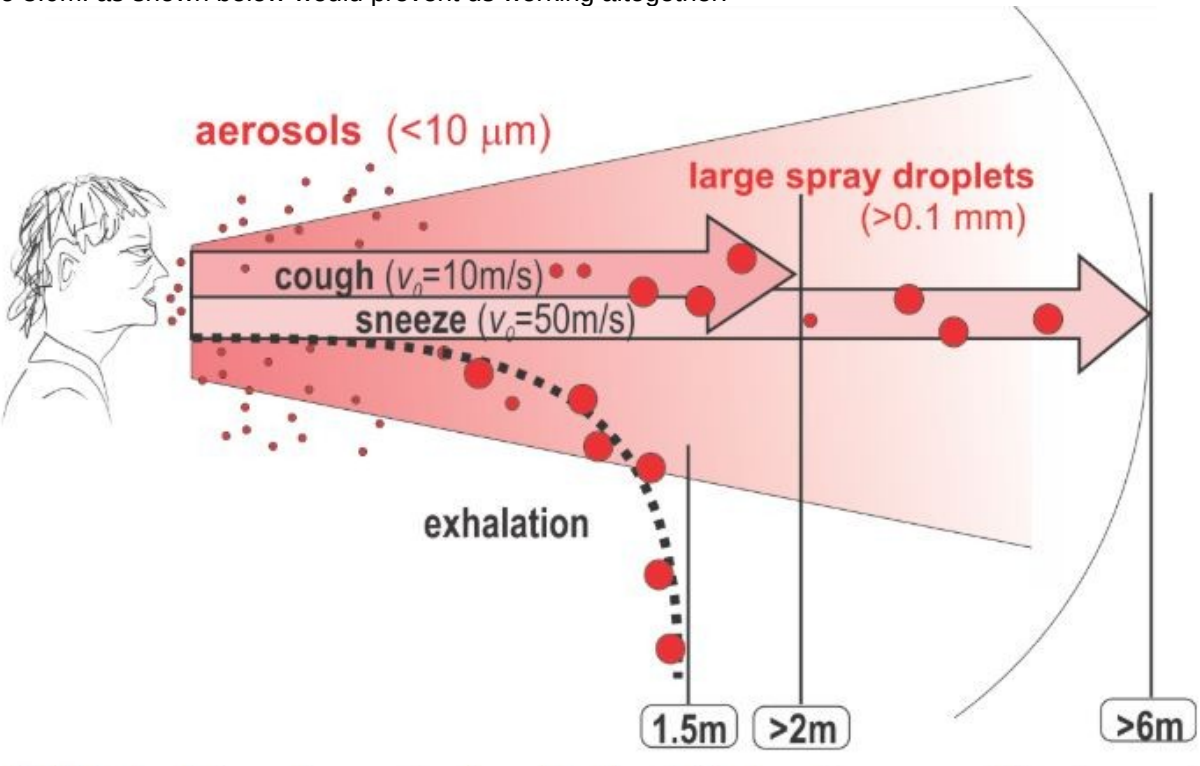
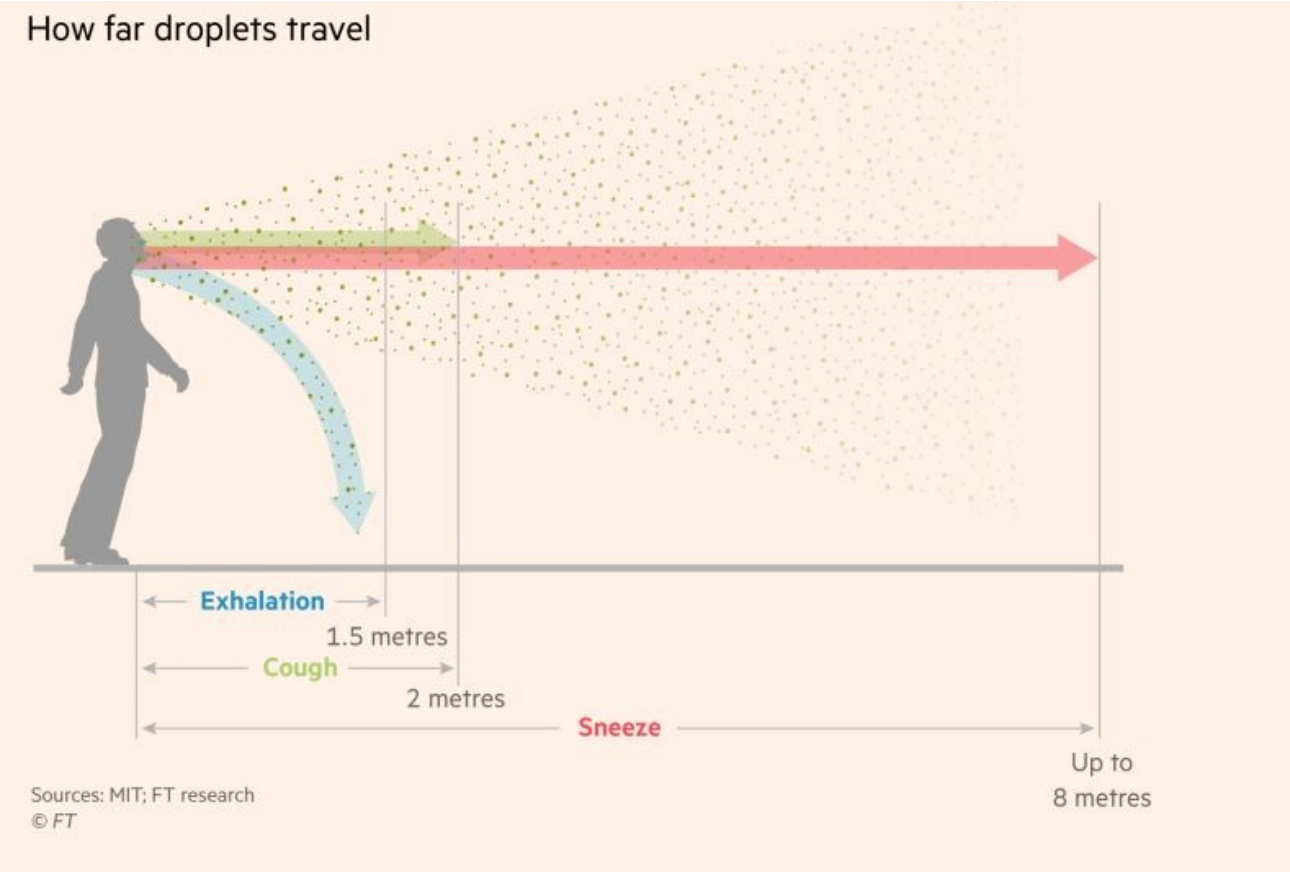
Method Statement for Work during Covid 19 pandemic

