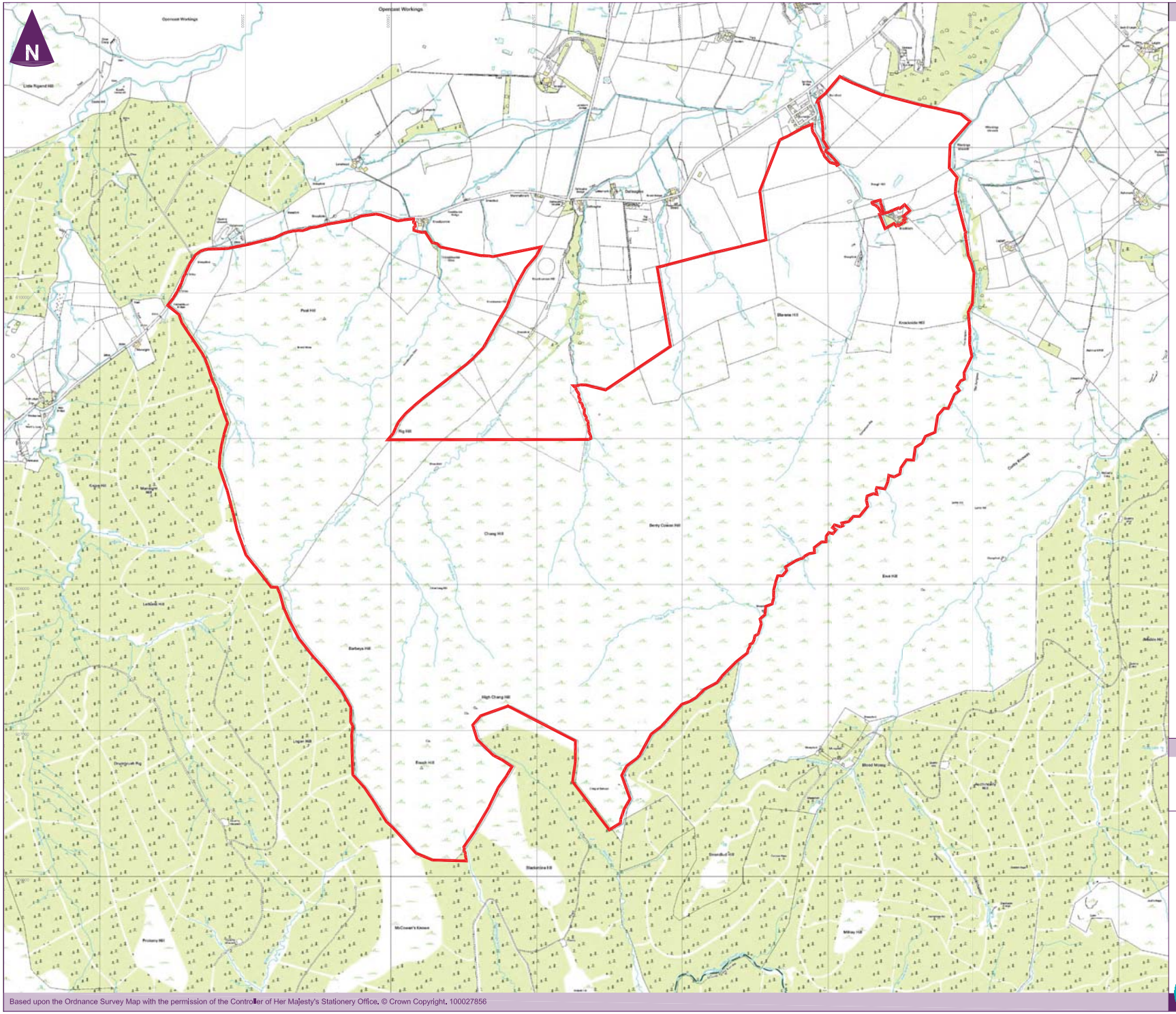
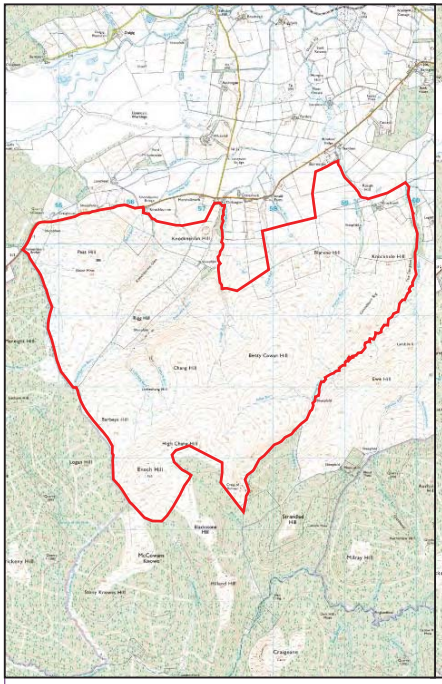
Enoch Hill Wind Farm

Environmental Statement

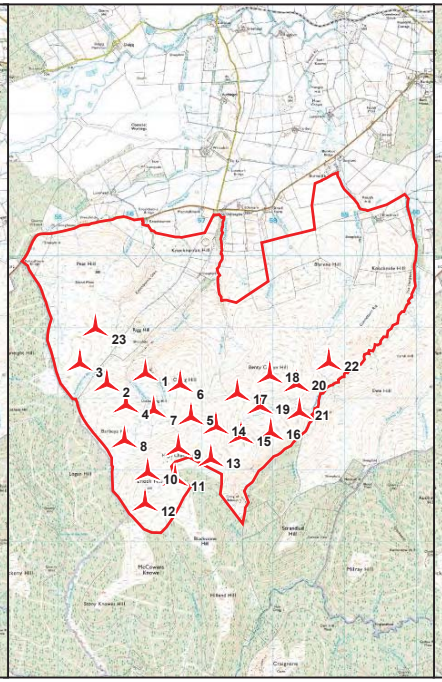
Volume 2: Illustrative Figures

September 2015

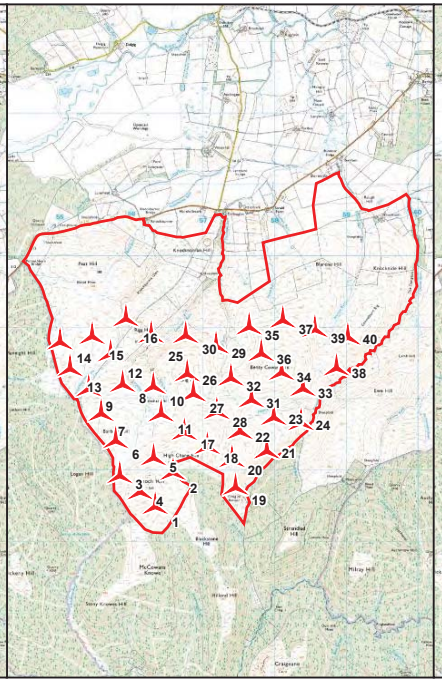




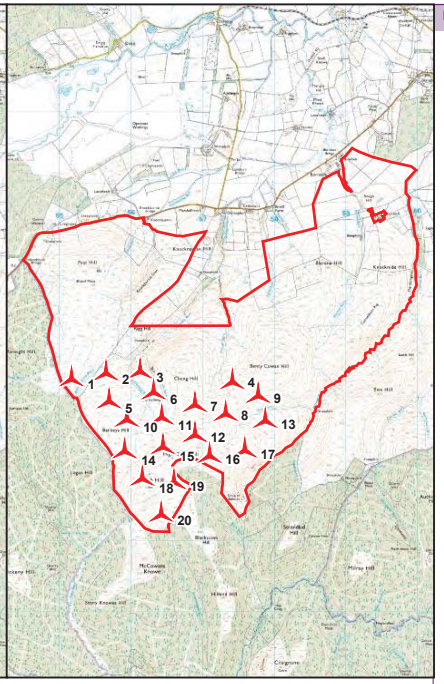
Layout 1 - Initial site boundary



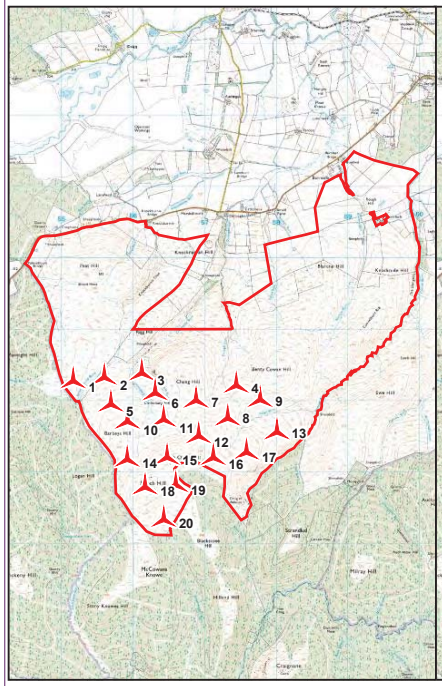
Layout 2 - 23 Turbine feasibility layout



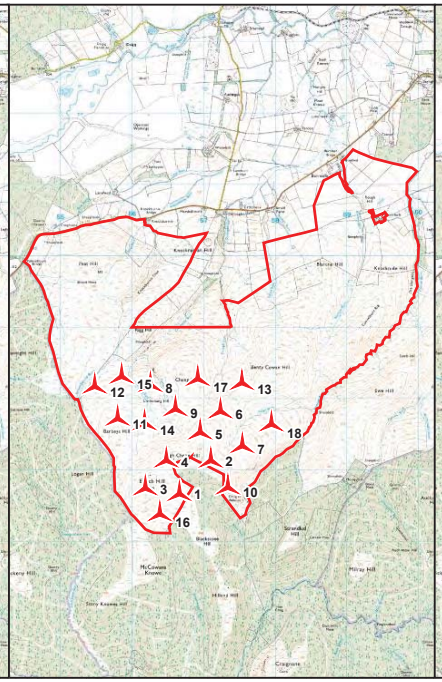
Layout 3 - 40 Turbine maximum capacity layout



