

30.0	20.0	10.0	0.0	SCALE BAR 1/500
150.0	100.0	50.0	0.0	SCALE BAR 1/2500
RE\ Date	Arch	nitectural D Mobile	lace Limite esign and 078160467 laceltd@gn	Technology 756

### Existing access Foundations 9933-Landscaping Replace existing rear wall and fence with new retaining wall and fence over Concrete -3539 4344 S,ROOM Internal stud partitions wc 294 hb New upvc glazed doors with toughened glass and side window. Fix Catnic cranked lintel over Catnic corner post support. ART ROOM MUSIC ROOM/STUDIO ×ai g n n n MOTOR BIKE STORAGE Drainage Wc. shower, handbasin and AND MAINTAINANCE rainwater down pipe to existing combined drain form plinth. Drainage. **Building Regulations Part J Heating** The existing residential building is heated by coal fired central heating and a hot water cylinder and emersion heater New Building. The new workshops extension will not be fitted with a permanent heating source as it will not be in permanent occupation Part G Water New shower room Wholesome water will be provided from the mains supplier in the main road, metered by the service provider United Utilities Limited. All sanitary ware is to be from a range designed to reach sustainable Code 3 for water efficiency to achieve standard Department. water usage of not more than 125 litres per person per day fitted with a flow restrictor to achieve the same rate. Within 5 days of practical completion the applicant should have 215 mm thick inner provided the water efficiency calculations proving the water leaf block return usage of the dwelling complies with the regulations. Steel roller shutter door **GROUND FLOOR PLAN** 50 ( 0 metres SCALE BAR 1/100 10.0 metres PROPOSAL FOR OUT **GROUND FLOOR PLAN 106 TARNSIDE BRAYSTONES CUMBRIA** Scale: 1/50 @ A3 BUILDING CA21 2YW FOR MRS MIRIAM BENZIE Date: **DEC 2021**

### FOUNDATIONS

Excavations for foundations GROUND CONDITIONS inspection by Local Authority Building Control officer. where wall thickness may vary mm horizontal overlaps

completion or to an approved construction joint. increments of 225 mm. to suit block covering.

### Cavity walls below ground.

300 mm. thick cavity walls consisting 100 mm. thick solid concrete block with 100 mm wide cavity back filled with concrete to ground level max 225 mm below damp proof course and 100 mm. solid concrete block inner leaf. Cavity wall ties to be Furfix stainless steel or similar specifically designed for 100 mm. cavities at 750 mm. horizontal centres and 450m vertical centres, offset 375 mm. horizontally to form a diamond pattern. Fix additional wall ties every course at all corners and jambs. Between ground level and floor level, fix bituthene Hyload DPCs continuous across the cavity to both inner and outer leaves of walls and integrated with the Gas and Damp proof floor membrane at min of 150 mm. above ground level. Fit cavity trays over continuous gas protection in cavities. Lay facing bricks from one course below finished ground level dpc level in outer leaf to

Connections and Discharges. investigated for suitable reuse with the approval of Building Control. General Drainage Specification:

New Ground Floor Construction. U Value 0.16 W/M<sup>2</sup>K thicker than 600 mm, deep.

the manufacture's specification for the location and purpose. New ground floor to be level with existing ground floor.

21/0323/02

DWG No.

Non-Structural stud partitions: In the bathroom, fix new stud partitions to layout shown. Partitions to be 100 mm x 47 mm. timber studs at 400 mm. centres built of 100 mm x 75 mm. sole plates with solid bracing at maximum 900 mm. vertical centres. Fix 10kg/m<sup>2</sup> 15 mm thick plasterboard and skim both sides. Fully insulate between studs with Rockwool insulation to reduce the passage of airborne sound. Bolt vertical studs to adjacent walls to provide lateral restraint to walls and studs to form rigid grid. Fix double joists under partitions parallel to joists and solid noggins under partitions perpendicular to joists.