To be read in conjunction with Method Statements in place

Present C19 guidelines

Government guidelines for C19 are based in behavioural science at national level. The stages have passed from containment of the virus spread, which has not been successful to delaying the incidence of infection with a view to avoiding high peaking of rates of infection leading to overloading and possible collapse of the NHS. At the same time research is at an early stage with little of use reported: this will require massive data collection which in turn depends on reliable testing and contact tracing. Mitigation requires the development of vaccines and survival of infection leading to immune responses which last robustly and don't fail to secondary infections.
The tactics required to be implemented by the whole population from the beginning have been social distancing, personal hygiene, recognition of symptoms leading to self isolation. Social distancing has reached the level of lockdown but with exceptions including continuing to work in construction and returning to work albeit with enhanced protective and distancing control measures in place. Now further reduction in protective measures is proposed by government with no agreed scientific or medical basis.
It is necessary to recognise that the 2.0m. distancing and 30 minutes contact rules are not based on scientific safe levels of exposure- they simply define what the government advisors and modellers have defined as "close contact" for the purposes of contact tracing/ statistical analysis and modelling. Not enough is known about the behaviour of the virus even to say that these 2 parameters can be used to describe an acceptable level of risk. We do not intend to change the 2.0m. distancing requirement for our works: while we cannot say any distance is completely safe, 2.0m. is 10 times safer than 1.0m. and to try to maintain a distance of, say, 6.0 m.to 8.0m. as shown below would prevent us working altogether.





With these qualifications as to the effectiveness of the distance metric, and the efficacy of hand washing regimes and biocides used as disinfectants in destroying the virus, we have revised our methods of work to inhibit the spread of the virus both to our workforce and by our workforce.
Some of our staff can work from home but mostly our staff work collaboratively away from home, where collective control measures will need to be applied by ourselves where we act as Principal Contractor or by the developer/ main contractor otherwise.

Reason for returning to work

Although the timescale for the introduction of mitigation measures is possibly a year away, and the risk of illness and death from C19 persists until these mitigation measures are in place, a return to work, with new controls is an economic necessity for the national economy and for the many building workers who will not be able to access or attract subsidy from the state.

Site wide preparedness for return to work

Before returning to work at any site, a survey and assessment will be carried out to see if site wide arrangements and procedures by the Principal Contractor are in place. The works will be assessed to ensure they can be undertaken immediately or if preparatory works by others or programme dates from others are required.
Each Principal Contractor will have specific internal procedures to be complied with before we will be allowed on site.

Selection of personnel

Personnel will be selected in the first place for their competence, as usual.
Not all of our workforce will however be available in the present circumstances.
Some will have family commitments taking priority.
Some will be prevented from working due to shielding or isolation of family members at home.

Full and open disclosure of being in a high risk group especially with pre-existing health conditions will be required of everyone.
The need to immediately return home if symptoms develop will be made clear and the consequent requirement will be to disclose C19 status to allow assessment of possible exposures on site and need for reporting. No-one should go to work if they are sneezing, whether or not they have other C19 symptoms.
RIDDOR reporting is required when:

- an unintended incident at work has led to someone's possible or actual exposure to coronavirus. This must be reported as a dangerous occurrence.
- a worker has been diagnosed as having COVID 19 and there is reasonable evidence that it was caused by exposure at work. This must be reported as a case of disease.
- a worker dies as a result of occupational exposure to coronavirus.

