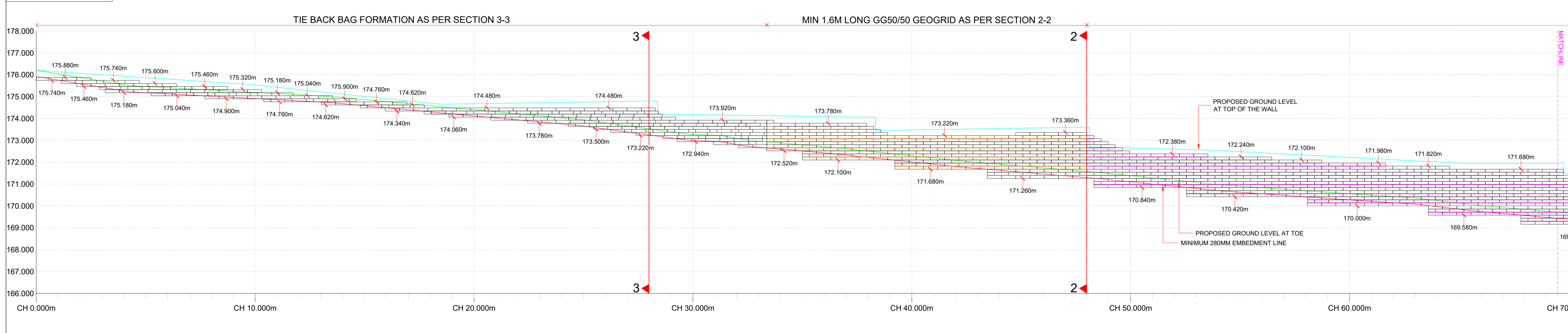


INDICATIVE LOCATION OF FLEX MSE WALL

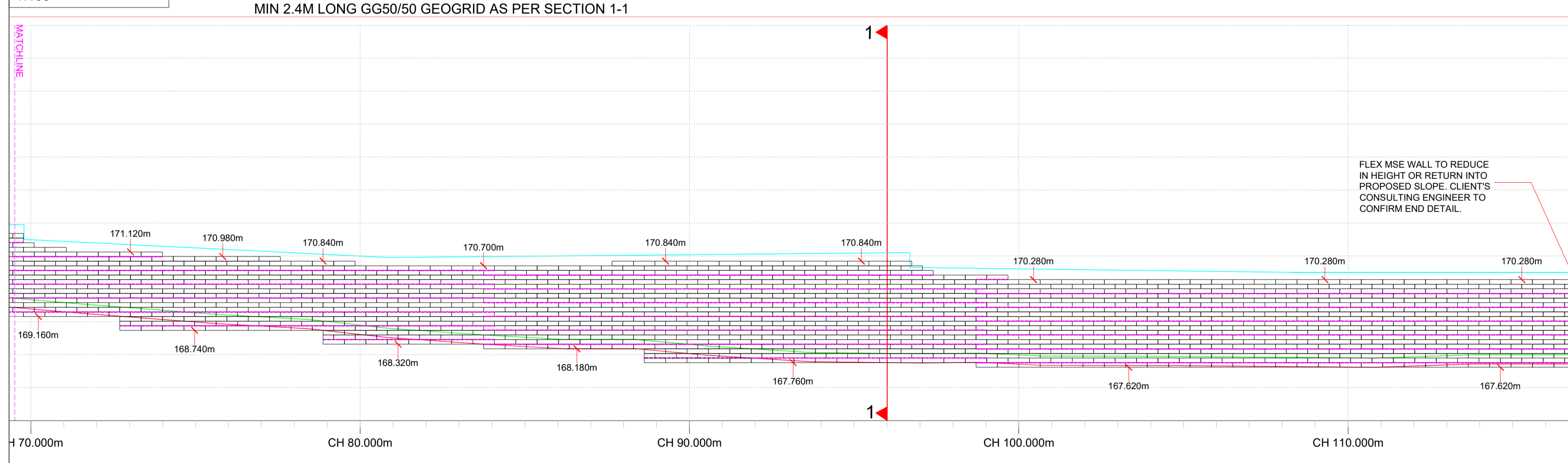
1:200
 All wall geometry, setting out and required offsets to be confirmed by the Principal Contractor and/or Client's Consulting Engineer prior to construction. The Principal Contractor and/or Client's Consulting Engineer must also confirm the locations of all services on site prior to construction and ensure that none will be affected by the Flex MSE wall and its installation.



