GEOROC

TECHNICAL GUIDE

GEOROC RETAINING WALL DATA SHEET

GeoRoc is a Mechanically Stabilised Earthwall structure. It is a closed faced system with face batter of 100mm / 1m vertical.
The 665 mm x 300 mm high C50 concrete panel creates a strong robust unit catering for required surcharge loading which is typically designed for a surcharge load of 10 kPa. This can be reviewed and increased with site specific design works which are undertaken by Retaining UK. These benefits allow GeoRoc to offer a suitable aesthetically pleasing solution in urban environments. 300 mm high panels allow optimal spacing for geogrid requirements of maximum spacing of 600 mm.

YORKSTONE TEXTURED*

OAKWOOD TEXTURED*

SLATE GREY TEXTURED*

*'Yorkstone' and 'Slate Grey' also available in smooth finish.

GeoRoc Technical Information

Material: C50 Concrete
Concrete Strength: C50 - 80 Year design life
Block Sizes:
Full: 665 x 300mm
Half: 300 x 330mm
Corner: 300 x 665 x 330mm (return)

Designed according to **BS EN 1992-1-1** & **BS EN 1997**

Housing development designed for 2.5 - 5.0 kPa surcharge loading (higher loads can be accomodated on request for commercial developments).

Connection to precast counterfort via 10mm galvanised loop with pullout load of 22KN to facilitate walls up to 10 metres high.

CONSIDERATIONS FOR DESIGN

Please take the below considerations into mind when planning your Retaining Wall.

SOIL
Soil Investigation is essentialr prior to design to determine the stabilisation of each wall and bearing capacity of the ground.

GEOGRID
GeoGrid chosen specifically to work with each projects design.

RESOURCES
Site won materials can often be incorporated into the design to avoid cart away costs, subject to suitability.

BOUNDARIES
Due consideration needs to be taken regarding the face slope of the GeoRoc and the fencepost sleeve offset when positioning any GeoRoc wall on a boundary or between plots.

WALL HEIGHT
GeoRoc walls are constructed in 300mm course. The Wall top and base are designed based on engineers finished ground levels to top and bottom of wall to the nearest 300mm increment.

BEARING CAPACITY
Ground bearing capacity under GeoRoc wall foundations needs testing prior to build to ensure compliance with Retaining UK Design.

HIGHWAYS
Highway retaining walls can be designed however clients are responcible for local authority approval.

