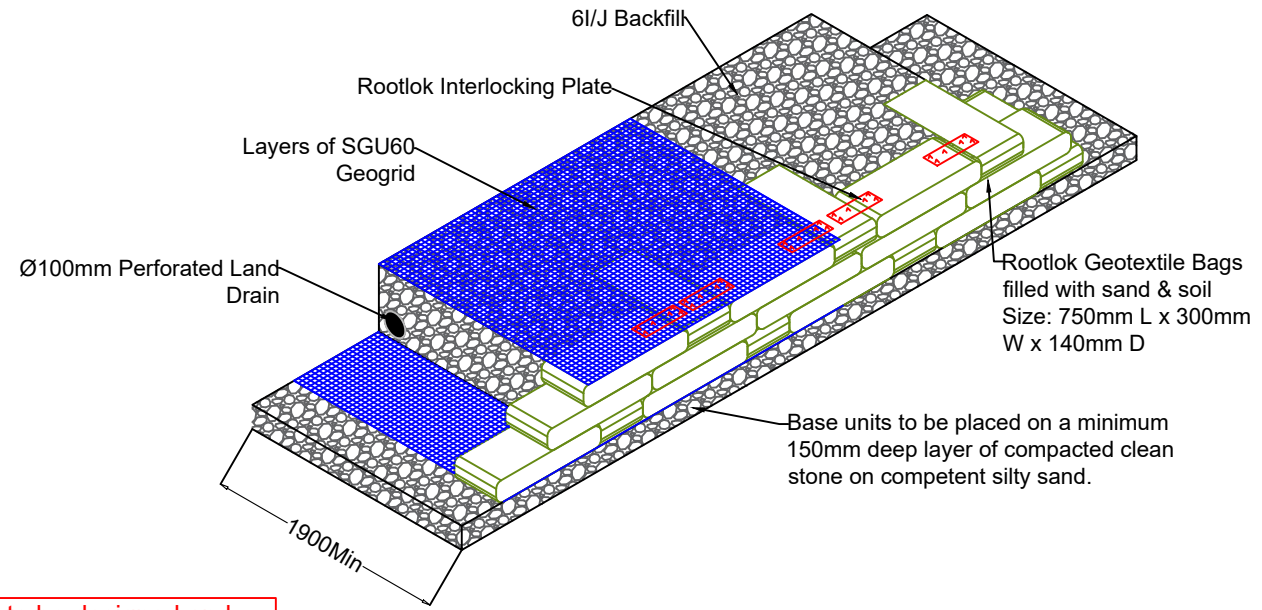
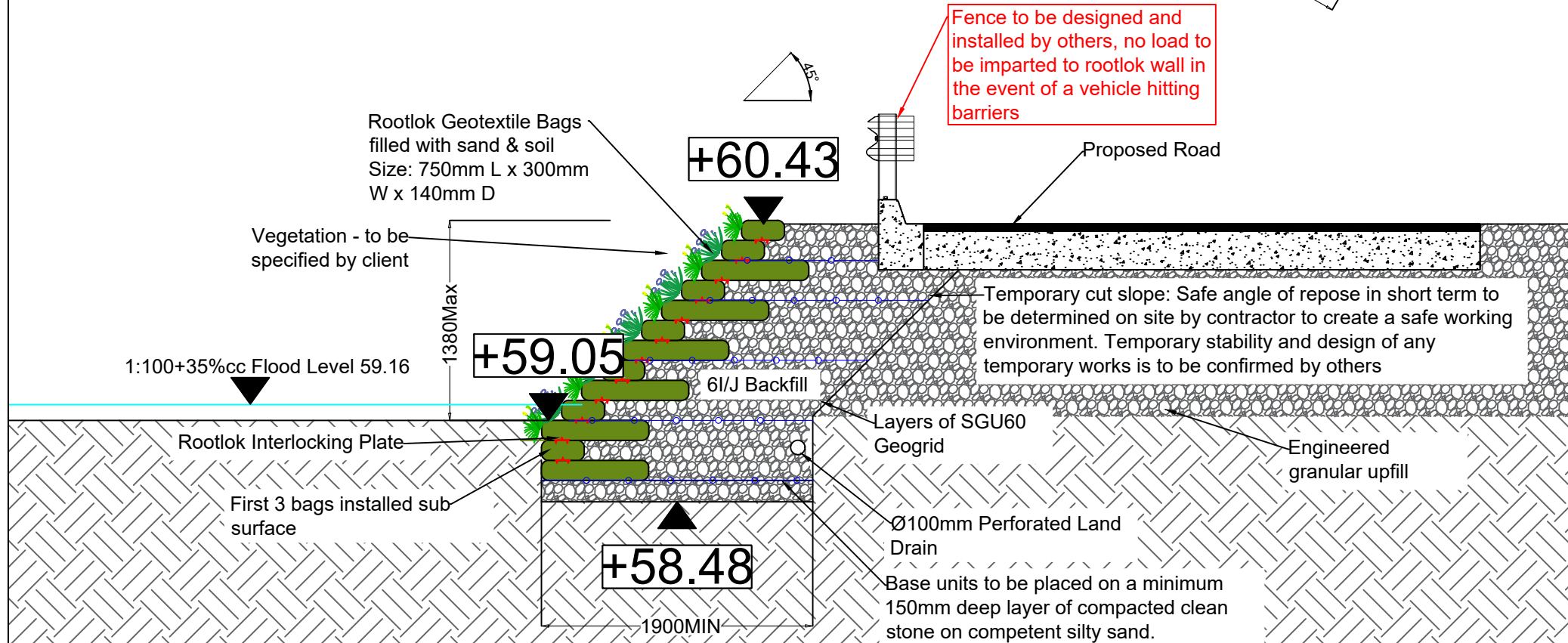