Transport to and from site

The first preference for travelling to work is to travel singly in your own transport.
The Company provides vehicles for some key personnel but has no commitment to provide transport to work for everyone. If a driver who has a vehicle provided contractually is unwilling to risk carrying a passenger, this will be respected.
If a driver has agreed to sharing transport, both he and his passenger/s will have to wear masks from before entering the vehicle. Gloves are not required in transit as long as the driver is cleaning the vehicle regularly.
This will be reviewed over the coming months and it is essential that vehicles are kept clean by drivers.
Drivers have been issued with disinfectant wipes and hand sanitiser.
Potential passengers must disclose and not take a lift if they have been exposed to the virus.
In an emergency situation, for example transporting someone with an eye emergency- chemical burns from mortar, concrete, or diesel splash- to A&E, a voluntary driver will be nominated.

Signing in/ use of permits/ induction forms

Where possible this will be arranged electronically or by minimal paper contact and use of personal pen.

Use of Personal Protective Equipment

PPE as set out in the original method statement and revisions will continue as specified for tasks before C19..

To limit the spread of C19, to and from our workforce:

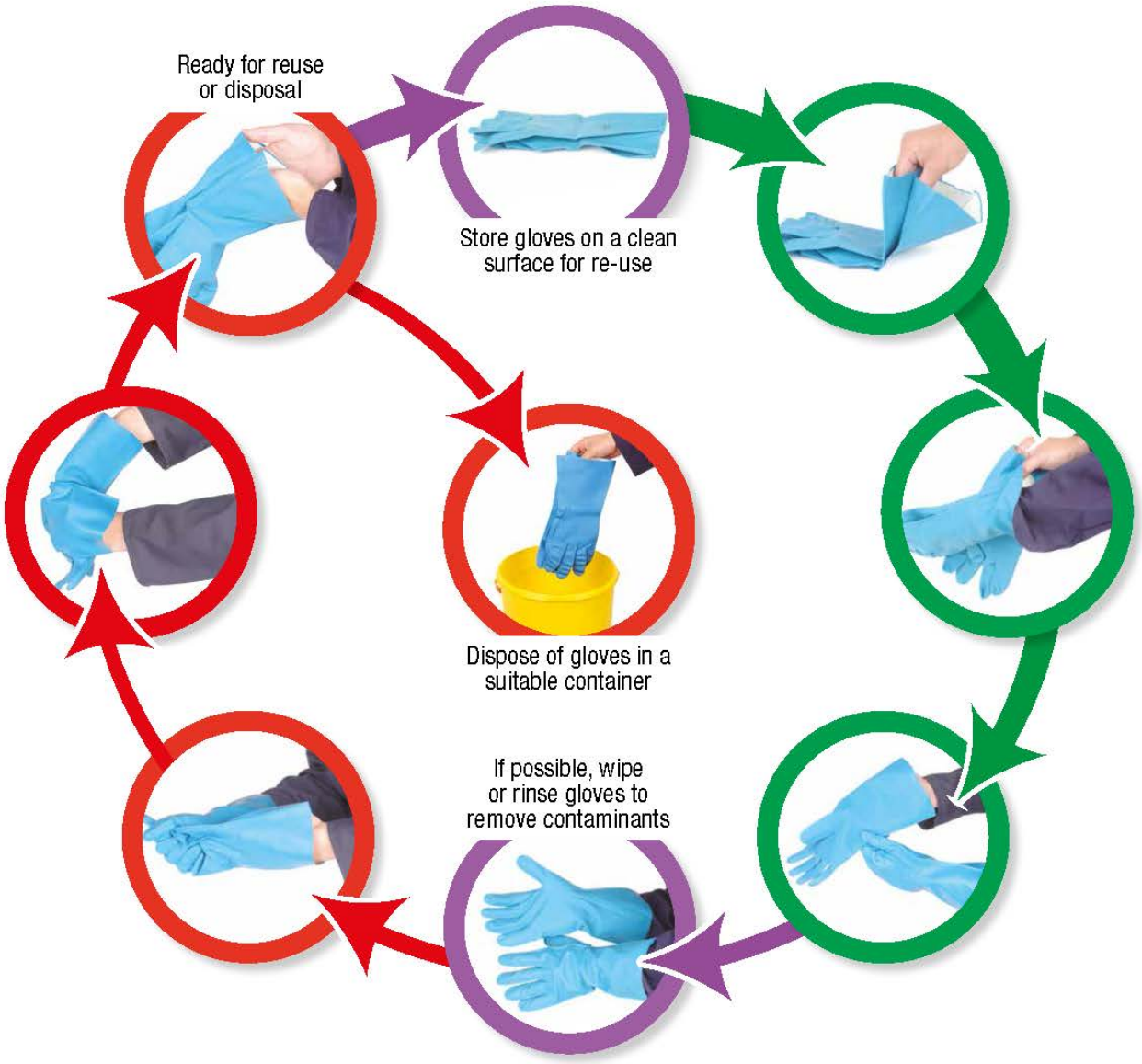
EYE PROTECTION
Glasses and eye shields will be task specific only. . Eye protection will be decontaminated with sanitising spray and wipes and reused,
Beyond the use as protection against airborne debris, in continuous use in conjunction with face masks or coverings, they interfere with clear vision and each removal and replacing for cleaning introduces a greater risk of cross contamination.
Should an individual wish to wear glasses, they will be made available for you to wear, please ask your supervisor.

GLOVES
Gloves will be for tasks as specified in Method Statements pre- Covid 19.
When worn for task specific, should be cleaned on a regular basis using hand sanitiser: they are not daily disposable and can be worn more than once.
Removal procedure for reusable gloves to be carried out to existing HSE guidelines, which have been in place for some time. This will prevent the potential for cross contamination. See below.