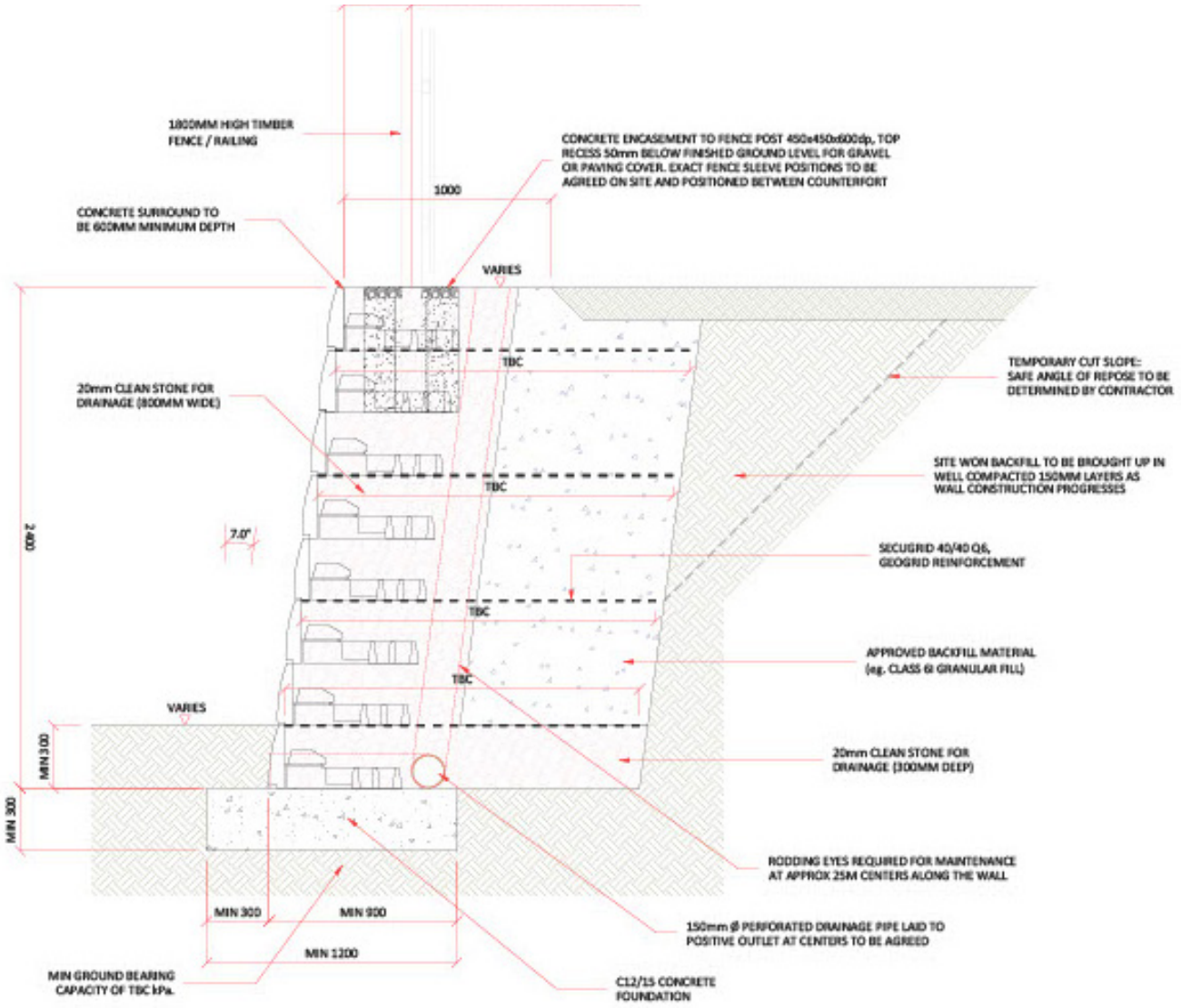
PREPERATION
Prior to Retaining UK arrival, ground needs to be excavated to top of foundation level and rear cut to profile shown in Retaining UK Design Sections, and rear cut over excavated at a safe angle of repose.

DRAINAGE
Retaining UK install perforated land drain behind each wall to aleviate any hydrostatic water pressure behind the wall. The drain needs positive outlet positions agreed by client.

Retaining UK build GeoRoc with the appropriate machineary sited on the low side of the wall. Retaining UK require safe access for deliveries and site working. Suitable fall arresests are required as wall construction proceeds.

TYPICAL SECTION

An example of a 2400mm high GeoRoc wall.



THE BENEFITS

QUICK INSTALLATION UP TO 25M^2
PER DAY

FULLY DESIGNED AND WARRANTED SYSTEM WITH
OVER 60-YEAR DESIGN LIFE

SUITABLE FOR CONSTRUCTION
ADJACENT TO HIGHWAYS

SUITABLE FOR CONSTRUCTION
ADJACENT TO WATERCOURSES

LIMITS **FACE CLIMBING**

CAN BE STEPPED TO **INTRODUCE PLANTING**

ALL PRODUCTS MANUFACTURED **IN-HOUSE**

MATERIALS **IN STOCK** FOR QUICK RESPONSE TIME
ORDER TO SITE

METHOD OF WORK

STAGE 1

1. Construction should commence at the lowest design level to permit the wall to be bonded correctly.
2. Set out the line of wall and associated foundation
3. Excavate to the underside of the formation removing any site vegetation and soft spots ensuring that the exposed ground meets the minimum load-bearing requirements as stated in the design
4. Place and compact sub-base to provide the foundation to the designed dimensions and level

STAGE 2

1. Install the first panel and associated counterfort to the correct line.
2. Proceed with the base panel layer to either the first foundation level change or a suitable length to permit efficient wall erection.
3. Install land drainage to the rear of the wall to the specified design position and detail.
4. Install and compact the specified structural backfill to the rear of the wall to the height of the first panel.

STAGE 3

1. Place the specified Geogrid to the surface of the backfill to the appropriate width including specified lap requirements.
2. Once the installation of the first layer of panels and the associated Geogrid has been completed to the required length repeat the process noted above to complete the next layer of panels. Note Geogrid may not be required to each layer of panels but must be installed in accordance with the intervals shown on the wall design.

STAGE 4

1. Repeat the sequence above for each additional 300mm panel until the design height is achieved.
2. Where required fence post sleeves can be installed in the top layers of the wall at positions agreed with the client.

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