FOUNDATIONS MAY BE RECONSIDERED WITH BUILDING CONTROL DEPENDANT ON SITE SPECIFIC

Foundation trenches to be excavated to suit dimensions indicated and taken down to virgin ground for

Depth may vary according to site conditions and site contours but top of concrete must be min. 450 mm. below the finished ground level. Strip foundations to be generally 600 mm. wide x 225 mm. min. deep to external cavity walls and 450 mm. x 225 mm. min. for 100 mm. load bearing internal walls or with min. 150 mm. toe

Form all steps in level of foundations in vertical increments of 225 mm. to suit block coursing, and with min 300

Concrete to be premixed C25 as described in tables 1 and 2 of B.S. 5328 maximum size aggregate to be 20 mm. All concrete shall be distributed and placed in position as quickly as practicable by a method which precludes contamination, segregation or loss of materials, compaction shall be complete before the initial set commences. Partial set concrete shall not be reworked or used. All concreting shall be continuous to

During the first seven days the concrete shall be protected by whatever means to prevent over rapid drying. Steps in the foundations are to overlap by twice the height of the step or by 300 mm. whichever is the greater and should not be of greater height than the thickness of the foundation. In general steps should be in

Tie new foundation horizontally to existing foundations, by inserting 3 no. 9 mm. twisted mild steel bars in a dovetail pattern into the face of the existing strip foundations and install new concrete foundations to fully surround steel connections, to form a horizontal tie between the two foundations, to prevent uneven settlement.

There are existing drainage connections for foul and surface water. These are to be surveyed recorded and

All new drains will be designed to comply with BS EN 752 . New soil and surface water drainage: Hepworth Supersleeve or similar spun clay 100/150/225 mm. diameter pipes with u.p.v.c. flexible sealed collars laid in clean square cut trenches at a gradient of not less than 1: 60 fall. Carefully back fill trenches with layered back fill strictly in accordance with the manufacturer's instructions. All fittings including manholes, inspection chambers, and back inlet gullies etc. to be from the same range and supplier. Set all pre formed gullies and chambers on 150 mm. concrete bases and surround with 150 mm. sleeves. Fit gullies with plastic or galvanized grills. Fit manholes and inspection chambers with steel rims and covers, as supplied by the manufacturer set in mortar surrounds. Set manhole covers onto pre formed r.c. covers where manholes internal size is greater than 450 mm. x 600 mm. which is the minimum acceptable internal dimension for a 900 mm. deep manhole. Where drains are less than 1500 mm deep in traffic areas surround pipes in 150 mm concrete sleeve with Flexcell joints at each pipe joint or as otherwise recommended by the pipe manufacturers. New drains under concrete floor are to be surrounded in concrete sleeve with expansion joints as described above.

All drain lines are diagrammatic and the final layout should be agreed on site with the Building Control

Allow for flooring finish thickness on 100 mm concrete floor slab on 500 gauge Visqueen vapour barrier on 150 mm Celotex GA4000 floor insulation slabs on 1200 gauge damp proof membrane. All on 50 mm sharp sand blinding on minimum 150 mm thick sand blinded hard-core sub-base laid and consolidated in 150 mm layers no

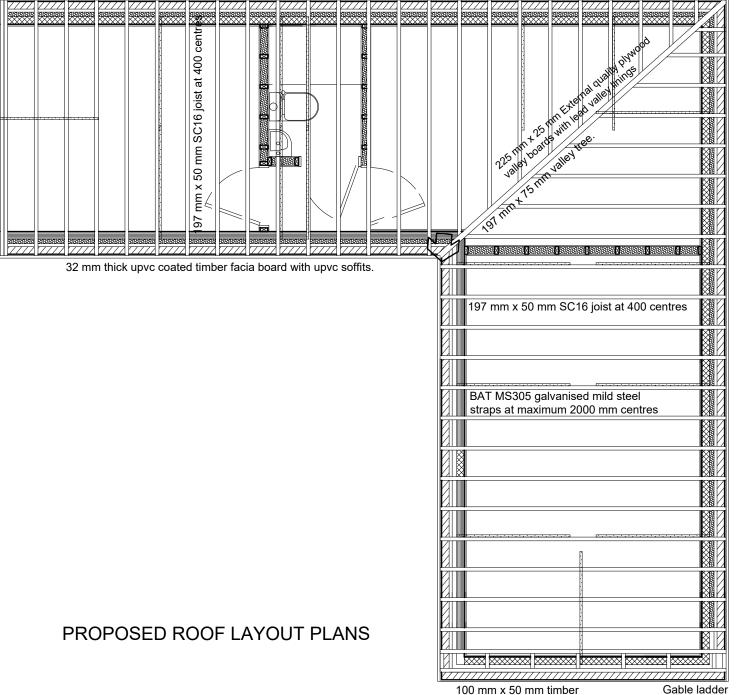
Visqueen Damp Proof Membrane is to overlap D.P.C. in inner leaf of external walls to form a permanent damp proof barrier. All damp proof courses, and vapour barriers are to be overlapped and taped as recommended in