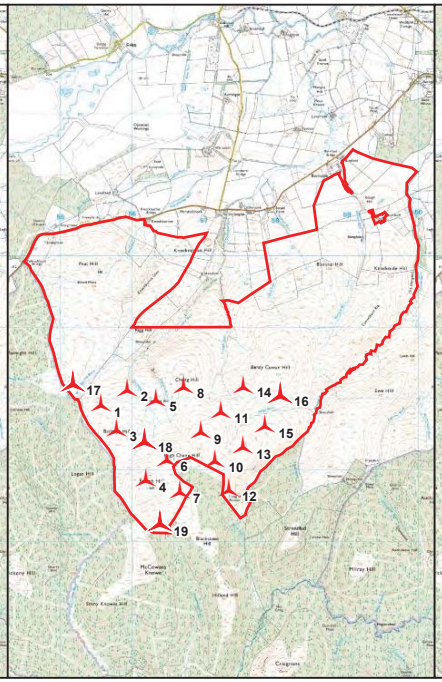
Layout 4 - 20 Turbine design chill layout



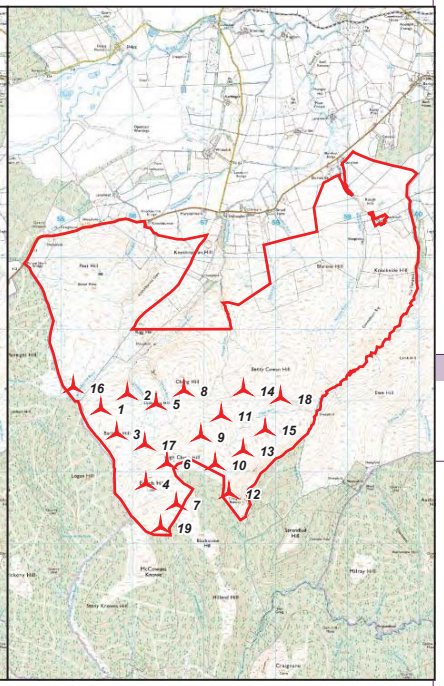
Layout 5 - 20 Turbine layout following civil site visit



