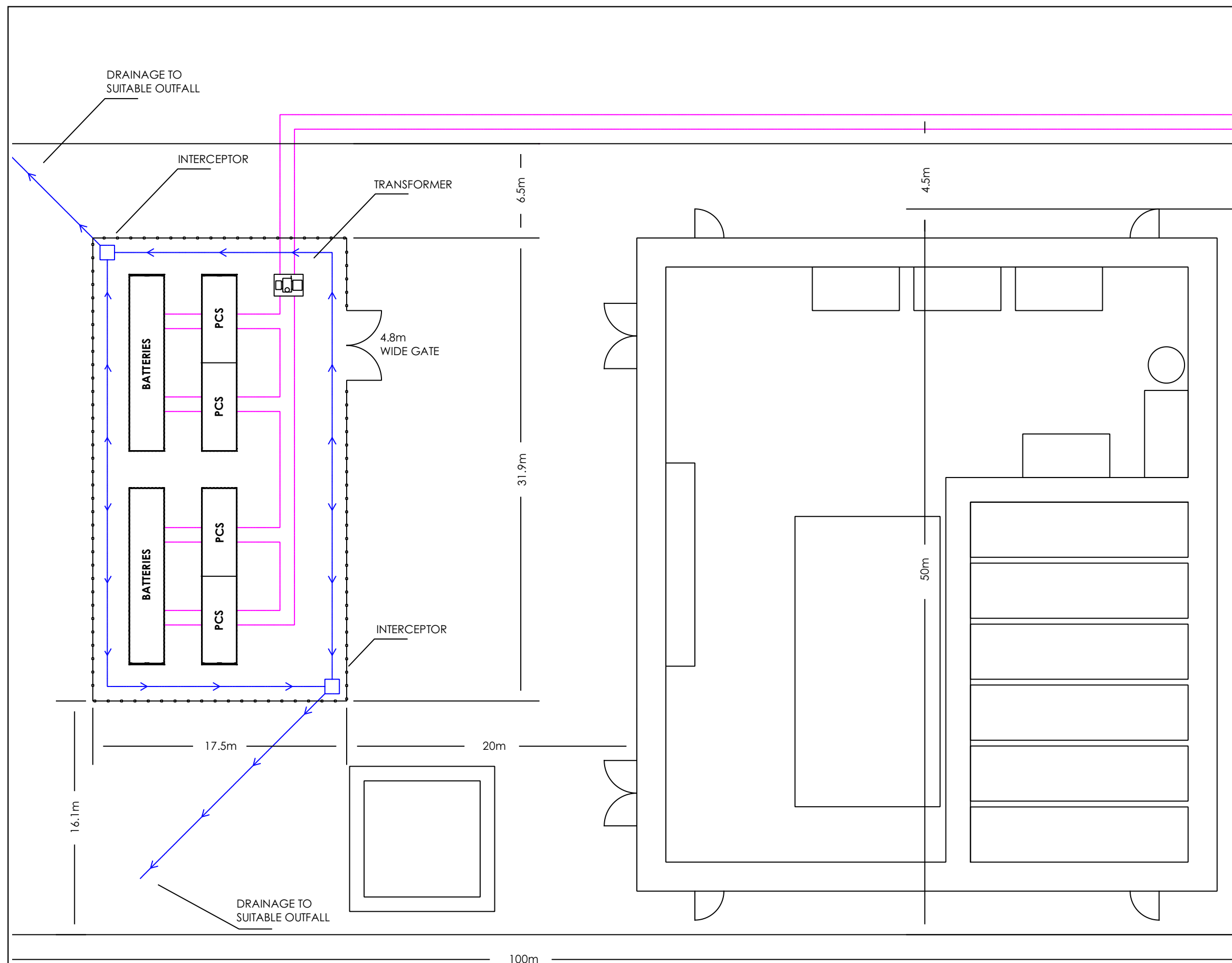
 CABLE TRENCH

 WIND FARM TEMPORARY
CONSTRUCTION COMPOUND

 PERIMETER DRAINAGE
MIN. 100mm Ø, LAID AT 1:100 FALL
(ARROW SHOWS FALL DIRECTION)

 PROPRIETARY INTERCEPTOR

 BATTERY CONTAINERS
FOUNDATIONS TO INCORPORATE
INTEGRAL BUNDING



0 2.5 5 7.5 10 12.5 15 m