



Method Statement - MS-001-Rev A

125 Albert Street

Substructure Works

Client: GSB

Dated: 25/01/2023

Compiled by: D Corcoran

1	Basic Details				
Company	Engel Construction Ltd		Package		Substructure Works
Author	DC	Date	25/01/2023		

2	Description		
Location	Ground Floor	Start Date	TBC
<p>For Location of Works refer to construction issue drawings</p> <ul style="list-style-type: none"><u>Induction and Method Statement:</u> Prior to work commencing all operatives will have undergone a Site Induction. Also, all operatives involved in these works will have both read and understand this Method Statement and Risk Assessment associated with the works. All the operatives will sign both the Induction and Method Statement Attendance Sheets prior to commencing work.<u>Scope of Works:</u> The scope of works involves the removal of existing timber ground floor, underpinning to front of building, new mass concrete strip foundation to rear garden, removal of existing underground drainage and installation of new underground drainage. <p><u>Methodology:</u></p> <ul style="list-style-type: none">The area will be photographed prior to any work commencing in the areaAll area will be survey to assure safety working conditions. Access to the working area will be limited to trained and authorized persons only.Ground floor removal <p>The timber ground floor area at the front of the house will be removed carefully by hand and cutting will be avoided. An adequate amount will be removed to the extent required for the underpinning works to take place afterwards. The flooring will be labelled and set aside in a covered stack in the rear garden and they will be reinstalled in their original location at later date by the principal contractor.</p>			

- **Underpinning:**

Note: All underpins to be carried out in a hit and miss approved sequence. Refer to structural GA's for underpins locations

Note: All underpins to have a toe from the face of the wall at basement formation level. This will alleviate the need for propping the underpins at low level.

Note: In case if we hit the below ground water table, submergible pumps will be on standby at all times during underpinning works should any groundwater arise. Should water any ground water be appear in any of the underpin excavations they will be pumped out immediately prior to the concrete pour of the particular underpin.

Underpinning work procedure:

All sections of the building are to be monitored at all times during working hours. This to ensure stability and safe working. Ensuring no loose sections or items are present that may cause structural damage or loss of human life or limb.

Prior to commencing the works, two parking bay will be suspended at the front of the property to allow access for taking excavated materials off site and also for deliveries. All materials being taken off site will be bagged by hand on site and carried to the skip located the suspended bays at the front of the site.

A mini digger will be delivered to site and will be used to excavate the underpins. This will be small enough so it will fit through the front door.

All excavated material will be stored on site in a suitable agreed location on the ground level area prior to bagging and carrying to the skip at the front of the site within the suspended parking bays.

On the days that the underpins are to be cast a concrete pump and concrete ready mix wagon will come to site and park in the suspended bays at the front of the site and the concrete will be pumped into the underpins ready on the particular day.

This should be one day per week.

Activity 1: Once the underpin location has been marked, the pit is to be dug down by a mini digger or hand no more than 1 meter wide and 1 meter off the existing foundations, the operatives are to ensure they do not go beyond the line of the existing party wall. A permit to excavate is to be filled by the site supervisor each day before the operatives enter the excavations. Adequate access into the excavation is to be provided at all times. A tripod winch will be located adjacent to the dig in case of an emergency.

Activity 2: The sides will need to be temporary propped to ensure the ground does

not collapse on the operatives. Pile sheets, acrow props, ply with timber will be used to prop the sides of the pit, as per temporary works engineer design, where requested prior to works being carried out.

Activity 3: The operatives will then excavate the new underpin to the back of the existing footing. The operative will excavate 50mm down from the existing footing, working to the back of the existing footing to find where it ends, the operative is to ensure that he goes no further than the back of the existing party wall. Once he has located the back of the foundation located, he will excavate down to the bottom of the first section of the double pin.

Activity 4 and 5: Following the excavations the, the area will be shuttered up using timber and ply. Building control is to be advised prior to concreting so that they can inspect the underpins. Once shuttered, the underpin will be concreted using the specified concrete design mix. The concrete will come premixed and will access the site from the front area; the concrete will be pumped to the specific locations where it will be placed into the shutter and vibrated using an 110V electric poker. The concrete will be kept max 75mm below the underside of the existing foundation. Engel construction will ensure test cubes are taken and this will form part of the QA plan.

Activity 6 and 7: The shutters will be struck and 75mm dry pack (mixture of sharp sand and cement as per structural engineer ratio requested) will be packed into the gap between the existing foundation and the top of the underpin. The operatives are to ensure that the dry pack is rammed tightly.

Activity 8: As the underpin shutters are being struck, trench props will be installed inside the trench box propping the face of the new formed pin against the back of the trench box.

Activity 9 and 10: Only when the underpin dry pack has cured for 24 hours can the temporary box be removed. Only the struts will be removed, leaving the ply in place. The ply will form the shutter of the adjacent pin when that particular pin is being carried out. The area inside the ply will be backfilled, compacting it in layers as it is brought to the top of the box. The trench props will be left in the trench to add extra support for the new pin. This will be removed later as we carry out the reduce dig and prop between both side of the basement. The existing footings are to be broken back to the line of the neighbor's wall, special care is to be taken not break back any further than party wall. Only once the box has been backfilled can the next set of underpins, namely set 2 begin where the above process will again

be repeated.