HOULIHAN & CO. (EXCAVATIONS) LTD
Civil Engineering Contractors
Specialists in Roads Sewers & Groundworks

Reusable, chemically-resistant gloves

Follow the simple steps below to put on and remove gloves correctly:



Remove carefully to protect your skin from contamination. Use gloves for no longer than recommended.

HSE

Your safety/union representatives are:

Should an individual wish to wear disposable gloves, they will be made available for you to wear, please ask your supervisor.

FACE MASKS, FACE COVERINGS

For task specific use as specified pre Covid. P3 masks which have been face-fitted must be used. Our P3 standard masks are classed as disposable but are NOT single use. Disposable simply means the filter cannot be replaced. As the masks will be taken off and made ready for the next use, they must be cleaned. The wearer should clean the inside and outside of the mask using a suitable disinfectant cleaning wipe and store them hygienically. See HSE guidance below

HSE

Using disposable respirators

Pre-use checks

- You should be clean-shaven around the face seal to achieve an effective fit when using disposable respirators. Beards and stubble will stop the disposable respirator sealing to your face and protecting you properly
- Make sure it is the right disposable respirator for your work and for you - have you passed a face fit test in this disposable respirator?
- Make sure the disposable respirator is clean and undamaged before you use it
- Follow the manufacturer's instructions for checking the disposable respirator and putting it on
- Check the fit every time you put on the disposable respirator to ensure there are no leaks

Putting the disposable respirator on and checking it fits

1 Cup the disposable respirator in one hand, with the straps hanging out of the way.

2 Hold the disposable respirator in place on your face.

3 Pull the bottom strap over your head, to the back of your neck.

4 Pull the top strap over your head to sit above your ears.

5 Check the straps are not twisted. If you need to tighten the straps, pull both ends at the same time, bottom first, then top.

6 If there is a nose clip, press this firmly to the shape of your nose.

Clean shaven?
Edges tight?
Nose clip shaped?
Chin snug?
Straps in place?

7 Before entering the workplace, a user seal check should be carried out. This is done by placing your hands over the filter material and breathing in. The mask should suck down onto your face when you breathe in sharply. You should hold your breath for ten seconds and the disposable respirator should not loosen. If it does, you should readjust and repeat.

Check your disposable respirator before you put it on.
Then do a pre-use seal check or fit check - for a proper seal each time: Clean shaven? Edges tight? Chin snug? Nose clip shaped? Straps in place?

This poster illustrates a typical disposable respirator, there are many other types available. Follow the manufacturer's instructions on putting your type of disposable respirator on and checking it fits.

Visit **hse.gov.uk/respiratory-protective-equipment** for more information

C100 03/2020

Disposable masks, NOT P3 , must be worn:

- by all persons travelling in vans at all times, if more than 1 person in a van.
- if you are unable to maintain 2m distancing through situations that have not been assessed or are unable to assess. Wear disposable masks for non-task specific and use P3 for task specific use. Note: first precaution should be to risk assess why you can't work outside of 2m.
- In any instances where you are likely to come within 2m of another person. This could be whilst walking across a site, or integration with another trade.

Note: Should an individual wish to wear a facemask / covering, they will be made available for you to wear, please ask your supervisor.

Note: face masks/coverings are designed to protect both you from people and people from you.

Co-ordination with other trades on site

No other trades will be allowed to work in areas where we have staff, This will require planning and communication. If necessary areas will be fenced off- in any event we will withdraw from close contact should any trade encroach on agreed exclusion zones.

Where members of the public (visitors/ residents) are present on site

Any members of the public coming close to our working areas will be intercepted politely and while they are still beyond 2.0m.will be redirected. Physical barriers are not always possible especially on part occupied sites and we would rely on the Principal Contractor to anticipate possible conflicts.

Letter drops to residents on or off site

When a letter drop is advisable to keep residents informed, we will wear PPE and stand off from their door after posting the letter, while wearing gloves. If they require further information we will offer phone contact only and request they do not approach our site staff.

Briefing/ passing on instructions/ consulting drawings/ inductions/ toolbox talks/ training and assessment/ consultation with workforce

All of these necessary interactions can and must take place while maintaining social distancing. We are used to estimating noise levels with 2.0m. distance as the starting point of concern if you have difficulty hearing the spoken word, so all these interactions can take place without shouting at 2.0 m. distance-if there is a document / drawing to be discussed it will be between the parties involved only.

Confirmation of essential work

A letter of authorisation by the Company will be carried by everyone engaged in our works, to be shown if requested while away from home on Company business.

Maintaining 2.0 m. minimum distancing/ hand washing/ sanitising tools, plant

These are the main defences against the virus spread as presently understood and have been incorporated as revisions to our method statement as relevant. When additional method statements are required, task analysis will be carried out to detail compliant procedures.

End of shift

Adequate time must be allowed for removal of PPE, cleaning and storage of re-usable PPE, disposal of single use PPE and hand washing and drying before leaving site.

Scope of Works

The scope of the works covered in the existing method statements for this site still apply: this additional method statement supplements and updates for C19 risk where required and these task and operational changes are detailed below.