### BAT MS305 galvanised mild steel straps at maximum 2000 mm centres

### Fix joist securely to wall plate.

Gable ladder



wall plate at eaves

### New Extension roof construction.

#### U Value 0 11 W/M<sup>2</sup>K Roof fabric.

Approved slates to match existing on 25 mm. x 50 mm treated timber battens on Proctor Roofshield breathable roof membrane or similar Roof structure.

197 mm x 50 mm C16 grade selected timber rafters at 400 mm centres fixed to 100 mm x 50 mm timber wallplates sat on inner leaf of cavity wall on mortar beds and held in place with BAT MS305 straps at 1200 mm centres. Form gable ladder to support verges at gable ends and mechanically fix ladder to last rafter.

Form valley with 75 mm x 197 mm C24 valley tree with 225 mm x 25 mm external quality plywood valley boards over to support lead sheet valley trav

### Insulation of roofs

Insulate between joists with 150 mm thick Celotex or similar insulation slabs, cut to fit neatly between spars, with no airgaps and tape joints as recommended by manufacturer. Fix 40 mm/25 mm insulated Gyproc Thermoliner insulated 15 mm plasterboard and skim ceilings throughout extension

### Leadworks to roofs.

All lead gutters, valleys, trays, soakers and flashings are to be in the correct code thickness as recommended by the Lead Sheet Manufacturer's Association and produced and fixed strictly concordance with their published recommended details.

All roof trims, eaves boxes and barge boards etc to match existing. Gutter and downspouts to be grey upvc to match existing.

### Cavity wall above dpc U Value 0.22 W/M<sup>2</sup>K

300 mm. thick cavity walls consisting rendered dense concrete block external leaf 100 mm. clear cavity with 60 mm. Kingspan insulation or similar and 100 mm. thick Armstrong Airtec 3.6n/mm<sup>2</sup> concrete block inner leaf. All walls are to be built in a manner to ensure the building would pass

a pressure test to achieve 5.5 M<sup>3</sup> / (h.M<sup>2</sup>) at 50PA or better. Walls are to be dry lined internally with minimum 15 mm. high density plasterboard on dabs or patent plasterboard adhesive.

Fix insulated cavity closers at all jambs and cills to doors and windows and fix tray under cills and lintels to heads of openings.

Cavity wall ties to be Furfix or similar stainless steel specifically designed for 100 mm. cavities at 750 mm. horizontal centres and 450m vertical centres, offset 375 mm, horizontally to form a diamond pattern or as otherwise recommended by the wall insulation manufacturer. Fix additional wall ties every course at all corners and jambs. Seal heads of cavities with inert fire proof material 6mm thick Masonite or similar bedded in mortar and fixed between toes of spars.

Fix Catnic Cougar or IG type stainless steel or galvanised lintels or similar designed for 100 mm. cavities. Lintels to have insulated voids and integral cavity trays and min. bearing of 150 mm. Fix additional bitumen trays in severe weather areas. Fix weep holes in outer leaf at 600 mm. centres above all cavity trays. All openings are to be sealed to comply with the pressure test requirement (5.5 M<sup>3</sup> / (h.M<sup>2</sup>) at 50PA.)