Elevation 1 (1/2)
1:100



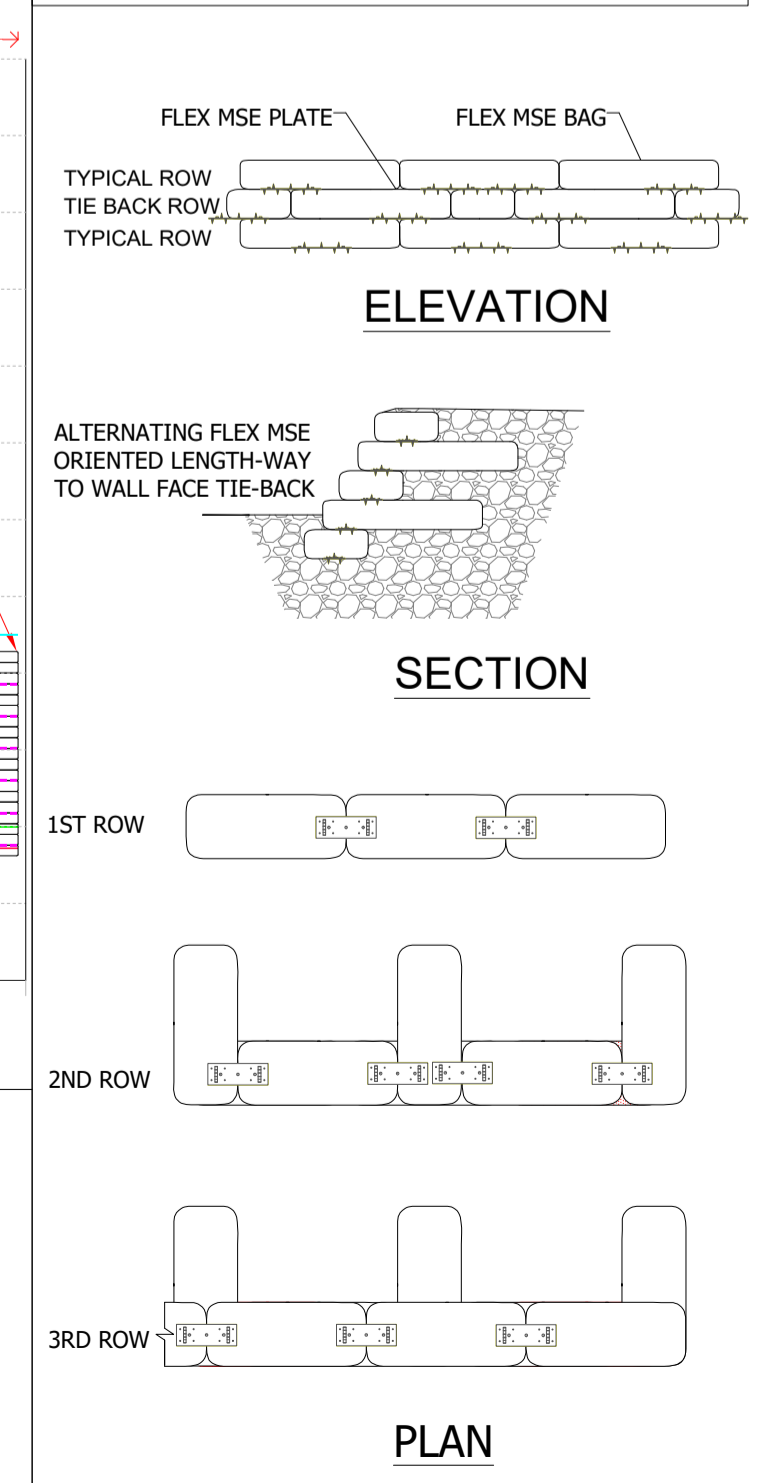
Elevation 1 (2/2)
1:100



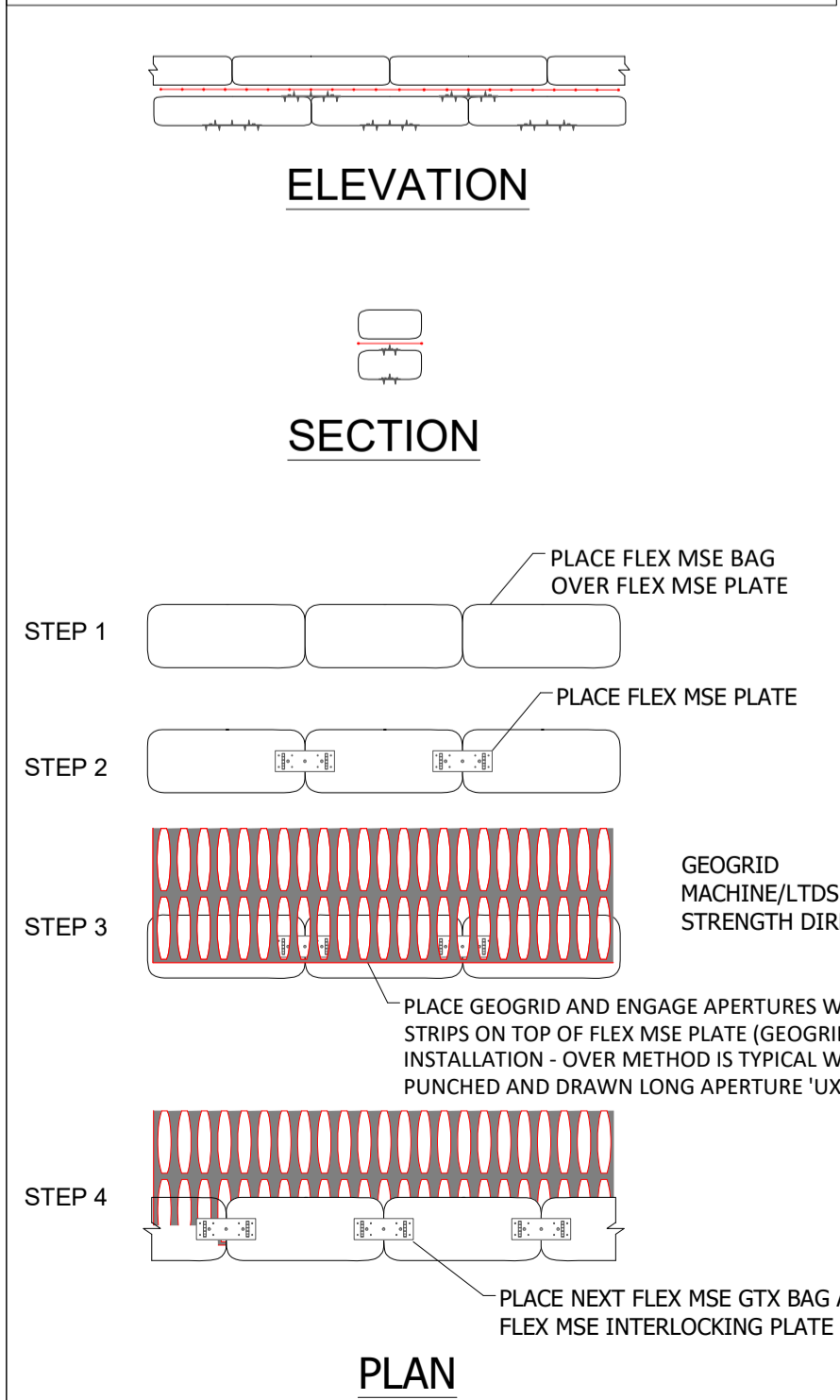
KEY
 - - - - - 2.4m long Gravitas GG50/50 Geogrid
 - - - - - 1.6m long Gravitas GG50/50 Geogrid