The introductory 'Method Statement Briefing will be on the first day of return to work and subsequent daily briefing will be given before the operation commences and a copy shown and explained to those operatives involved. Method Statements and signed briefing registers will be placed on the Health and Safety notice board.

The Contracts Managers will brief and consult with supervisors in regard to the novel risks and required alterations to work patterns and specific tasks.

The Site Supervisor, will be responsible for the 'Method Statement Briefing' to the site teams, again concentrating on our response to the ongoing pandemic
- Explaining the content of the Method Statement and Risk Assessments to all operatives.
- Ensuring induction is recorded- revised Method statements, risk assessments, authorisation to travel, developer requirements/ video inductions/,"passports". Send these proofs of induction to site management, ideally electronically. This will continue as personnel increase or change nd will apply to specialist contractors to Houlihan who will be expected to produce their own Covid 19 compliant method statements at the induction. Until the novel procedures are bedded in no delegation of the induction will be allowed.
- Anticipating previously unidentified instances of possible exposure and controls which can then be generalised across the Company
-Checking and enforcing compliance in line with zero tolerance policy each individual has signed up for.
-Weekly H&S inspections continue and compliance will be critically examined
-Give advance notice of labour levels/ number of vehicles arriving to limited parking spaces, as early as practical. NOTE: this is impossible to be certain of as non-site related issues may prevent individuals coming to work (isolating at home, symptoms appearing)
- Confirming disclosure has been made and recognising undisclosed symptoms
-Sosial distancing and enhanced hygiene are key controls which will not go away with time- mitigation measures are not yet predictable
- Repeating C19 control measures at every daily briefing
- Responding to suggestions to improve control measures and what is not working. Consultation is vital in these circumstance besides being a legal requirement
-Each day ensure there is a nominated volunteer driver to deal with emergency transport to home or hospital
-If a task requires operatives to work in close proximity and it is not detailed in the RAMS, work must stop immediately and will be reported to the site manager. A permit and a point of work risk assessment will be required to allow for the task to continue.

Detailed Task Analysis

Task Pre Start

Briefing on tasks and planned control measures without exception, actively consulting to ensure best practice can evolve.
Topographical surveys can be carried out by one person but lone working should be avoided.
Checking drawings for correct issue can be done by one person and communication electronically with surveyors.
All relevant drawings of existing services should be in hand. Paper drawings should be placed in A3 clear plastic folders which can be cleaned between users.
Inform client in time for them to give notice of need to exclude to residents and other trades. Areas should be Heras fenced off where possible: panels can be moved by 2 people at either end as length is 3.0m.

CAT and transmitter scan can be carried out in a planned work area by one person who will spray paint identified services- recording by another, at a distance, including verification and detailing reduced levels. Client permits will be completed and communicated electronically.
Existing manholes will be checked for depth of invert, flow, condition by one person after one person, not necessarily the same individual, has used a hydraulic manhole lifter with correct keys to lift the manhole cover.

Excavations

Planning for trench support for excavations will take account of the need to distance during assembly of boxes: excavator to place box side on ground, connecting struts to be attached diagonally apart and second box side guided in to place on struts by 2 operatives standing diagonally apart from each other.

One person only will be in a trench at one time, unless essential for jointing, which should require one person at each end of a 3.0m. pipe section. Jointing of heavier sections will involve an excavator driving the pipe in guided at the far end by one person in the trench.

Place shingle/concrete bedding using the excavator bucket. Materials will generally be discharged into a drag skip or alternatively in the skip of a dumper. Note: during placement of any material/product into trenches all operatives must evacuate the excavation. Dumpers must not directly tip into the trench. This is all machine work with only one person on the ground checking the trench is empty so no-one will be in close contact.

Rescue from a trench may require 2 people carrying a rescue stretcher, one at each end. The nominated team who would carry this out including securing he IP in the stretcher will have been trained to do this quickly while keeping the IP still and keeping apart as far as possible. Trained first aiders accept the minimal risk here as part of agreeing to act as first aiders.

Control of Delivery/ Muck Away Vehicles

Haul Road Formation
Banking delivery vehicles will be by one person, The driver can remain in his vehicle. 2no. people will be required to unroll the roll of terram as crushed concrete is placed- they will most usefully be standing at least 2.0 metres apart while doing so.
Deliveries
Unloading plant and materials can usually be controlled by one banksman, but if 2 are needed the vehicle being guided will distance them- one each side..
When we are loading lorries with site won material, the drivers have to dismount. They will be expected to cooperate by standing close to the loading operation but keeping away from other site workers. The loading area should itself have an exclusion zone during this operation.
Site cabins, oasis type units now are unloaded by Hiabs controlled by the driver from ground level with lifting points at ground level which requires only one man operation'

Installation of Foul & Surface Water Drainage (mains & domestic)

The extent of the proposed drainage run must be subject to a reduced level dig so drainage trenches are dug at reduced levels; ideally below the proposed road formation/level. The machine driver will be guided by an attended laser level operated by one man, who will be the only person allowed in the area of operation apart from the driver, for reasons of pedestrian / plant separation..

Pipe laying (clay)

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Operatives can manually place pipes of 150Ø or below depending on the excavation depth, pipes can be lowered manually utilising a web sling. If the operation forces people to work within 2.0m. of each other, the

slings can be attached to an excavator which allows distancing. Pipes will be aligned using a pipe laser, set up by one man at the beginning of the run.. Jointing pipes will be done by one person in the gtrench.