SCALE BAR 1/200 ORIGINAL DRAWING SIZE A3	0.0	2.0	4.0	6.0	8.0	10.0	12.0	14.0	16.0	18.0	20.0 metres		80.0 metres	70.0	60.0	50.0	40.0	
SCALE BAR 1/100	0.0	1.0	2.0	3.0	4.0	5.0	6.0	7.0	8.0	9.0	10.0 metres		400.0 metres	350.0	300.0	250.0	200.0	1
SCALE BAR 1/50	0.0		1.0		2.0		3.0		4.0		5.0 metres							
106 TARNSIDE BRAYSTO CA21 2YW FOR MRS MIR				<b>\</b>	PRC BUII			FOR	OU	Г		ROOF LAYC	OUT PLAN	1	Scale: Date: DWG No.	DE	@ A3 C 2021 323/03	RI DA

### Electrical Installations.

All electrical installations are to be designed and carried out by a suitably qualified Electrician or Electrical Engineer, the system is to be designed and tested as defined by BS 7671: 2001 Chapter 13 or an equivalent standard. These works are to be undertaken by a person registered with an electrical self-certification scheme or alternatively by a suitably qualified person with a certificate of compliance produced by that person to Building Control upon completion of the works.

Full details are to be submitted to Building Control prior to installation or the Electrician must be registered with a self-registration scheme authorized by the Secretary of State. Where self-certification is accepted the works commissioners should receive a signed Building Regulation self-certification certificate after installation and testing. All materials used in the installation are to bear the "CE" mark for the relevant EEC directive regarding the use of Electric supplies, Low voltage and extra low voltage supplies.

All electric design work is to take into account the requirements of all other Parts of the Building Regulations which may be affected by the electrical installations i.e. Part M Accessibility.

### Energy efficient lighting.

All rooms are to be provided with dedicated low energy lighting. All external lighting is to be movement censor controlled and fitted with dedicated high efficiency light fittings.

### Electrical layouts

The exact position of Electric lighting and power points to be agreed with the client prior to installation, The qualified electrician to advise the client on the minimum requirements of Building Control and the electrical specification required to meet the requirements of Part M and Part P.

### Access and Facilities for Disabled People

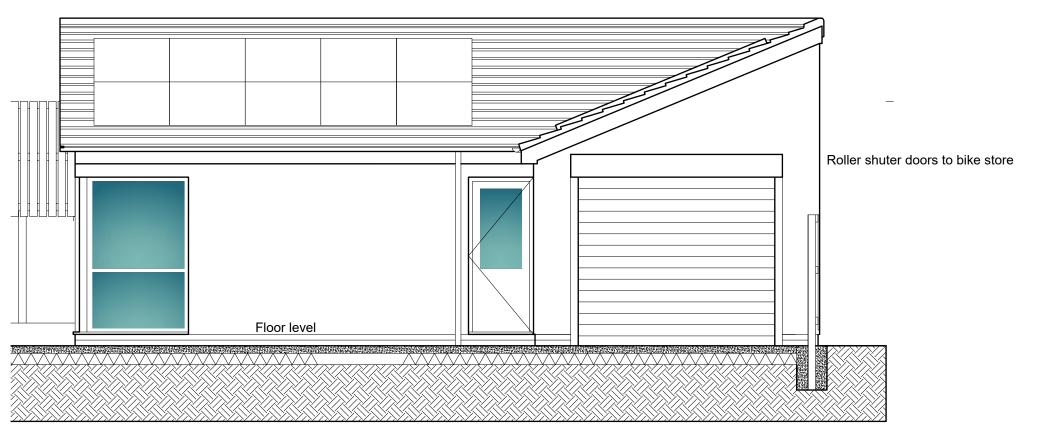
All light switches are to be no higher than 1200 mm above the finished floor level and all power sockets are to be min. 450 mm above finished floor level.

Building Regulations Only. Named products. Where products are named in the specification the developer can substitute similar products provided the specification of the products meets or exceeds the selected product specification.