- NOTES**
- All dimensions in mm unless otherwise specified.
 - WALL SPECIFICATION:**
 Facing will consist of Gravitas International Ltd Flex MSE bags system filled with sand and soil mix (650mm x 300mm x 140mm) as per manufacturer's details. Interlocking plates to be provided between courses of Flex MSE bags. Bags installed beneath the water level to be filled with gravel in accordance with Gravitas specifications.
 - GEOGRID:**
 Where required soil reinforcement is to consist of Gravitas GG50/50 geogrid installed at max 420mm vertical centres (3 bags).
 Geogrid placement to comply with the following:
 - 1st layer to be installed on the base Flex MSE course.
 - Subsequent layers at no greater than 420mm vertical c/c (3 Flex MSE bag courses).
 - Top layer to be max 420mm (3 blocks) below finished ground level.
 - Geogrid to be wrapped up a max of 3 bag courses and returned back by a min of 1m as indicated. Where a geogrid layer steps up/down one course, there should be a minimum overlap of 380mm (half a Flex MSE 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. not 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.
 - INSTALLATION:**
 Please refer to standard manufacturer's installation guidelines. A specialist installer, approved by Gravitas International Ltd, and experienced with constructing reinforced earth walls should be employed to install works.
 - BACKFILL TO THE FLEX MSE WALL:**
 Well graded granular fill compliant with Class G1 or G1 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 6/4.
 The Principal Contractor is responsible for the selection of this material to ensure compliance with the geotechnical characteristics specified in the 'Series 600' of the MCHW Specification for Highway Works, as shown on the relevant drawings and in the design documents/calculations, namely:
 $\phi = 35^\circ$, $\gamma = 18kN/m^3$ and $c = 0kPa$
 Silt-won granular fill may be used should it comply with the requirements of Class G1 or G1 granular fill. Testing to be carried out by the contractor to confirm acceptance. We advise grading tests are carried out on representative samples of site won fill to determine if the fill complies with Class G1 or G1 fill.
 To achieve a suitable foundation for the Flex MSE wall, excavation must take place down to competent bearing stratum and allow for the placement and compaction of a minimum 0.5m thickness of selected granular material (e.g. Class G1 or G1 material with assumed properties of $\phi = 35^\circ$, $\gamma = 18kN/m^3$ and $c = 0 kPa$).
 The formation level must be on original competent bearing stratum (original firm CLAY or MUDSTONE) and the formation level should be proof-rolled and carefully inspected by a suitably qualified engineer. Any soft loose or unstable material (such as topsoil, organics or other deleterious material) must be excavated out down to competent bearing stratum (original firm CLAY or MUDSTONE) with a safe bearing resistance of 80kPa and be replaced with compacted granular fill.
 We suggest that hand shear vane tests or plate bearing tests should be undertaken to confirm minimum safe bearing resistances at and below formation level. Plate bearing tests should be carried out to comply with BS 5939 incremental method using a minimum 600mm diameter plate loaded. If cohesive material is found hand shear vane tests should be undertaken to confirm a minimum undrained shear strength.
 Continuation must not commence until the Contractor has written confirmation from a local geotechnical specialist that the proposed formation level is in compliance with this design and achieves the required safe bearing resistance.
 - DRAINAGE:**
 The installation area must be well drained to provide a stable area of works for the wall installer. The excavated slopes should be checked for any flows or seepage that require drainage measures. Any flows, seepage or standing water must be directed to a suitable outfall as soon as they are encountered. Permanent and maintained drainage should be installed to ensure runoff is not discharged behind the wall. Site drainage is outside the scope of this design.
 We recommend that a minimum 150mm diameter drainage pipe is installed behind the wall as indicated on the sections. The pipe should be connected to an approved positive outfall, be fully roddable and regularly maintained.
 - PERMANENT AND MAINTAINED ROAD DRAINAGE** should be installed on the pavement behind the Flex MSE wall to intercept run-off and discharge it away from the wall backfill. Site drainage design is outside our scope.
 - SITE / IN-SITU SOILS:**
 Based on the Haply Huddleston & Associates Geo-environmental Report, Report Ref: E197465/R004A, AUG 2022 (TPO3, TPO8, TPO9, SHW3, SHW4, SHW11, SHW12(G)), it is assumed that the foundation and retained soils have the following properties as a minimum:
 Foundation soils: original firm CLAY or MUDSTONE