Layout 6 - 18 Turbine layout design workshop January 2015



Layout 7 - 19 Turbine layout February 2015



Layout 8 - Final design layout

Key

Site boundary

Turbine location

0 km 4.5km

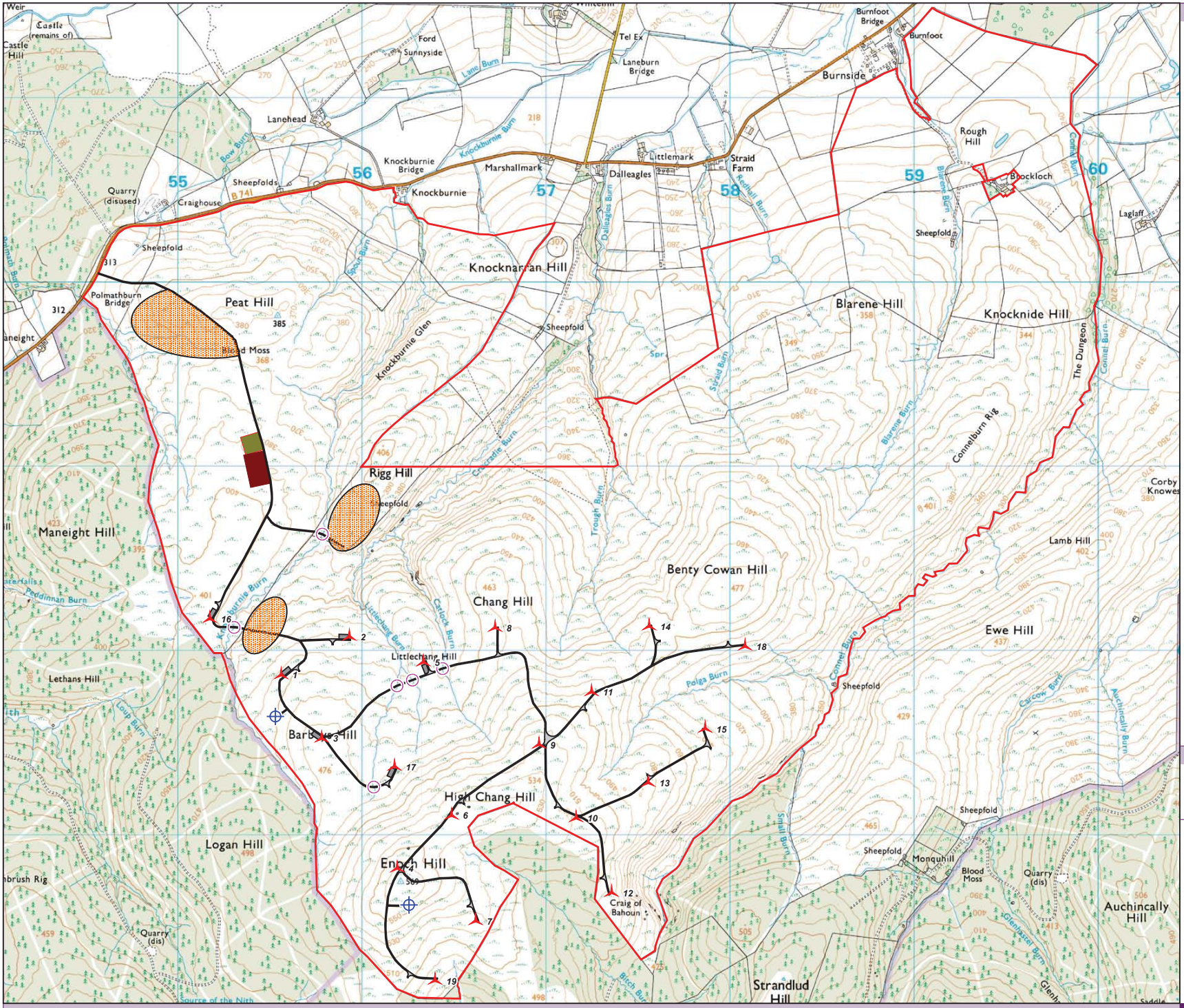
Scale 1:75,000 @ A3

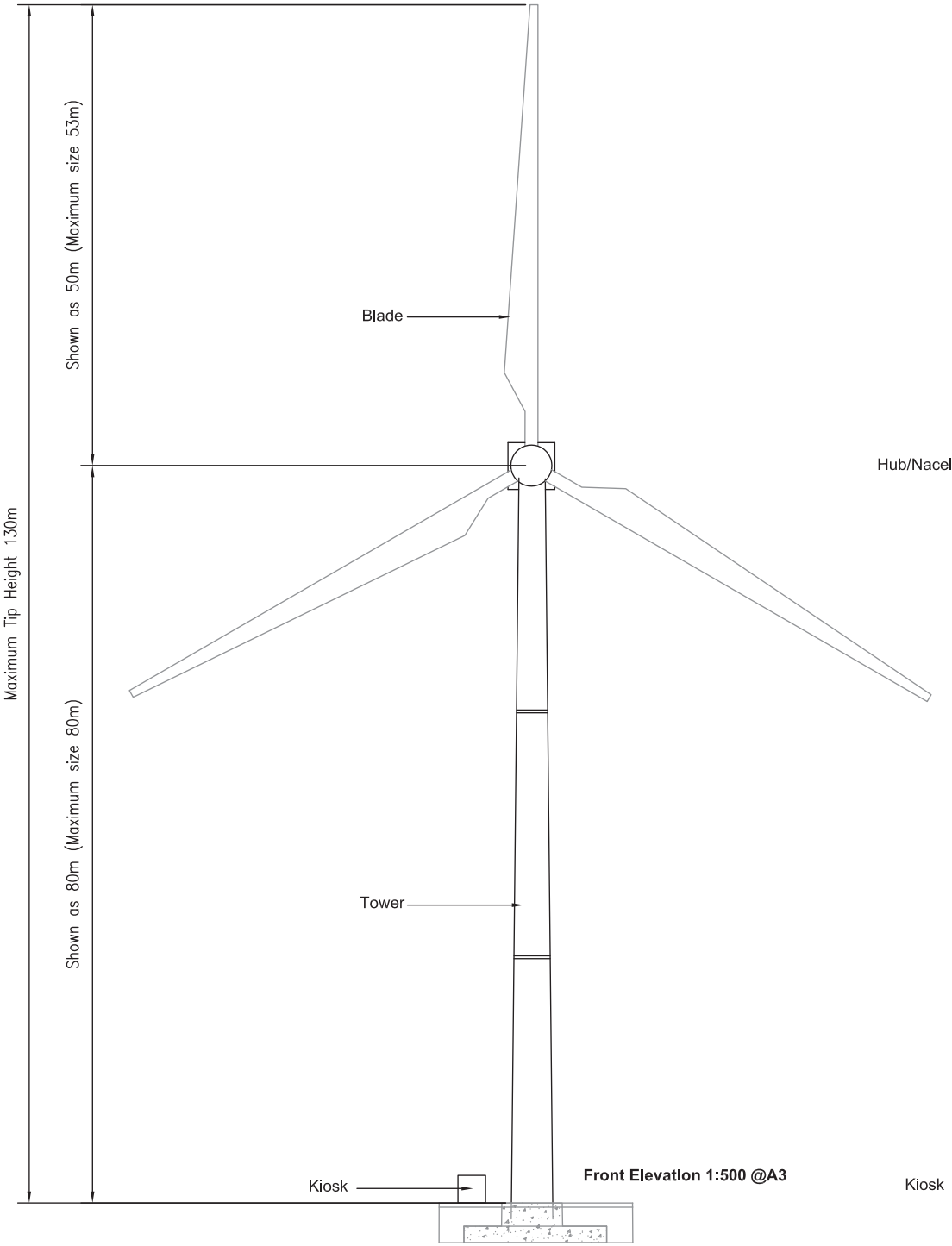
Client

Enoch Hill Wind Farm
Environmental Statement

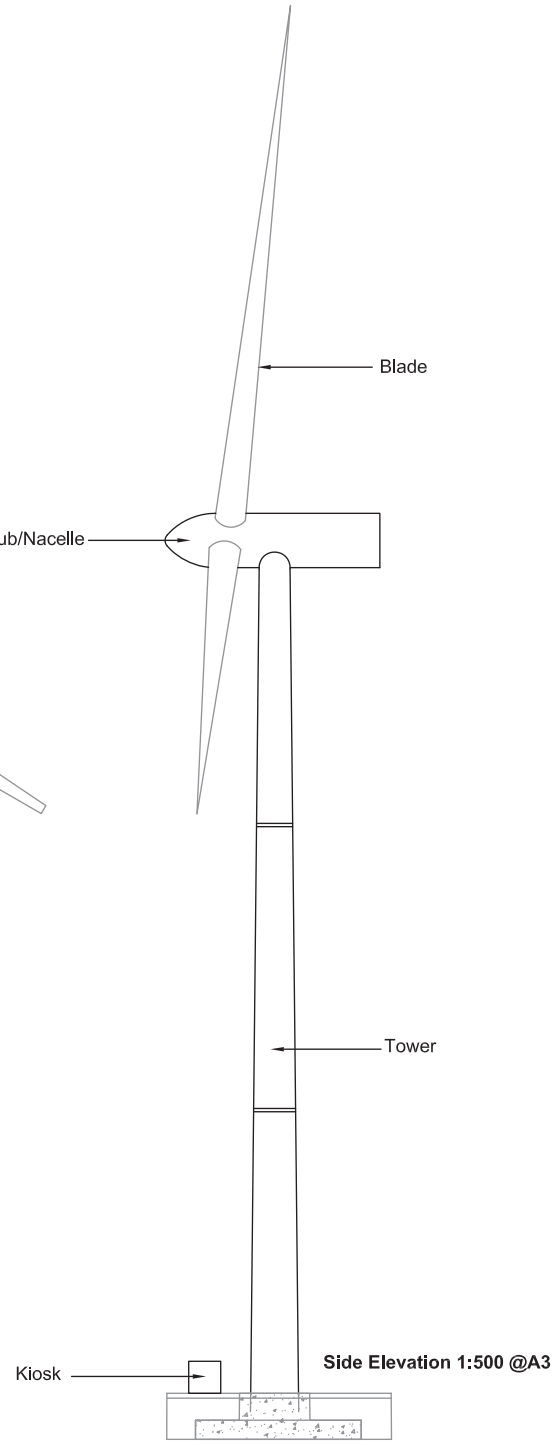
amec foster wheeler

Figure 3.1
Site Design Iterations


Key
Turbine location
Proposed on site tracks
Crane pad
SPEN and EON Substation compound
Temporary construction compound
Watercourse crossing
Borrow pit search area
Permanent meteorological mast
0 km
1.2km
Scale 1:20,000 @ A3
Client
Enoch Hill Wind Farm
Environmental Statement
amec foster wheeler
Figure 4.1
Site Layout
July 2015
32965 Gla329b.wor doggt
Based upon Ordnance Survey Map with the permission of the Controller of Her Majesty's Stationery Office. © Crown Copyright. 100001776
Peat Hill
Knocknarran Hill
Blarene Hill
Knocknide Hill
Rigg Hill
Maneight Hill
Benty Cowan Hill
Chang Hill
Littlechang Hill
Barkeval Hill
High Chang Hill
Enoch Hill
Logan Hill
Ewe Hill
Lamb Hill
Auchincally Hill
Strandlud Hill
Craig of Bahoun
Rough Hill
Burnside
Knockburnie
Dalleagles
Littlemark
Straid Farm
Brockloch
Laglaff
Lanehead
Sheepfolds
Craighouse
Quarry (disused)
Polmathburn Bridge
Knockburnie Bridge
Marshallmark
Laneburn Bridge
Burnfoot Bridge
Burnfoot
Tel Ex
Ford
Sunnyside
Castle (remains of)
Castle Hill
Lethans Hill
Monquhill
Blood Moss
Quarry (dis)
Connelburn Rig
The Dungeon
Corby Knowes
Sheepfold
55
56
57
58
59
60
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19



Front Elevation 1:500 @A3



Side Elevation 1:500 @A3

Notes:

1. This drawing is for illustrative purposes only
2. Drawing based typical turbine equal to or greater than 3MW
3. Maximum tip height will not exceed 130m i.e. if the maximum size of blade (53m) has been used, hub height would equal 77m

0 m 30 m

Scale 1:500 @ A3

Client

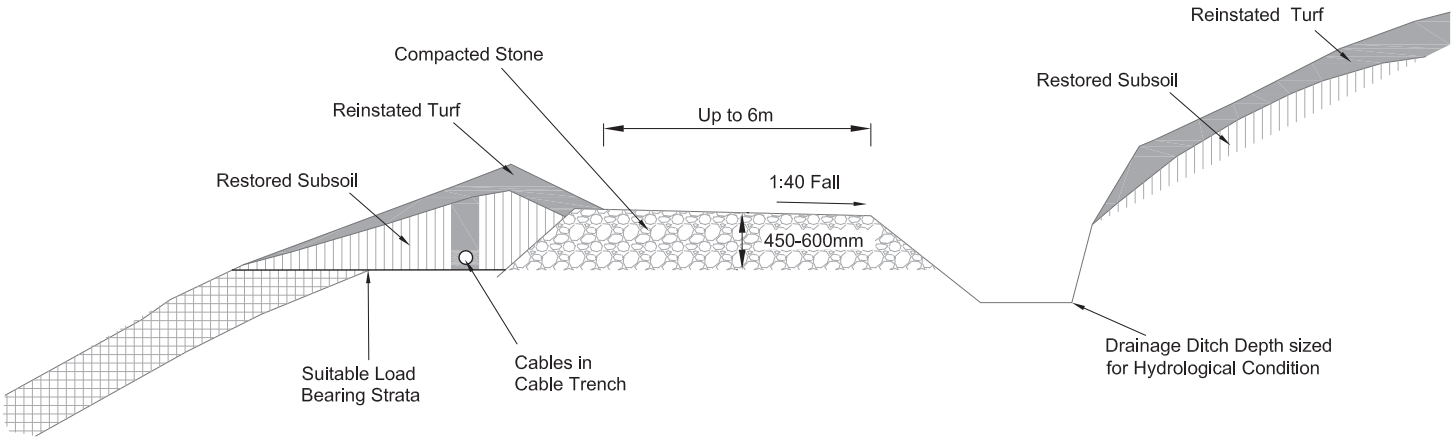
Enoch Hill Wind Farm
Environmental Statement

amec foster wheeler

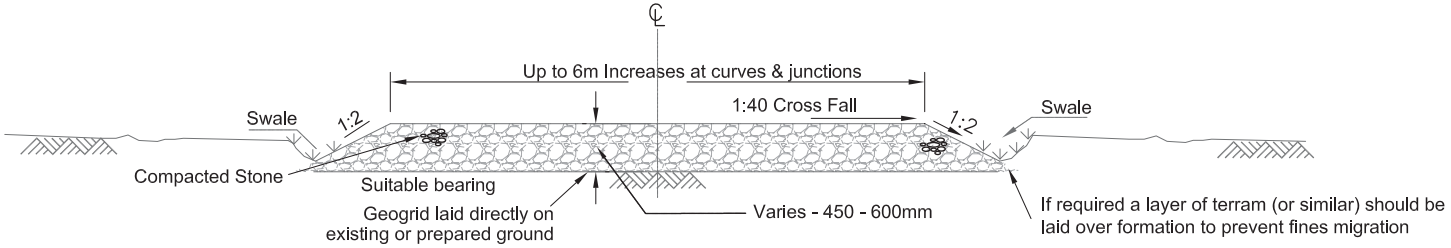
Figure 4.2
Typical Wind Turbine Structure

based on 30251-Gos182.dwg

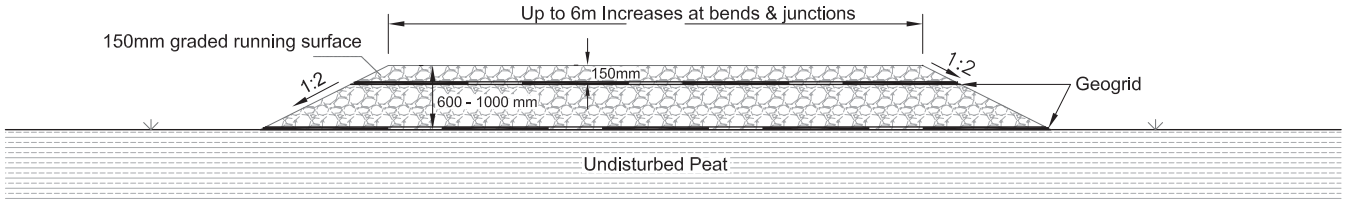
May 2015 32965-Gla298.dwg panng



A) Typical Section Through Cut Road Excavated on Slope
(1:100 @ A3)



B) Excavated Proposed New Track Construction on Rock
(1:50 @ A3)



C) Floating Track Construction
(1:50 @ A3)

Notes:

1. All dimensions are in millimetres unless otherwise stated.
2. Track width based on:
   - minimum advised width of up to 6m for turbine delivery.
   - single track road with passing places at suitable locations.
3. Maximum track width is 12-14m.
4. Reflective marker posts to be located as required.
5. Drainage to be established on-site.