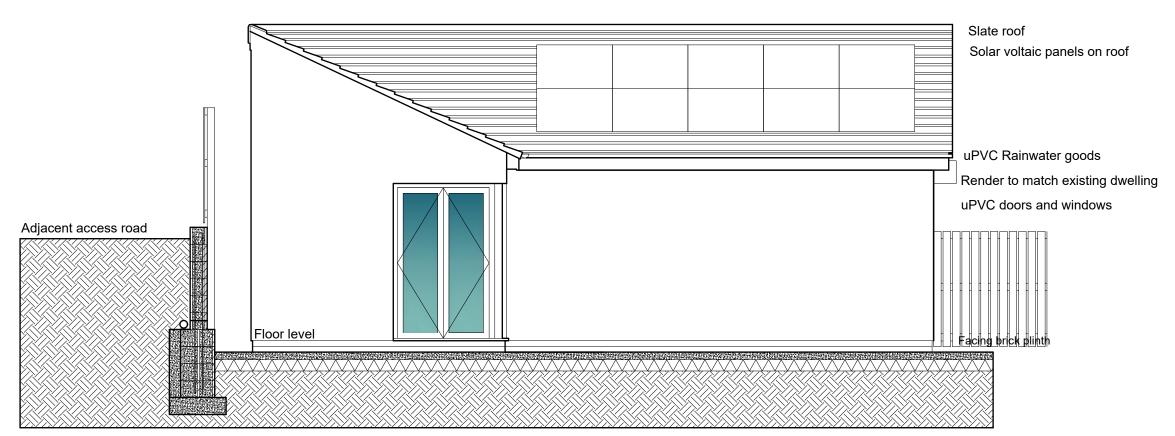


SCALE BAR 1/200 ORIGINAL DRAWING SIZE A3	0.0	2.0	4.0	6.0	8.0	10.0	12.0	14.0	16.0	18.0	20.0 metres			80.0 metres	70.0	60.0	50.0	40.0	30.0	20.0	10.0	0.0 SCALE BAR 1/500
SCALE BAR 1/100	0.0	1.0	2.0	3.0	4.0	5.0	6.0	7.0	8.0	9.0	10.0 meti	tres		400.0 metres	350.0	300.0	250.0	200.0	150.0	100.0	50.0	0.0 SCALE BAR 1/2500
SCALE BAR 1/50	0.0		1.0		2.0		3.0		4.0		5.0 metro	res										
106 TARNSIDE BRAYSTONI CA21 2YW FOR MRS MIRIA					PRO BUIL			OR (	DUT			PF	ROPOSED	ELEVATIONS	6	Scale: Date: DWG No.	1/50 @ A3 DEC 202 21/0323/04	1	REV DATE	Archit	ectural Desig Mobile 078	Elimited FCSD MCIAT Sn and Technology 316046756 Sitd@gmail.com

## PROPOSED FRONT ELEVATION



# PROPOSED SIDE ELEVATION



(		Mono tile roof ridge.
1		
		+
	□ 15 L/S Extract fan grill	۲
F	Return retaining wall to	
	enclose property	
Ó	Floor level	ina briek plinth
		Facing brick plinth
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# **PROPOSED SIDE ELEVATION**

	Floor level	Facing brick plinth		Adjacent acces
	Floor level	 Facing brick plinth		

### **PROPOSED SIDE ELEVATION**

SCALE BAR 1/200 ORIGINAL DRAWING SIZE A3	0.0	2.0	4.0	6.0	8.0	10.0	12.0	14.0	16.0	18.0	20.0 metres		80.0 metres	70.0	60.0	50.0	40.0	
SCALE BAR 1/100	0.0	1.0	2.0	3.0	4.0	5.0	6.0	7.0	8.0	9.0	10.0 metres		400.0 metres	350.0	300.0	250.0	200.0	
SCALE BAR 1/50	0.0		1.0		2.0		3.0		4.0		5.0 metres							
106 TARNSIDE BRAYSTO CA21 2YW FOR MRS MIR				۹	PRC BUII			FOR	OUT	Γ	P	ROPOSED	ELEVATI	ONS	Scale: Date: DWG No.	1/50 @ DEC 21/032	2021	RE DA

grills.

External doors and windows to be from the same manufacturer. All new doors are to be upvc insulated to have a minimum U value of 14 Wm<sup>2</sup>K. Entrance doors are to be minimum 838 mm. wide and fitted with low profile cills and thresholds to comply with Part M of the Building Regulations. Any access ramps required shall have a maximum gradient of 1:12. All external doors and frames are to be fitted with draught proof seals and thresholds and the frames are to be fully sealed to the structure with mastic to prevent heat loss directly to the external air.

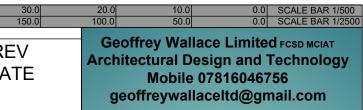
Casement doors to be fitted with with trickle ventilation at a ratio of 500 Sq. mm per 1 sq. metre of floor space throughout habitable rooms.