Monitoring:

The monitoring procedure for identifying any movement to the party walls will be a visual inspection; this will be carried out every morning prior to any works being carried out. The site supervisor will carry this out. Photographic evidence will be taken, and the findings will be recorded on the monitoring sheet, refer to the last page on this document for example of the monitoring sheet that will be used.

The morning inspection does not take away from visual inspections that will be done throughout the day. The operatives are to immediately report any visual cracks on the party wall to the site supervisor. The site supervisor is to inspect the crack and report any major issue to the structural engineer who is to advise on the way forward.

- **Underground Drainage**

Any redundant underground will be grubbed up and removed from site. This will be removed using hand held electric breakers, and other hand-held digging tools to excavate the trenches and grub up the drains. The pieces will be either bagged or larger pieces carried the skip at the front of the site. Any trenches excavated will be shored if necessary to prevent the soil collapsing and backfilled once the drainage has been removed.

The next phase of work will be the installation of the below ground drainage. The lines and location of the drainage trench's and manhole trench's will be set out by the site engineer as per the drainage design.

The trenches will be dug to the required level set out also by the engineer.

Temporary shoring will be installed in the trenches where required.

Appropriate bedding such as pea shingle will be installed in the trenches.

The drainage pipes will be installed to within the trench to the required invert and fall. These can be lifted into position by hand.

Once the drainage is installed it will be tested and witnessed.

Building control will be asked to inspect before we backfill the trenches surrounding the pipes.

- **Trench Footings**

The lines of the trench footing will be marked out by a site engineer. The trenches will be excavated by hand held tool the required depth as per the structural engineer's design. The trenches will be shored on the sides to prevent the sides

collapsing. Once formation level has been reached, building control will visit site to approve the suitability of the foundation ground. Once signed off, ready mixed concrete will be pumped into the trenches using a line pulp fed by the ready-mix concrete wagon parked at the front of the site. The concrete will be vibrated to take out any air pockets until poured to the correct level. The footing will get a tamped finish on the top of the concrete.

- **Duration:** The works will take approximately 10 weeks

3	Resources
<u>Supervision:</u> M Huber <u>Site Manager:</u> M Huber	
<u>Plant & Equipment</u> Breakers, conveyor belts, muck away wagon, skips, small hand tools, trench Props, Submersible Pumps, temporary props, electric chain hoist, muck skips	
<u>Materials</u> 18mm Ply, 100x50mm Timber, 100 x 75mm timber, mould oil, concrete, cement, sand, trench sheets, , trench sheets, drainage pipes and fittings, shingle <u>COSHH:</u> Diesel, Resin, Cement and Concrete	

4	Significant Risks
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Risk Assessments for the following activities attached: -

- a) Working in and with excavations
- b) Disposal waste materials
- c) Disk cutters and abrasive wheels
- d) Hand tools
- e) Use of portable electrical equipment
- f) Manual handling
- g) Concreting
- h) Control of dust
- i) Underground services
- j) Ladders and stepladders
- k) Working in confined spaces
- l) Unloading vehicles

5	Control Measures
<p><u>Permits</u></p> <ul style="list-style-type: none"> • Method statement and risk assessment briefing • To excavate • To enter excavation • Hot works • To Demolish 	
<p><u>Security</u> All employees of ECL for</p>	

	1 year and have passes. All have been inducted.
<u>Special Training</u>	<p>All operatives involved in this operation are to have read and understand this Method Statement and signed the attached Attendance sheet.</p> <p>Refer to ECL Health and Safety file for all operatives training certificates.</p>
<u>Pollution / Environmental Control</u>	Refer to ECL's Health and Safety file

6	Personal Protective Equipment
<p><u>Everyone to wear:</u> Safety Helmet (to EN397:1995), Protective footwear (to EN345), Hi-Viz Jackets (EN471), Gloves (EN420:2003 and EN388:2003), Ear (EN352-1) and Eye (EN166:2001) protection.</p> <p><u>In Addition:-</u> Banksman to wear Orange Hi Vis Vests</p> <p>Wear Safety Clothing and Eye Protection</p>	

7	Emergency Arrangements And Incident Response
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<u>Rescue</u>	In an emergency dial 999
<u>Special First Aid</u>	The First Aiders on site is: TBC
<u>Special Fire Prevention</u>	n/a
<u>Pollution / Environmental Recovery</u>	n/a

8	Temporary Amended Systems
To be approved prior to been instigated	

9	Who the Information Has / Will Be Submitted To	
<u>Checking:</u> Will be undertaken members of the ECL team prior to works commencing.		
<u>Review</u>		
<u>Update</u>		
<u>Operative Briefing</u>		
Name	Date	Signature
* See attached Method statement declaration sheet		

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10	Monitoring Compliance
<u>Daily</u>	TBC
<u>Zone Change</u>	n/a
<u>Scope Change</u>	MS to be revised if scope changes
<p>ECL H&S manager will be visiting site on a fortnightly basis to ensure work is being carried out in a safe manner.</p> <p>ECL supervisor will also do regular checks to ensure the safety of all the operatives and that work is being carried out in a safe and proper manner.</p>	