 Drained - $\phi = 27^\circ$, $\gamma = 18 kN/m^3$ and $c = 0 kPa$
 Retained soils: soft CLAY or MADE GROUND or Class 1/2C Upfill
 Drained - $\phi = 27^\circ$, $\gamma = 18 kN/m^3$ and $c = 0 kPa$
 Any re-engineered clay fill proposed to be placed beneath the wall must be placed and compacted in accordance with the Specification For Highway Works. Suitability of this clay as founding material is to be confirmed by others, any contamination in the vicinity of the wall is outside the scope of this design and this should be dealt with by a qualified Environmental Consultant.
 - TYPICAL FRONT FACE:**
 The maximum front face angle is indicated on the adjacent sections, maximum 75degree face angle. SHW advice (G 610.5) concerning restriction of compaction plant within 2m of the front face shall be followed. If face movement should occur, the next course shall be set back as necessary to ensure that overall batter remains at or below the permitted maximum.
 - PEDESTRIAN/VEHICULAR BARRIERS:**
 We have assumed that a maximum 1.8m high post and rail fence (design and details by others) will be installed behind the wall. The fence posts are to be fully concreted into minimum 1000mm deep 300mm ϕ void formers pre-installed into the wall backfill during construction. The retaining wall designer should be installed of any changes to the proposals prior to construction. Details must be provided for review prior to construction.
 - STABILITY OF TEMPORARY EXCAVATION:**
 Temporary excavations have the potential to collapse rapidly and without warning. This solution is for the permanent works only, and is based 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/Flex MSE wall installer must produce a method statement and risk assessment for the works to be approved by the Client's Consulting Engineer. As per drawing 02.
 Temporary stability and design of any temporary works is entirely outside our scope and should be confirmed by others.
 - STATUTORY APPROVALS (APPROVAL IN PRINCIPAL GEOTECHNICAL CERTIFICATION):**
 The Client/Principal Designer must check to see if any statutory approvals such as Approval in Principle/Geotechnical Certification are required for proposed works. If approvals 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.
 - VEGETATION ESTABLISHMENT:**
 The Flex MSE bags must be filled with a sand and topsoil mix as recommended by the manufacturer. The wall must be hydro-seeded immediately post construction.
 The Principal Contractor must accept it will be their responsibility to ensure successful vegetation achieved by careful construction, inclusion of good quality topsoil and ensuring the Flex MSE bags do not dry out. Should, three months after completing construction, no significant vegetation be visible we recommend that the face of the slope is hydro-seeded again.
 - 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 set back and adequate distance from the rear of the wall (designed by others). Construction plant operates on the unprotected retained material, distortion/bulging of the wall may occur.
 - EXISTING SERVICES BEHIND THE WALLS:**
 All existing services must be located before the works are carried out and suitable precautions taken to ensure that they are not impacted by the works or clash with the reinforced zone of the Flex MSE slope.
 - SURCHARGE:**
 A maximum live load of 5kN/m 2 was assumed to act on the retained side of the wall.
 Please advise us if the surcharge on the retained side of the wall in the permanent condition is to exceed the assumed live load. The Client's Consulting Engineer must inform The Retaining Wall Designer, prior to construction to allow this design to be reviewed.
 - NOTES ON CALCULATIONS/DRAWINGS:**
 These plans and the accompanying design documentation should be thoroughly checked by the Client's Consulting Engineer. Any apparent errors, omissions or variations should be reported immediately to the retaining wall designer. Construction of these walls shall not commence unless and until the Client/Client's Consulting Engineer has considered the retaining wall designers Design Submission Document (PDR Ref: 26-5070-F1) to ensure that there are no errors, omissions or conflict with the scheme design.
 The installer must have received 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 the retaining wall designer and is not to be copied or disclosed to any persons other than the person to whom it is originally intended.

TIE BACK INSTALLATION DETAIL



STRECHER BOND INSTALLATION DETAIL



FOR COMMENT - NOT FOR CONSTRUCTION

Rev.	Issue / Revision:	Drawn: Date:
B		DM 12.02.26
A		DM 11.02.26
O		DM 04.02.26

GRAVITAS INTERNATIONAL LTD

Project Title:
ABBEY ROAD, SHEPLEY (F5035)

Drawing Title:
FLEX MSE PLAN & ELEVATION

Designed:	AMcK	Date:	12.02.26	Project No:	26-5070-F1
Drawn:	DM	Date:	12.02.26	Scale:	AS INDICATED AT A1
Checked:	GM	Date:	12.02.26	Drawing No:	SK26-5070-F1-01
Drawing No:	SK26-5070-F1-01	Revision:	B		