Fit all new windows with draught proof seals to all opening casements and seal around heads jambs and sills with air tight mastic sealant. All casements are to be draught sealed and all frames fully sealed to structure with mastic joints to prevent heat loss directly to the external air.

### Mechanical Ventilation.

Supply and fix electric light switch operated extract fan to outside air with 20 minute overrun to the following including all ducting, damping, and external

En-suite sh'rooms.....100 mm. dia. 15 l/s min. extract rate.



### New Retaining wall (based on ground level difference of 1500mm) Foundations

Concrete strip foundations as describe elsewhere with cranked steel starter bars to suit hollow block centres.

### **Excavation Work for Concrete Block Retaining walls**

Proper machines or tools should be selected and used for this purpose and undisturbed and satisfactory strong soil can be reached after the removal of the soil. The work should be carried out based on the lines and grades provided by the retaining wall design drawings. Considerable care should be practiced to prevent excessive excavation. It should be remembered that the position of structures and utilities at the vicinity of the project site should be specified and necessary measures should be taken to prevent damages because of excavation work.

### Foundation Soil Preparation for Concrete Block Retaining walls

Foundation soil under the basement should be excavated in accordance with drawings of the concrete block retaining wall design. It should be compacted to at least 95% standard proctor compaction test. Site engineer should explore and examine foundation soil to ensure that it meets the requirements of the design. If the soil foundation does not meet the design requirements, it should be replaced with acceptable material.

### **Construction of Concrete Block Retaining Wall Base**

Similar to other part of the retaining wall, the placement of base material should be carried out as per drawings provided. It is recommended to consider low permeable granular material as a base material and this soil layer is placed on foundation soil. When base materials are placed, adequate depth should be lifted according to recommendations of applicable codes or design documents to install and bury the bottom of the wall. The base material need to be compacted at 95% standard proctor and the top surface is advised to be levelled using 13mm thickness of well graded sand

The thickness of the base material is based on the height of retaining wall. For example, 100mm can be adopted for heights less than 1.2m and 150mm for heights greater than 1.2m.

### Concrete Block Unit Placement in Retaining Wall

Concrete block units should be installed properly in accordance with design documents and need to be plumbed. They should be placed cells vertical, and mortar need to be applied for all sides of the block both in horizontal and vertical directions. It should be guaranteed that first course of the wall should adequately be in contact with base material

The horizontal and vertical mortar joint thickness should not be smaller than 10mm. If joints are visible, then concave joint section should be created otherwise the finishing work will be struck with trowel. It is recommended to use a mortar of 1 cement or 1 lime: 6 sand or 1 cement: 5 sand plus water thickener. If the retaining wall is reinforced with steel bars, then cell should be cleaned from the first course using proper means and techniques. The cleaning is considerably advantageous since the position of the steel bars would be influenced by debris in the spaces. Additionally, mortars that stick into the spaces should be removed either along construction progression or after completion of block placement. Weep holes are required to be placed at a recommended spacing of 1200mm. The reinforcement bars are embedded into the space of the wall and fastened sufficiently to prevent their disposition

### **Reinforcement Placement in Concrete Block Retaining Wall**

Grouting of Concrete Block Retaining Wall Grouting process carried out as follow:

Seal/clean out holes.

Pour the grout and ensure that all spaces are filled adequately with grout to produce the best possible bond in the wall.

Voids in the grout should be eliminated by applying compaction. Building code requirement for masonry structures and commentary provides minimum space requirements for grouting which can be seen in Table 1.