Section A1 - 1:40

3D VIEW TIEBACK - GRID



- NOTES**
- 1) All dimensions in mm's unless otherwise specified.
 - 2) **WALL SPECIFICATION:**
Facing units to consist of GeoGrow Ltd. Rootlok bags system filled with sand and soil mix: (200mm x 750mm x 140mm) as per manufacturers details. Interlocking plates to be provided between courses of Rootlok bags.
 - 3) **GEGRID:**
Soil reinforcement to consist of Stratgrid SGU 60 geogrid installed at maximum 420mm vertical centres (3 bags).
Geogrid placement to comply with the following:
 - 1st layer no higher than top of the 1st course of Rootlok bags
 - Subsequent layers at no greater than 420mm vertical (3 Rootlok bag courses)
 - Top layer to be max 420mm (3 blocks) below finished ground level.
 - Where a geogrid layer steps up/down one course, there should be a minimum overlap of 375mm (half a Rootlok bag width)
 - Grid lengths from the higher sections should be used for intermediate wall heights.
 - The geogrid is always placed with the roll direction (direction of strength) perpendicular to the wall face, i.e. out in the required length.
 - Tension must be applied to the geogrids before fill is placed over them.
 - When filling over the geogrid, a minimum of 100mm of fill must be placed over the geogrid before driving plant over it.
 - 4) **INSTALLATION:**
Please refer to standard manufacturer's installation guidelines. A specialist installer, approved by GeoGrow Ltd. and experienced with constructing reinforced earth walls is employed to carry out the installation works.
 - 5) **BACKFILL TO THE ROOTLOK WALL:**
Imported well graded granular fill compliant with Class BN fill as defined by Series 600 of the MCHW Specification for Highway Works must be used as the backfill. Suitable material must be placed and compacted in accordance with the MCHW Specification for Highway Works, Series 600, Table 601. The Principal Contractor is responsible for the selection of this material. It must comply with the geotechnical characteristics specified in the Series 600 of the MCHW Specification for Highway Works, as shown in the attached drawings and in the attached Geotechnical Certificate. It is to be placed to the following:
 - 1st layer to be max 420mm (3 blocks) below finished ground level.
 - Subsequent layers at no greater than 420mm vertical (3 Rootlok bag courses)
 - Top layer to be max 420mm (3 blocks) below finished ground level.
 - Where a geogrid layer steps up/down one course, there should be a minimum overlap of 375mm (half a Rootlok bag width)
 - Grid lengths from the higher sections should be used for intermediate wall heights.
 - The geogrid is always placed with the roll direction (direction of strength) perpendicular to the wall face, i.e. out in the required length.
 - Tension must be applied to the geogrids before fill is placed over them.
 - When filling over the geogrid, a minimum of 100mm of fill must be placed over the geogrid before driving plant over it.
 - 6) **FOUNDATION FOR ROOTLOK WALL:**
Formation level must be on competent clayey sand/ gravelly CLAY or clayey, gravelly SAND with a minimum allowable bearing capacity as listed below:
Section A1 A1 70kPa
Section A2 A2 40kPa