Clay pipe weights: 100Ø x 1.6m (L) weigh 15kgs
150Ø x 1.00m (L) weigh 18.5 kg
150Ø x 1.75m (L) weigh 31 kg
225Ø x 1.75m (L) weigh 61 kg.

The larger pipes 225Ø+ will be placed by the excavator, pre slung with 2xno.choked web-slings placed by one slinger/signaller and lowered in to position in the excavation. Where necessary a pipe lifter can be used. Note – there must be no operative within the proprietary earthwork support system whilst any load is being slung overhead – especially clay pipes due to the vulnerability of them shattering, producing razor sharp fragments.

Backfilling

Withdraw earthwork support when backfill reaches the underside of waling. One man hooking up chains to trench boxes, with driver in cab distanced by arms of the 360° excavator

In the first stages of backfill, selected material should be placed uniformly on both sides of the pipe by hand in layers not exceeding 100mm in thickness, each layer being compacted by hand tamping until the pipe has a minimum of 150mm compacted cover.

Further backfill should be placed in layers not exceeding 300mm, each layer being well compacted. Mechanical compaction equipment should not be used until there is a minimum of 450mm of compacted material above the crown of the pipe.

One man will be guiding excavator in placing backfill. Later one man will be operating the Rammax from ground level.

Pipe cutting (Clay)

Pipe chain cutter for 100Ø & 150Ø pipes
Cutting shall be performed by a competent operative with the correct tools and as recommended by the pipe manufacturer, cuts shall ensure adequate performance of the ensuing joint.
Make a clear mark around the circumference of the pipe at the desired length.
Pass the chain under the pipe, aligning the cutting wheels on the desired mark.
Hook the chain link onto the jaw of the pipe cutter. Tighten the chain upon the pipe by closing the arms of the lever cutter together.
Make a final check for correct alignment of the chain with the pipe, then continue to increase the chain tension until the pipe cuts.
After cutting, any sharp edges may require trimming with an emery stone. For both 100mm and 150mm diameter use pipe trimmer. All this can be done by one man.. Like steelyards for steelfixers and cutting pipes to length, it will be necessary to set up an exclusion zone

A powered masonry saw can be used to cut any diameter of pipe we use. Generally 100Ø & 150Ø diameter pipes are cut with a pipe chain cutter for speed and efficiency.

225 & 300Ømm pipes are generally cut by a powered masonry saw, using a diamond tipped blade.

When using a powered masonry saw a safe system of work should be followed: Note only an appointed and authorised (abrasive wheel trained operative) individual should use an abrasive wheel. Correct PPE must be worn while using powered masonry saw.

Before any pipe cutting operation is started, read and adhere to the safety and operating instructions of both the masonry saw and the blade manufacturer.

Check that the masonry saw is fitted with the correct specification of blade.

Make a clear mark around the circumference of the pipe at the desired length.

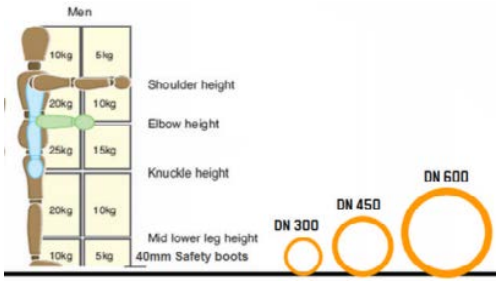
The pipe being cut should be positioned in a horizontal and stable position. No second person should help in this operation.

Care should be taken to support and secure both halves of the pipe being created by the cut, to avoid the blade being nipped as the pipe separates,. This will be done by placing packing under the pipe, not by a second person holding the pipe to prevent binding.

Note- Short length pipes should be ordered directly from the preferred supplier to minimise cutting operations on-site.

Pipe laying (PCC)

PCC pipe weights: 225Ø x 1.25m (L) weigh 122kg / 300Ø x 1.25m (L) weigh 217kg / 300Ø x 2.05m (L) weigh 420 kg / 375Ø x 2.5m (L) weigh 510 kg / 450Ø x 2.5m (L) weigh 705kg / 525Ø x 2.5m (L) weigh 900kg / 600Ø x 2.5m (L) weigh 1200kg / 675Ø x 2.5m (L) weigh 1275kg / 750Ø x 2.5m (L) weigh 1924kg / 825Ø x 2.5m (L) weigh 1820kg / 900Ø x 2.5m (L) weigh 1920kg / 1050Ø x 2.5m (L) weigh 2590kg / 1200Ø x 2.5m (L) weigh 3550kg.



These dimensions and weights clearly show that concrete pipeline systems should not be lifted or carried manually. There are a number of established tools and methods that should be used to handle concrete pipeline systems. The use of these machine based lifting operations avoids close contact.
Once the trench has been excavated to the specified line and levels and the proprietary earthwork support system adequately installed with handrails and ladder access platform attached.

One operative will be slinging or helping direct the machine mounted pipelifter above the ground and the other one will be laying in the trench. The positions adopted will easily allow distancing.

Before lowering into the trench, each unit should be inspected carefully for any damage which may have occurred in transit or during handling and storage on site. Pay special attention to jointing surfaces. Units should be lowered carefully into the trench with tackle suitable for their weight and for the depth of the trench.