#### **Construction Inspection of Concrete Block Retaining Wall**

It is necessary to conduct inspection at various construction phases which are explained below

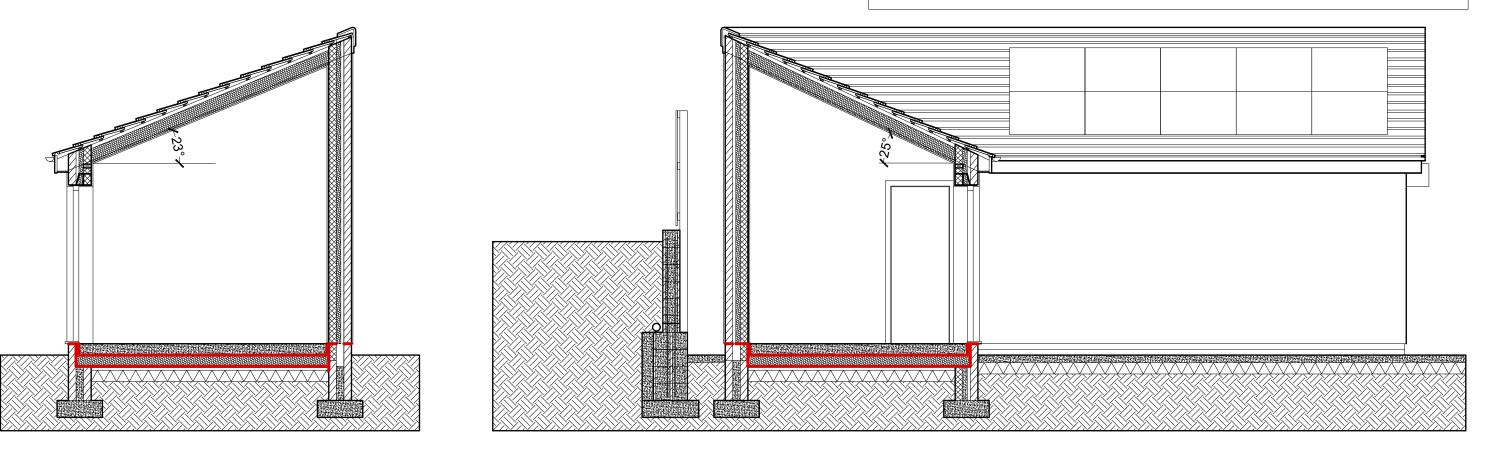
Inspection would be necessary after the completion of foundation excavation work and reinforcement placement, and it should be conducted prior to concrete pouring. Before the placement of grouts, after concrete blocks are placed and steel bars are inserted.

Prior to the placement of backfill material.

Finally, after the entire construction work is ended.

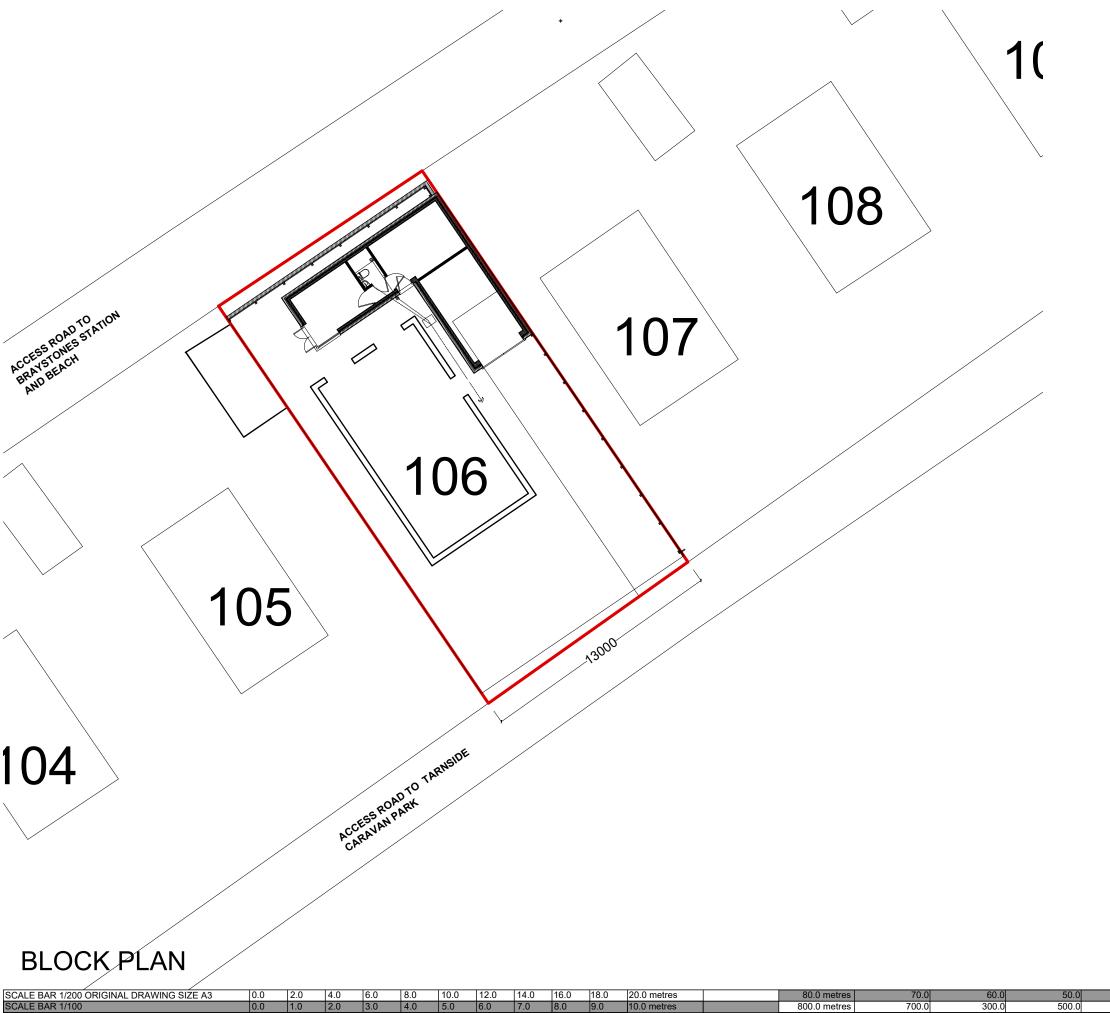
### Table-1: Grout Space Requirements (MSJC, 2011)