0 m 5 m
Scale 1:100 @ A3

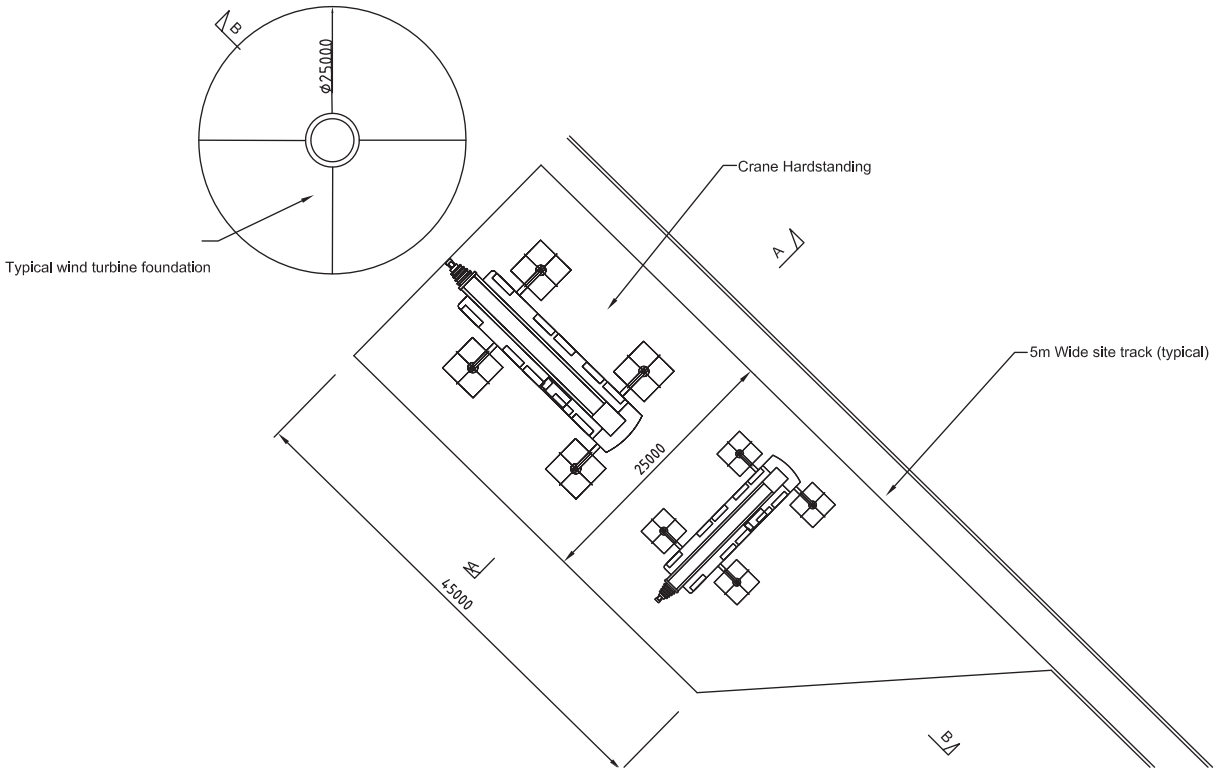
0 m 2.5 m
Scale 1:50 @ A3

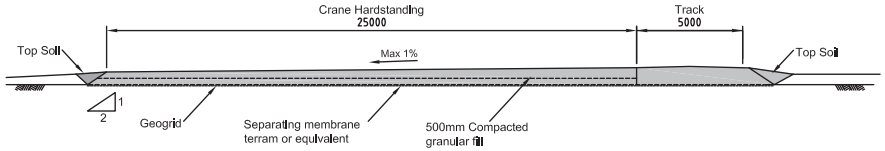
Client

Encoh Hill Wind Farm
Environmental Statement

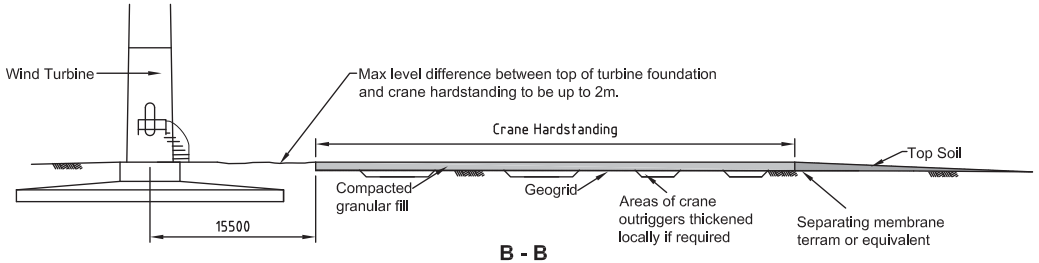
amec foster wheeler

FIgure 4.3
Typical road construction





A - A
Typical Cross Section (1:200)



B - B
Typical Cross Section (1:500)

Notes:

1. All dimensions are in millimetres.
2. Drainage to be established on site.
3. Lateral slope drainage strategy used will depend on site specific factors e.g. type of crane used.

Scale: As Shown @ A3

Client

Enoch Hill Wind Farm
Environmental Statement

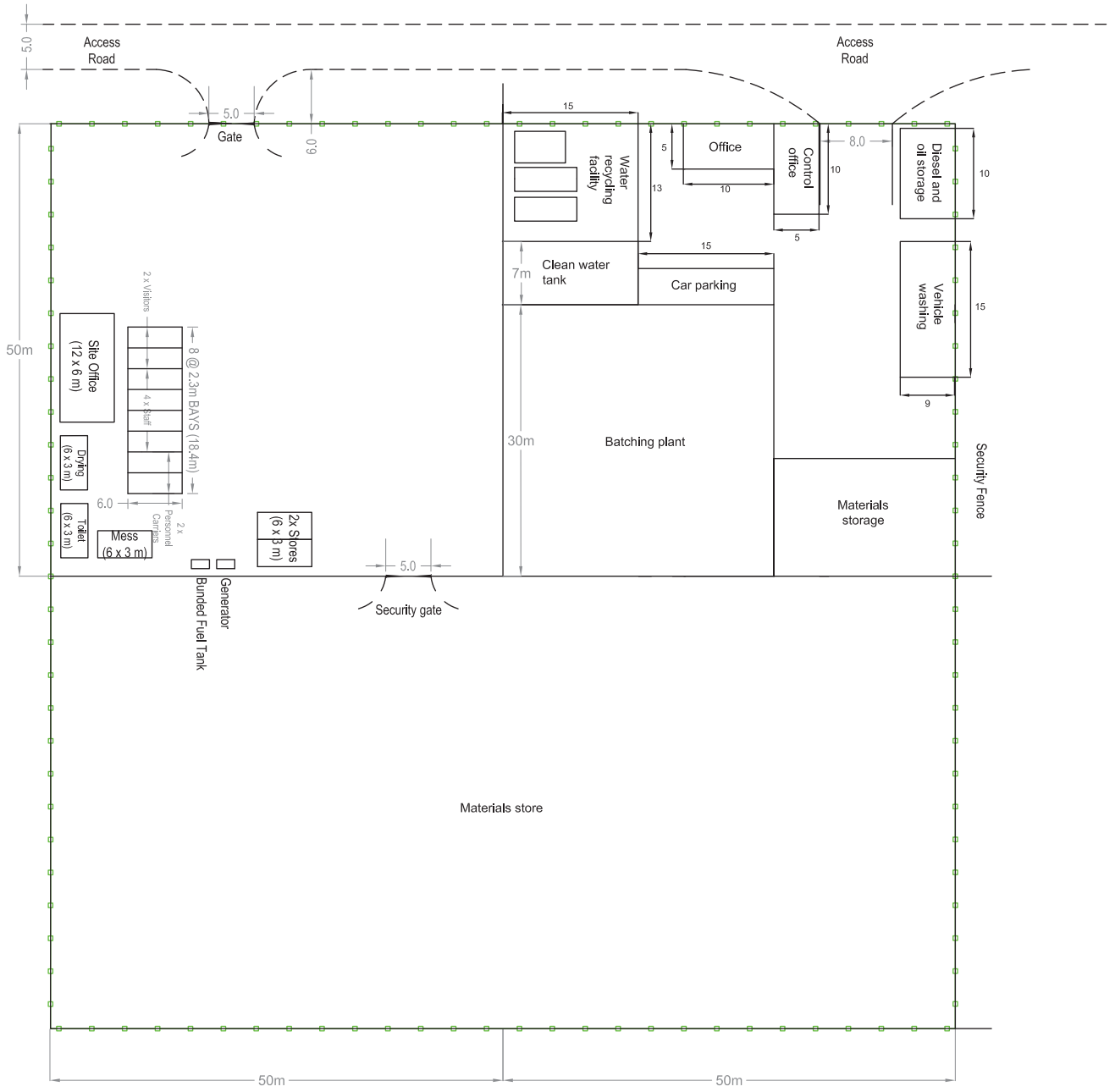
amec foster wheeler

Figure 4.4
Typical crane hardstanding

based on 30251-Gos185.dwg

May 2015

32965-Gla300.dwg panng



Notes:

1. All dimensions in metres.
2. All drainage to be in accordance with CIRIA SUDS publications C521 and C523.

0 m 30 m

Scale 1:500 @ A3

Client

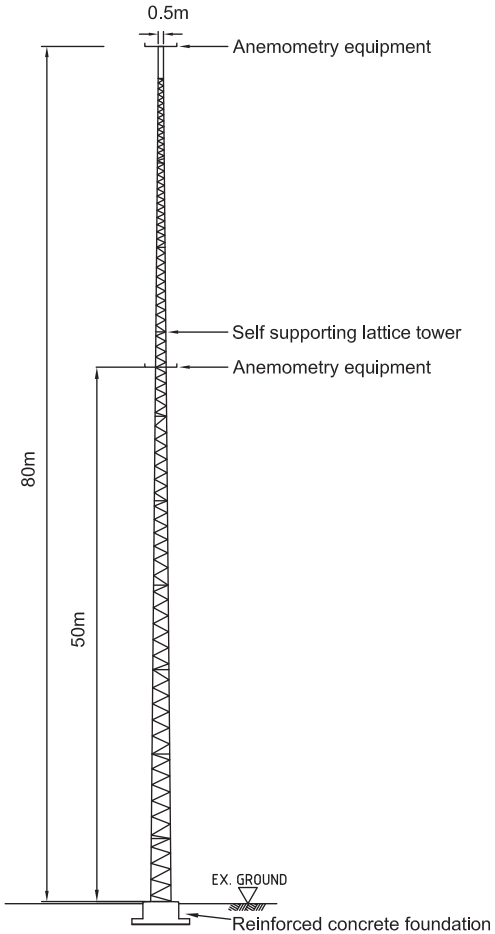
Enoch Hill Wind Farm
Environmental Statement

amec foster wheeler

Figure 4.5
Indicative construction compound

based on 30251-Gos186a.dwg

May 2015 32965-Gla301.dwg panng



Notes:

1. All dimensions are in metres unless otherwise noted.
2. This figure represents an indicative design for a wind monitoring mast.

0 m 30 m

Scale 1:500 @ A3

Client

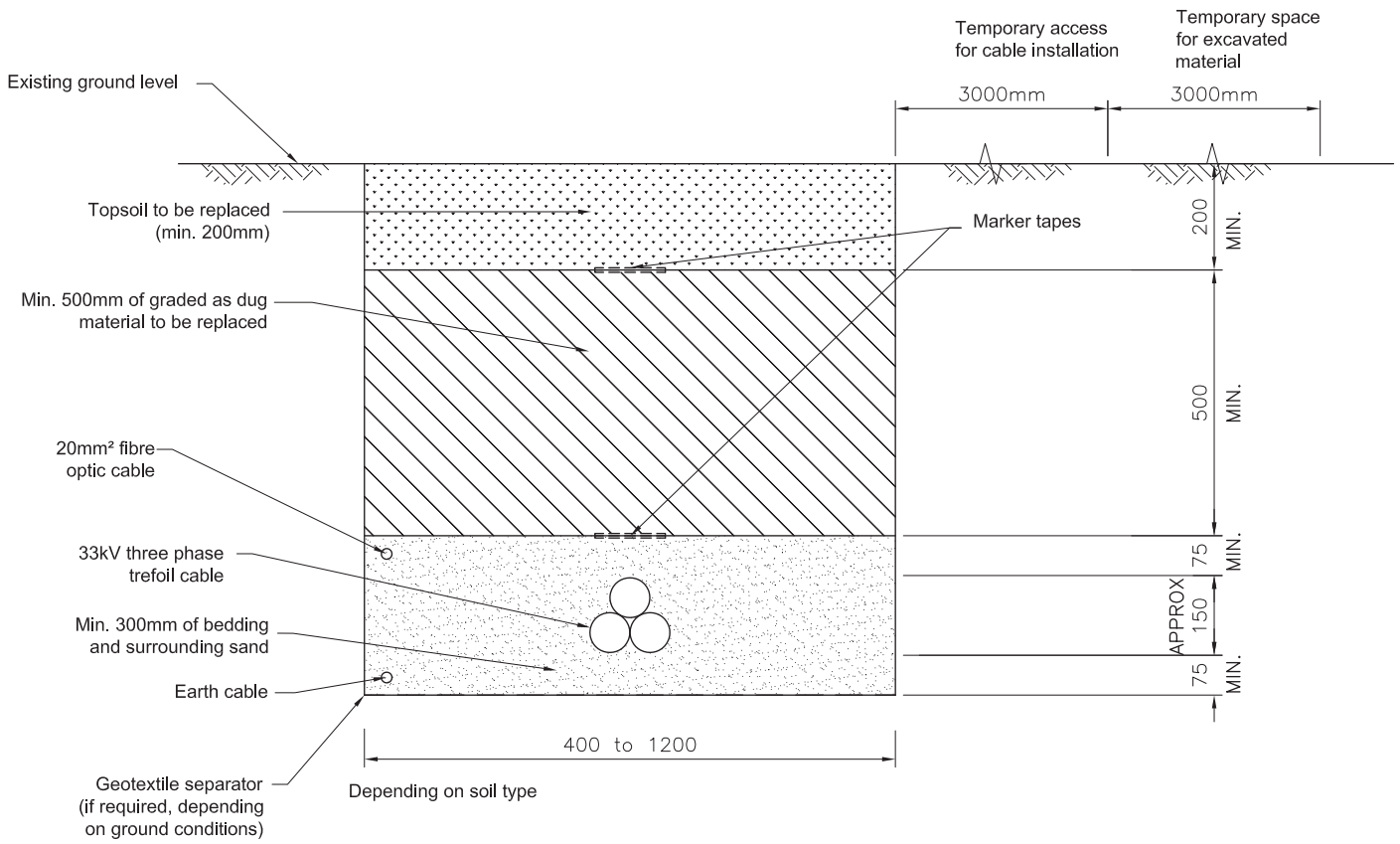
Enoch Hill Wind Farm
Environmental Statement

amec foster wheeler

Figure 4.6
Typical lattice anemometry mast

based on 30251-Gos187.dwg

May 2015 32965-Gla302.dwg panng



Typical Cable Trench Detail
(typically adjacent to road)
1:10 @ A3

Notes:

1. All dimensions are in millimetres unless noted otherwise.
2. Cable routed to run adjacent to site roads.
3. Above ground cable markers to be located as required.

0 mm 500 mm
Scale 1:10 @ A3

Client

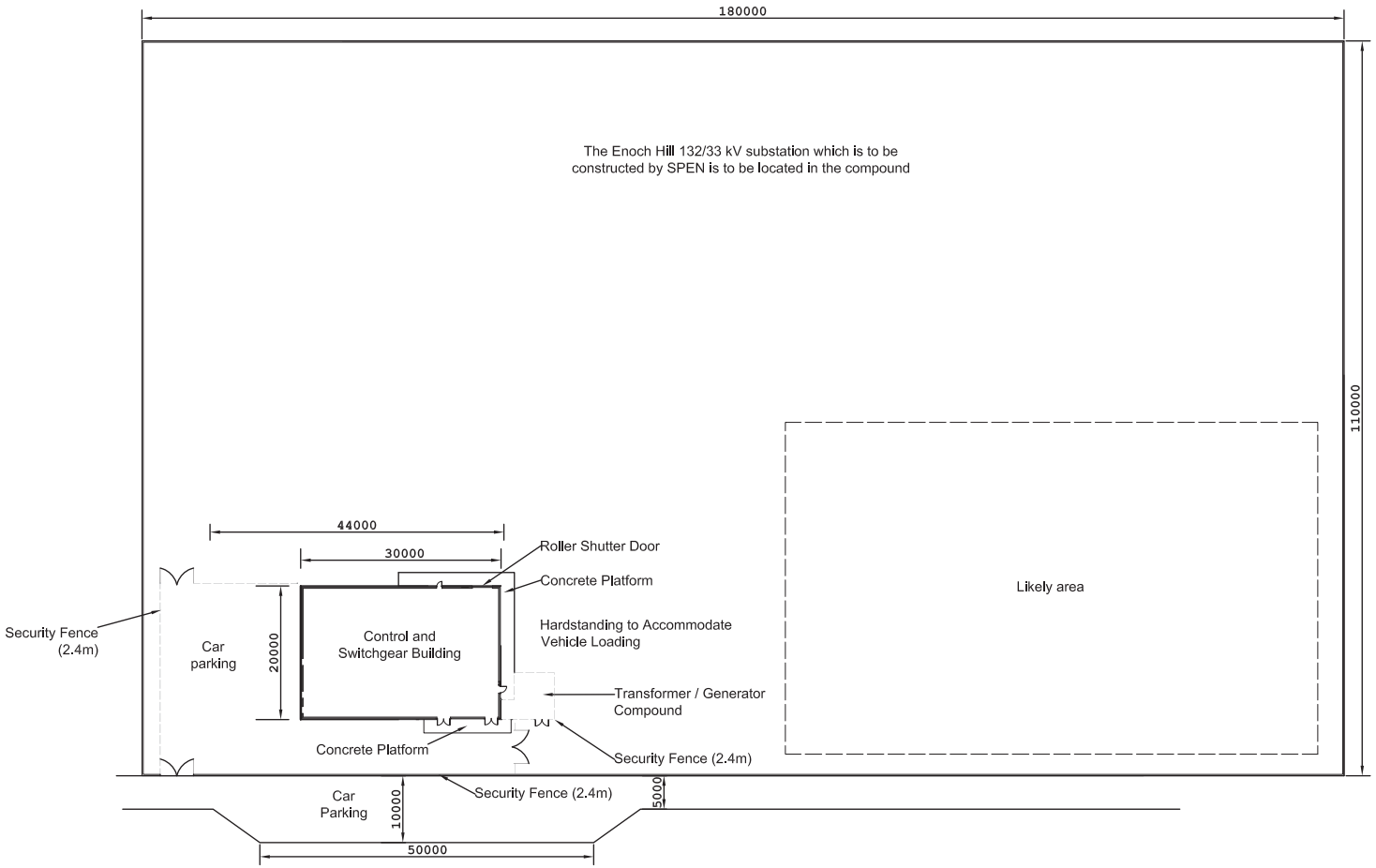
Enoch Hill Wind Farm
Environmental Statement