 Any soft, loose or unstable material (such as made ground, peat or alluvium) present at or below formation level that does not comply with the assumed soil parameters, must be excavated out down to competent stratum and replaced with compacted Class 6/2 granular material (with assumed properties of $\phi = 30^\circ$, $\gamma = 18.0 \text{ kN/m}^3$ and $c = 0 \text{ kPa}$).
 The Principal Contractor must confirm the suitability of the founding material prior to construction commencing. We recommend in-situ plate bearing tests/ hand shear vane are carried out to confirm the allowable bearing capacity.
 Construction should not commence until the Principal Contractor has received written confirmation that the bearing stratum is competent.
 - 7) **DRAINAGE:**
A 100mm \varnothing perforated drainage pipe should be placed along the full length of the slope as shown on the cross-sections. This should be fully rotatable and connected to appropriate site drainage outlet. The drainage should be regularly maintained.
 It is assumed that the road/footway above the wall will have permanent and maintained drainage to prevent run-off from entering the wall backfill.
 All other site drainage is outside the scope of this design.
 - 8) **SITE / IN-SITU SOILS:**
Foundation (original stiff silty CLAY):
 $\phi = 22^\circ$, $\gamma = 18.0 \text{ kN/m}^3$ and $c = 0 \text{ kPa}$
Retained (granular engineered soils):
 $\phi = 30^\circ$, $\gamma = 18.0 \text{ kN/m}^3$ and $c = 0 \text{ kPa}$
 (River terrace deposits - loose to medium dense, slightly clayey sand)
 $\phi = 28^\circ$, $\gamma = 18.0 \text{ kN/m}^3$ and $c = 0 \text{ kPa}$.
 The Principal Contractor / Principal Designer is responsible for ensuring the in-situ soils complying with the geotechnical characteristics as shown on the relevant drawings and in the design calculations.
 - 9) **TYPICAL FRONT FACE:**
 The minimum front face slope is indicated on the sections provided.
 80% above IC 610.0 (concerning restriction of construction plant within 1.5m of the front face shall be followed. If face movement should occur, the next course shall be set back as necessary to ensure that vertical face later remains at or above the minimum.
 - 10) **PEDESTRIAN/VEHICULAR BARRIERS:**
 All pedestrian and vehicular protection to be included at the crest of the reinforced earth slope to be designed by others. Pedestrian barriers are subject to detailed design by a suitably qualified consulting engineer and are subject to GeoGrow scope. The Client/Consulting Engineer must ensure that lateral loading is transferred to the Rootlok slopes to resist impact from a vehicle. This supporting base slab must be designed by others in accordance with BS589:1 and the parapet must be for normal or high level of containment only. Any vehicle parapets should be designed by others, with the appropriate clear working width to their rear. Any protection installed at the top of the Rootlok slope, other pedestrian or vehicular, is outside of this design.
 - 11) **STABILITY OF TEMPORARY EXCAVATION:**
 This solution is for the permanent works only and is issued on the basis that a safe system of works is provided for construction. Temporary excavations have the potential to fail rapidly and without warning. The Principal Contractor/Rootlok slope installer must produce a method statement and risk assessment for the works to be approved by the Principal Designer.
 Temporary stability and design of any temporary works is entirely outside our scope and should be confirmed by others.