Grout type	Maximum grout pour height, m	Minimum clear width of grout space, mm	Minimum clear grout space dimensions for grouting cells of hollow units, mm x mm
Fine	0.3	19.1	38.1 x 50.8
Fine	1.63	50.8	50.8 x 76.2
Fine	3.86	63.5	63.5 x 76.2
Fine	7.32	76.2	76.2 x 76.2)
Coarse	0.30	38.1	38.1 x 76.2
Coarse	1.63	50.8	63.5 x 76.2
Coarse	3.86	63.5	76.2 x 76.2
Coarse	7.32	76.2	76.2 x 102



### SECTIONAL ELEVATIONS

SCALE BAR 1/100	0.0 0.0	0.2	.04 2.0	0.6	0.8	1.0 5.0	1.2 6.0	1.4 7.0	1.6 8.0	1.8 9.0	2.0 metres 10.0 metres	80.0 metres 400.0 metres	70.0 350.0	60.0 300.0	50.0         4           250.0         20		30.0 50.0	20.0 100.0	10.0 50.0	0.0 SCALE BAR 1/500 0.0 SCALE BAR 1/2500
SCALE BAR 1/50 106 TARNSIDE BRAYSTONE CA21 2YW FOR MRS MIRIA				• I	PRC BUIL			FOR	OUT	-	5.0 metres	ROPOSED SECTION		Scale: Date: DWG No.	1/50 @ A3 DEC 202 21/0323/06	1 DA		Archited	tural Desig Mobile 078	e Limited <sub>FCSD MCIAT</sub> gn and Technology 316046756 eltd@gmail.com



SCALE BAR 1/100	0.0	1.0	2.0	3.0	4.0	5.0	6.0	7.0	8.0	9.0	10.0 metre	s		800.0 metres	700.0	300.0	500.0	400.0	
SCALE BAR 1/50	0.0		1.0		2.0		3.0		4.0		5.0 metres	\$							
106 TARNSIDE BRAYSTON CA21 2YW FOR MRS MIRIA				•		OPO ILDIN		FOF	R OU	JT			ROPOSE LAN	D BLOCK	( PLAN	Scale: Date: DWG No.	1/200 @ A DEC 20 21/0323/	21	

Planning Details. Finishes: Roof: Slates to match existing. Doors & windows. Brown upvc to match existing. Boundaries: All existing boundaries retained. Gutters fascias sofits and roof trims.Brown upvc to match evicting. 