amec foster wheeler

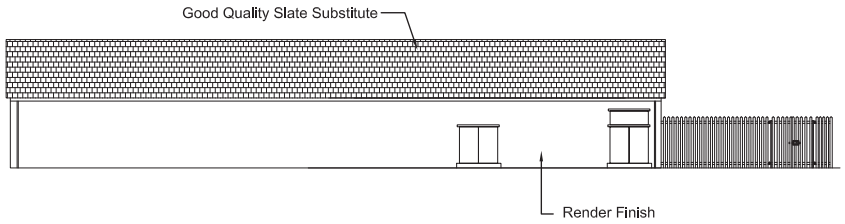
Figure 4.7
Typical cable trench cross section

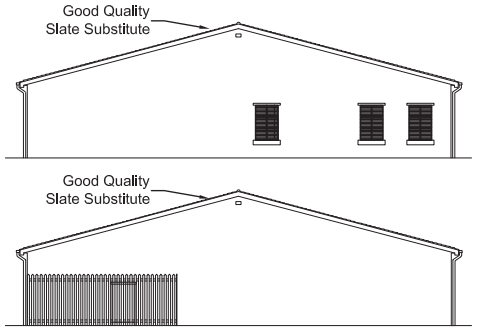
based on 30251-Gos188.dwg

May 2015 32965-Gla303.dwg panng



Overhead Plan
1:750





Elevations
1:250

Notes:

1. Measurements shown in millimetres unless otherwise stated.
2. Site layout plan, ground floor plans and elevations to be submitted in accordance with planning conditions attached to the consent should approval be granted.

0 m 40 m
Scale 1:750 @ A3

0 m 15 m
Scale 1:250 @ A3

Client

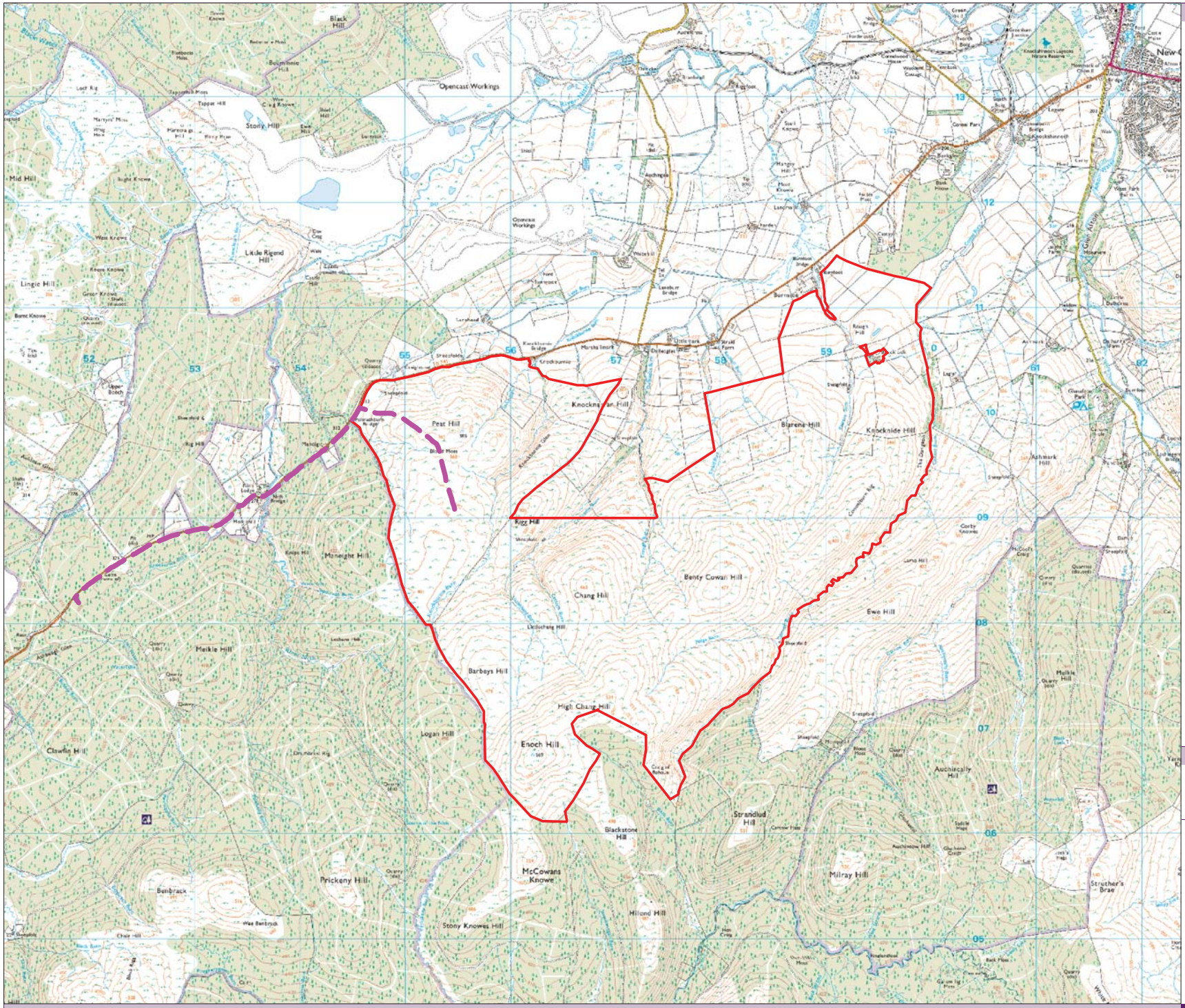
Enoch Hill Wind Farm
Environmental Statement