 - 12) **STATUTORY APPROVALS (GEOTECHNICAL CERTIFICATION):**
 The Client/Principal Designer must check to see if any statutory approvals such as Geotechnical Certification are required for proposed works. If applicable are required, this must be gained prior to construction. If construction proceeds prior to necessary approvals being required, then it does so at the Client's own risk.
 - 13) **VEGETATION ESTABLISHMENT:**
 Rootlok systems should be hypothesized as soon as possible after construction.
 Manufacturer's maintenance regime should be followed to ensure best vegetation growth.
 - 14) **HEAVY CONSTRUCTION TRAFFIC OPERATING CLOSE TO THE WALL:**
 It should be ensured that the face batter is not compromised by the use of heavy construction plant machinery too close to the front face of the wall. If construction plant is to traffic the crest area of the wall, a suitable haul road design must be undertaken and be set back and adequate distance from the rear of the wall (designed by others). If construction plant operates on the unsupported retained material, distortion/bulging of the wall may occur.
 - 15) **FUTURE MAINTENANCE OF SERVICES INSTALLED UNDER THE ROAD ON THE RETAINED SIDE OF THE WALL:**
 The Principal Contractor and Client's Consulting Engineer must also confirm the locations of all services prior to construction and ensure that none will be affected by the wall and its installation. Services to be installed under the proposed road should be kept behind the reinforced zone of the Rootlok wall to ensure any future maintenance does not rip through the geogrid reinforcement.
 - 16) **RISK OF FLOODING:**
 A flood level of 58.16 MOD has been assumed (1:100+35% CC) if the value is deemed to be low Geogrow to be retained.
 - 17) **NOTES ON CALCULATIONS/DRAWINGS:**
 These plans and the accompanying design documentation should be thoroughly checked by the Principal Designer any apparent errors, omissions or variations should be reported immediately to GeoGrow Ltd. Contributor of these walls shall not commence until the Client/Principal Designer has confirmed the GeoGrow Design Analysis Document (Report Ref: SU2023) to ensure that there are no errors, omissions or conflict with the relevant design.
 The installer must receive a copy of the material supplier's risk assessment prior to the start of construction and take account of the content in their method of construction.
 This drawing, or design proposal, remains the copyright of GeoGrow Ltd and is not to be copied or disclosed to any person other than the person to whom it is originally intended.



HAZARD DETAILS
FOR MORE DETAILS SEE THE DESIGNERS RISK REGISTER IN FORMAL DESIGN REPORT NUMBER SU3038

HEALTH & SAFETY/ENVIRONMENTAL HAZARDS	
HAZARD 01	Working at Height
HAZARD 02	Risk of Flood

FURTHER DETAILS

Wall Setting out & alignment to be confirmed by principal designer, any clashes between Rootlok wall and other elements/structures is outside the scope of this design and thus any amendments/alterations due to clashes are to be the responsibility of others.

STATUS

A	For Approval	RN	10/07/23
Rev	Issue/Revision	Drawn	Date

GeoGrow

PROJECT TITLE:
East Horsley

CLIENT:
Taylor Wimpey

DRAWING TITLE:
Section A1

Designed:	BV	Date:	17/07/2023	Project No.:	SU3038
Drawn:	RN	Date:	17/07/2023	Scale:	1:40
Checked:	DR	Date:	17/07/2023	Drawing No.:	SU3038_GG_XX_XX_DR_X_04
				Revision:	A