A trench narrower than that specified may impede the proper placing and consolidation of the bedding material and restrict working conditions in the trench during pipe laying.

Using a proprietary pipe-lifter

Pipe lifters are specifically designed to allow excavators to quickly and efficiently pick up and place a wide range of concrete pipes without the need for an operative to contact either the pipe or the pipe-lifter.

No operative should be within the excavators fully extended radii in transit.

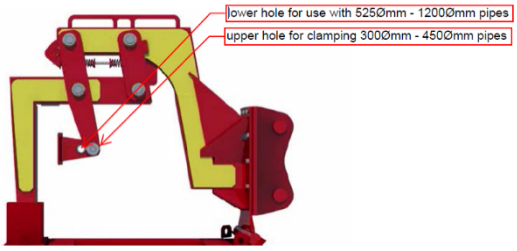
All users must be familiar with the pipe lifters manufactures ‘user guide’.

Prior to delivery of any concrete pipe ensure the correct pipe lifter head is compatible with the appointed excavator/s.

The pipe lifter must have a current thorough examination certificate valid within 6 months – this also must be logged on the OHSEQ site notice board clipboard – lifting accessories register.

The most common pipe lifter we use is from MGF this particular item has been tested to a SWL of 3.7t and designed for use with collared concrete pipes ranging from 300Ømm - 1200Ømm and a maximum length of 2.6m (our max purchased pipe length is 2.5m).

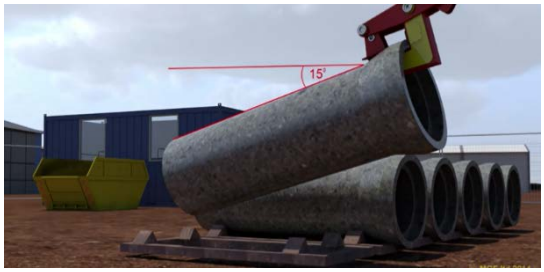
The clamping plate has TWO available settings, an upper hole for clamping 300Ømm - 450Ømm pipes; and a lower hole for use with 525Ømm - 1200Ømm pipes. (see photograph below).



If the adjustment is required to be undertaken on-site ensure this is carried out whilst the lifter is stabilised and contained within its stillage. Remove securing bolt and collar and carefully take out 40mm diameter pin. Re-position the clamp to the required hole and slide the pin back in place, slip over the collar and tighten M10 bolt.

When the pipe-lifter is not in-use it must be placed in a bucket/attachment area for safe storage and coupling.

When the pipe-lifter has coupled a load and raised 2 foot above ground level the operator must confirm that the load is stable by tilting the pipe + & - 15° from horizontal.



If the pipe is stable and correctly coupled the pipe may be lifted and transferred to a suitable storage location or placed into a prepared trench and jointed following the application of a lubricant to the pipe spigot and visual inspection of the socket profile checking for any fractures or obvious damage. Note- care should be taken to prevent the lubricant coming into contact with the pipe or equipment as this can cause the pipe to slip.

Pipes being lifted must be kept as near the ground as is practicable and never lifted over operatives.

Upon reaching the trench with the pipe attached and the excavator stabilised it will carefully begin to lower the pipe into the required position.

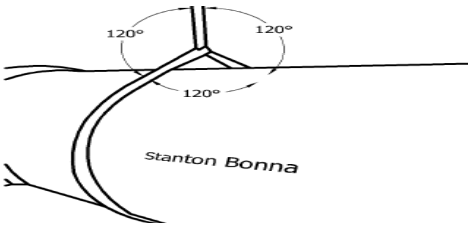
The pipe may be tilted up to 30° from horizontal and manoeuvred between the struts of the trench box. During the operation ensure neither the pipe lifter nor the pipe snags other equipment or the ground as this could lead to a dangerous release of the pipe-lifter.

For all operations ensure that the pipe is being laid on suitable ground/bedding and the pipe is chocked/backfilled to prevent unexpected movement.

The pipe lifter can be used to push the pipe into position – care must be taken when jointing to ensure even pressure is being applied to the gasket. – No personnel should be in the working area or come into contact with the pipe-lifter/ excavator / any pipe in transit / installation.

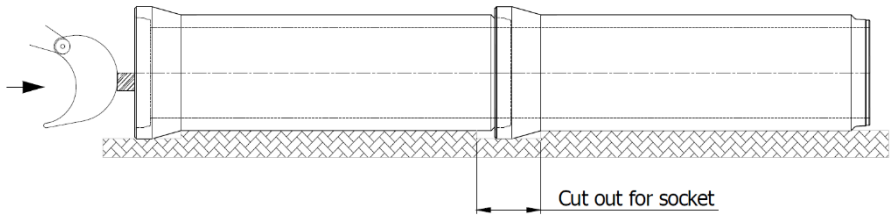
IF personnel are required inside the trench, then the operative must stand well behind the collar of the previously installed pipe (as per illustration below), and this will allow social distancing.