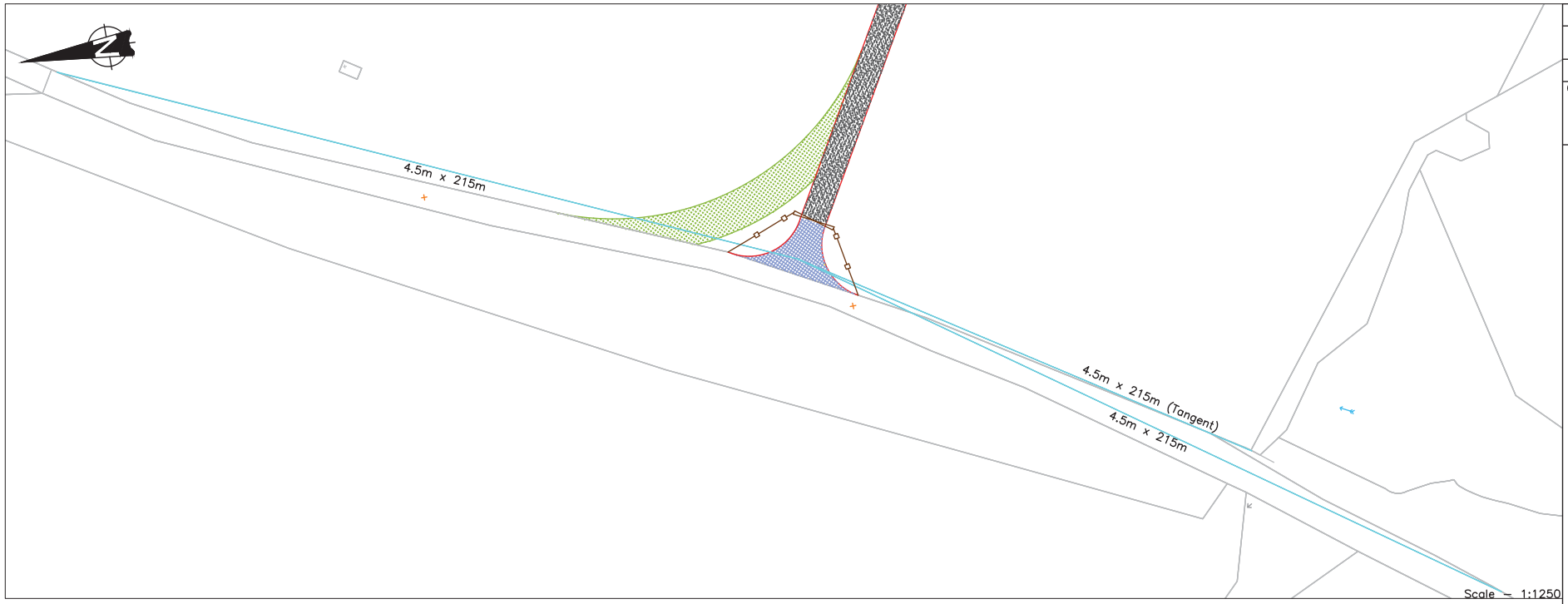
amec foster wheeler

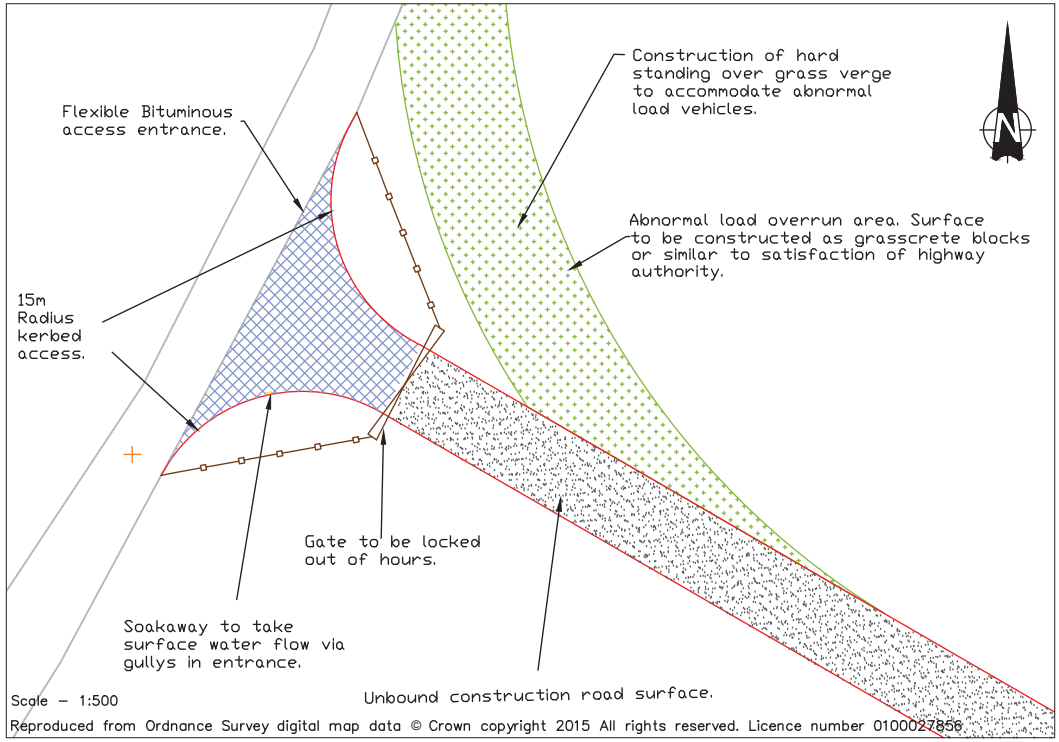
Figure 4.8
Typical substation and control building

based on 30251-Gos189.dwg and 34165-Edi11a.dwg

July 2015 32965-Gla304b.dwg panng







DESCRIPTION

REV	DATE		DWN	CHK	APP
–	JUN 2015	FIRST ISSUE	DS	JGM	JGM

REVISIONS

REV	DATE		DWN	CHK	APP

NOTES

1. SWEPT PATH BASED ON BLADE TRANSPORTER CARRYING 51.5m LONG BLADE
2. THE SWEPT PATHS SHOWN ON THIS DRAWING HAVE BEEN PRODUCED USING REAR WHEEL STEERING. AUTODESK CONFIRM THAT THESE PATHS ARE AS ACCURATE AS POSSIBLE USING THE CORRECT SPEED AND TURN RATE OF A REAL LIFE VEHICLE. HOWEVER, THE EXACT ALIGNMENT CAN NOT BE GUARANTEED DUE TO THE ACCURACY DIFFERENCE BETWEEN THE SOFTWARE OPERATOR AND THE VEHICLE DRIVER
3. PLEASE NOTE THAT THE MANUFACTURER OF VEHICLE TRACKING GIVES NO WARRANTY AS TO THE RESULTS OR PERFORMANCE OF THIS SOFTWARE.
4. THIS SWEPT PATH ANALYSIS IS A HIGH LEVEL ASSESSMENT BASED ON PRELIMINARY MAPPING. AS A RESULT FURTHER DETAILED ANALYSIS MAYBE NEEDED TO ENSURE KEY CONSTRAINTS ARE CONSIDERED AND AVOIDED WHEREVER POSSIBLE.
6. ANY STREET FURNITURE LOCATED WITHIN THE SWEPT PATH EXTENTS SHOWN WILL NEED TO BE REMOVED AND RELOCATED AS NEEDED.

KEY

- VISIBILITY SPLAYS
- VEHICLE WHEEL BASE
- TURBINE BLADE
- BLADE OVERHANG
- UNBOUND CONSTRUCTION ROAD
- ABNORMAL LOAD OVERRUN AREA
- FLEXIBLE BITUMINOUS ACCESS
- POST AND RAIL FENCING
- ACCESS ROAD

SCALES: AS SHOWN

PROJECT TITLE:
ENOCH HILL WINDFARM
ENVIRONMENTAL STATEMENT

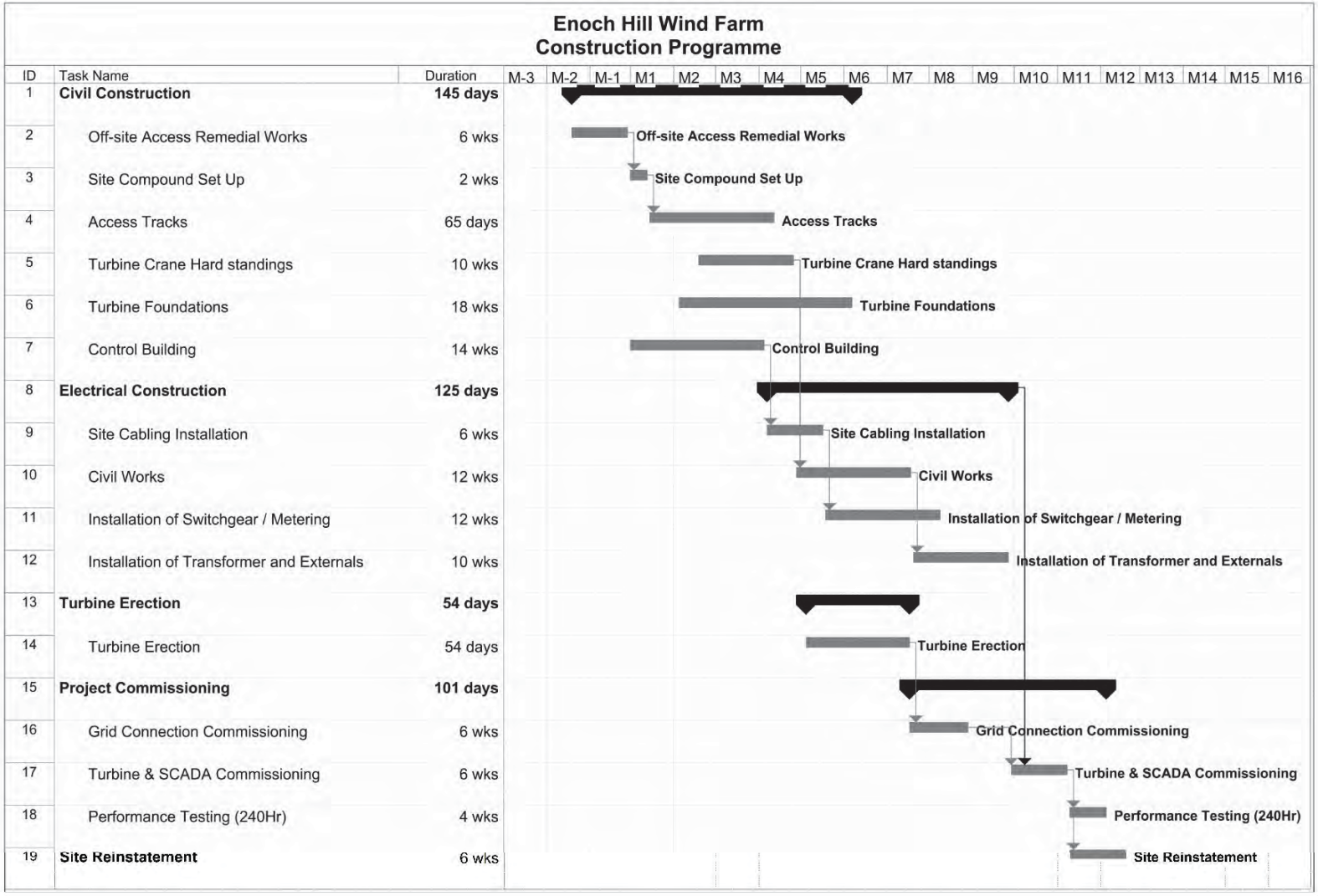
DRAWING TITLE:
FIGURE 4.10
PROPOSED SITE ENTRANCE JUNCTION ARRANGEMENT

CLIENT:

amec foster wheeler

Project Ref.	DRAWING No.	Revision No.
32965	GLA362	–

Original Drawing Size – A3



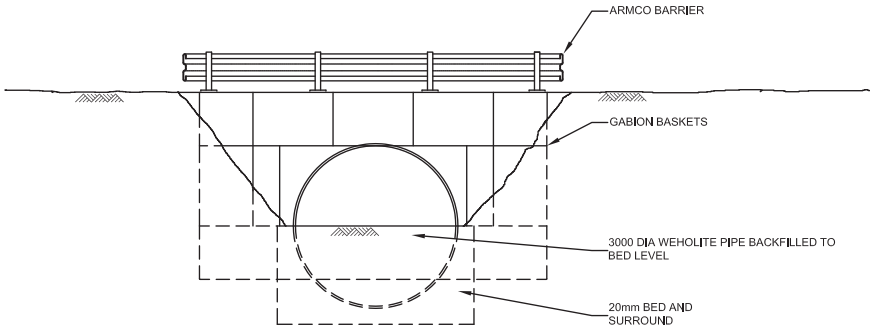
Key

Client

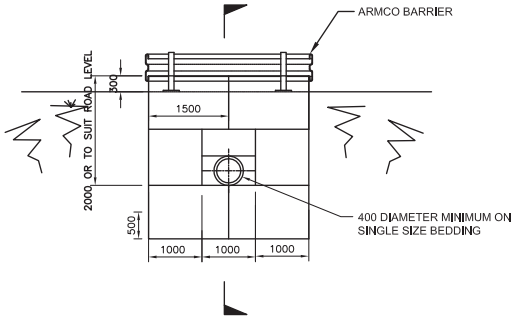
Enoch Hill Wind Farm
Environmental Statement

amec foster wheeler

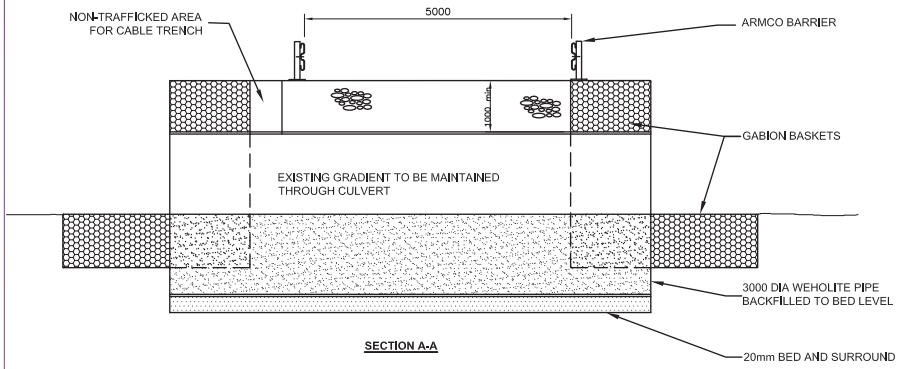
Figure 4.11
Indicative Construction Programme



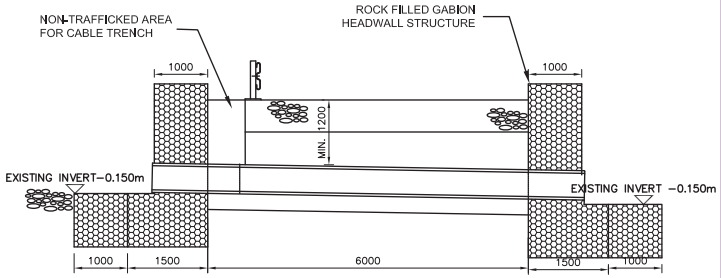
SECTION B-B



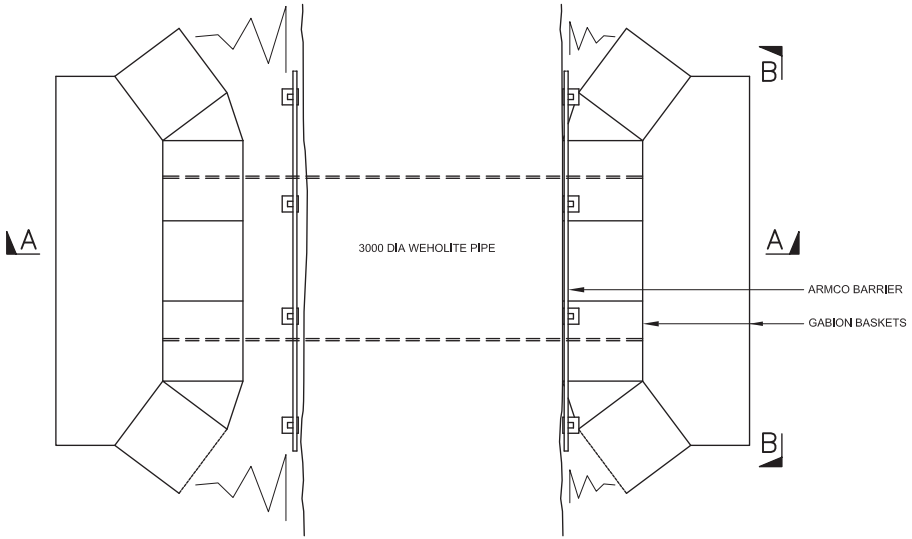
ELEVATION ON CULVERT HEADWALL



SECTION A-A



CROSS SECTION THROUGH CULVERT



Typlcal Land Draln Culvert

Notes:

1. All dimensions are in millimetres.
2. The culvert detalls are Indlcatlve.
3. Minimum diameters and invert levels based on CIRIA recommendations.
4. Flnal culvert deslgn ls dependant on local topography, ground condltlons and flows.

0 m 5 m

Scale 1:100 @ A3

Client

Enoch Hill Wind Farm
Environmental Statement

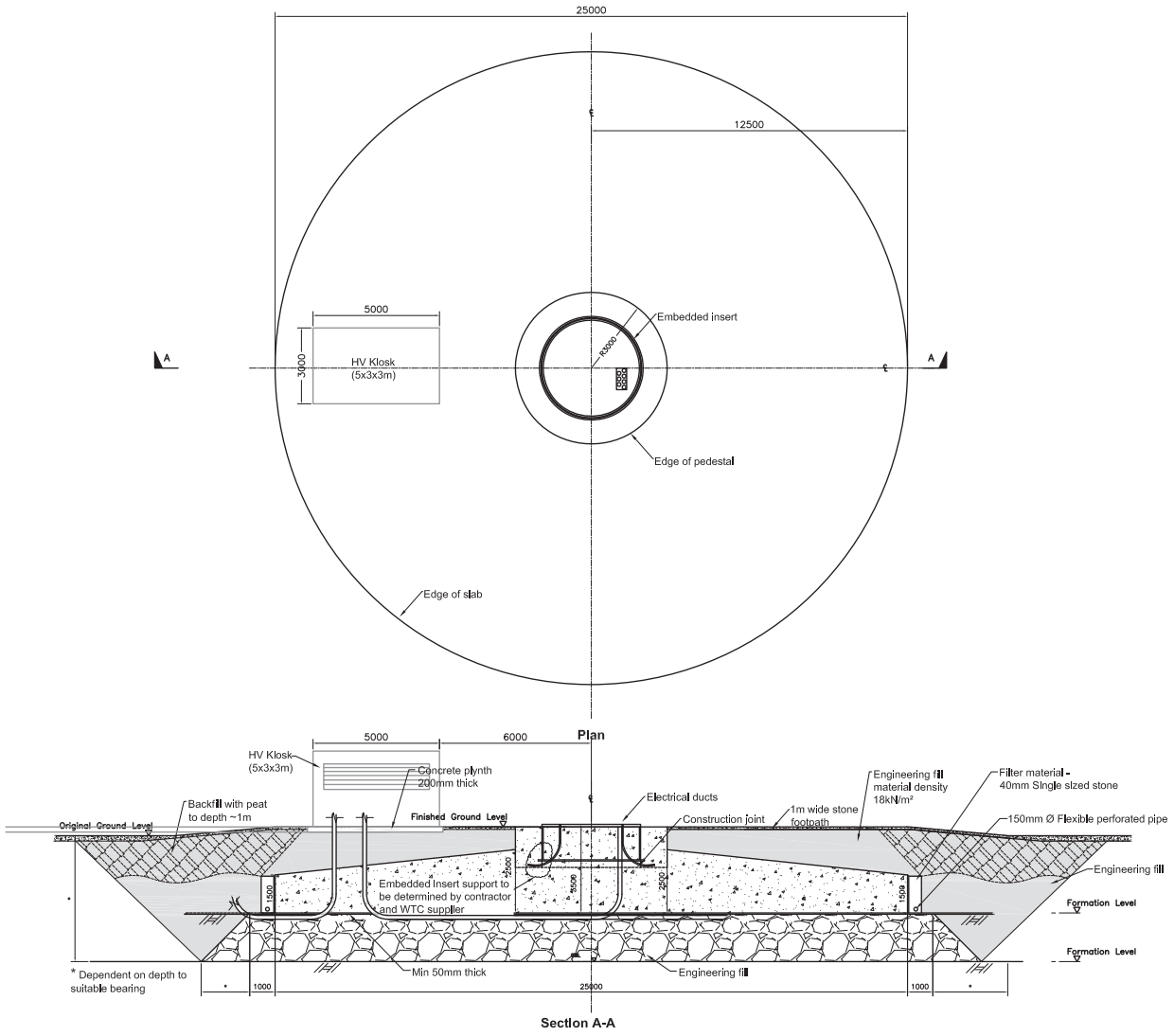
amec foster wheeler

Figure 4.12
Typical culvert

based on 30251-Gos190.dwg

May 2015

32965-Gla305.dwg panng



Notes:

1. All dimensions are in millimetres.
2. The foundation size is indicative only.
3. Inserts and ducting to be supplied by turbine manufacturer.
4. Earthing details are indicative, subject to turbine supplier approval.
5. Suitable foundation to be specified by turbine supplier.

0 m 10 m

Scale 1:200 @ A3

Client

Enoch Hill Wind Farm
Environmental Statement

amec foster wheeler

Figure 4.13
Typical turbine foundation

based on 30251-Gos191.dwg

May 2015 32965-Gla306.dwg panng