Alternatively if a pipe lifter cannot be used due to size or weight; jointing chains or appropriate straps can be utilised to carefully lift and guide pipe spigots into the previously laid pipes sockets taking care not to disturb the jointing ring/damage the jointing surfaces. The spigot should be offered up to and centred carefully into the receiving socket. The pipe can now be allowed to rest on the bedding material (alternatively the pipeline can be back-laid i.e. new pipes laid with the socket offered up to previously laid pipes spigot – special attention should be made to ensuring the socket does not scoop up bedding material and hence contaminating the joint when laid using this method). The sling must be wrapped around the barrel of the pipe in a choke at the balance point. Position the bight for the choke lift at 120°(natural angle) – as per the sketch below:



Using the excavator bucket or pulling the pipe home with a strap/jointing chains which are common methods of completing the joint. If using the excavator bucket to push the pipe home, always place a timber between the back of the bucket and the pipes socket (spigot if back-laying). Apply a steady even pressure until the pipe is in its final jointed position with the joint gap being within the recommended limits of between 10-25mm (joint gap measured internally).

Ensure no operatives are within the trench whilst the bucket is applying pressure against the timber pushing the pipe in case the timber breaks and strikes an operative in close proximity – note this has happened within the industry before and resulted in a fatality.
As shown below: (Jointing with the excavator bucket).



Note: Mechanical plant must not be used to press pipes down to their correct level.

Ground water should be kept below the bottom of trench by use of temporary drains and not allowed to rise before backfilling is complete.

Manhole installation

Recommended excavation size/ manhole box to suit manhole Ømm:

1050Ømm, 1200Ømm, 1350Ømm (tight) – 2.5m(L) x 2.5m(W)
13500Ømm, 1500Ømm, 1800Ømm (tight) – 3.0m(L) x 3.0m(W)
1800Ømm, 2100Ømm (tight) – 3.5m(L) x 3.5m(W)
2100Ømm, 2400Ømm, 2700Ømm (tight) – 4.0m(L) x 4.0m(W)
2700Ømm, 3000Ømm (tight) – 4.7m(L) x 4.7m(W)
3000Ømm, 3660Ømm – 5.0m(L) x 5.0m(W)

Manhole excavations will be conducted / supported similarly as previously mentioned drain runs and will have PCC chamber sections placed by the attendant excavator.

Again, operative will leave the excavation until the PCC chamber ring is near the intended position and is stable. The section will then be manually guided into the final position by one operative on the concrete/shingle bed or previous section. Note – the second and subsequent PCC rings must not be installed until all benching has been undertaken.

Benching will be done by one operative.

Once the benching has been undertaken with the additional sections installed, and the manhole is a traditional type (not pre-formed) a concrete manhole surround steel shutter will be lifted into place with the inclusion of the surround safe handrails.

When the concrete has cured the shutter will be removed and cover slab will be lifted into position; there are usually lifting anchors on the face allowing the use of hook and chain.

Backfilling

Withdraw earthwork support when backfill reaches the underside of waling.

In the first stages of backfill, selected material should be placed uniformly on both sides of the pipe by hand in layers not exceeding 100mm in thickness, each layer being compacted by hand tamping until the pipe has a minimum of 150mm compacted cover.

Further backfill should be placed in layers not exceeding 300mm, each layer being well compacted. Mechanical compaction equipment should not be used until there is a minimum of 450mm of compacted material above the crown of the pipe.

Emergency Plan

If there is an emergency at the bottom of an excavation, then initial assessment by first aider will establish if the IP can be moved or must be stabilised in situ pending arrival of paramedics.The first aider will be wearing PPE but will come into close contact with the IP. This contact must be limited as possible to immobilise the IP, dress wounds, strap into rescue stretcher. The requirements of this type of action should be addressed, short of simulation, before anything actually happens.

Until and unless agreed first treatment can be carried out in situ, preparation for paramedic access and subsequent evacuation by stretcher will immediately begin.

In the event of evacuation being necessary, this will be achieved down to 5.0m. BGL by the excavator pulling a ramp in the direction of the run being pulled, to an angle of approximately 20°. The sides of this ramp will then be reduced to allow safe access and egress by paramedics.

If the ramp cannot be pulled in the direction of the run, the excavator will move round to the opposite end of the boxes, where the pipework has already been installed, and a ramp will be constructed in the opposite direction to the run.

Service excavations

Preparation

Before any work is carried out, the following items must have been completed and copies of relevant documents are available at the site of the works: -

Accurate plans showing all existing services in vicinity of work site.

Plan of proposed new services trench.

Correct signing & guarding implemented as per TMP.

The actual width of trench depends on the following factors: -

- Type and size of services being laid.

- Number of services being laid in same trench.

- If low and high voltage cables being laid in same trench, the effect on the cable ratings must be considered.

- Whether ducts are being used.

- If mechanical means are being used in order to excavate the trench in order to install a single cable, then the width can be as narrow as 150mm.

- The trench width must also allow for mechanical compaction.

Trenches should: -

(a) Be as straight as possible. Where bends are unavoidable the trench should allow the service to be installed at not less than its minimum-bending radius.

(b) Be to the approved dimensions and normally have vertical sides which

should have a side support system (e.g. timbering), should the ground be soft or loose.

(c) Have a firm and smooth contoured base.

(d) Be cleared of water by pumping to prevent the risk of the trench collapsing and hazard to the general public, especially trespassing children. In locations where flooding can occur, measures shall be taken to divert rainwater away from the trench (e.g. use of sandbags).

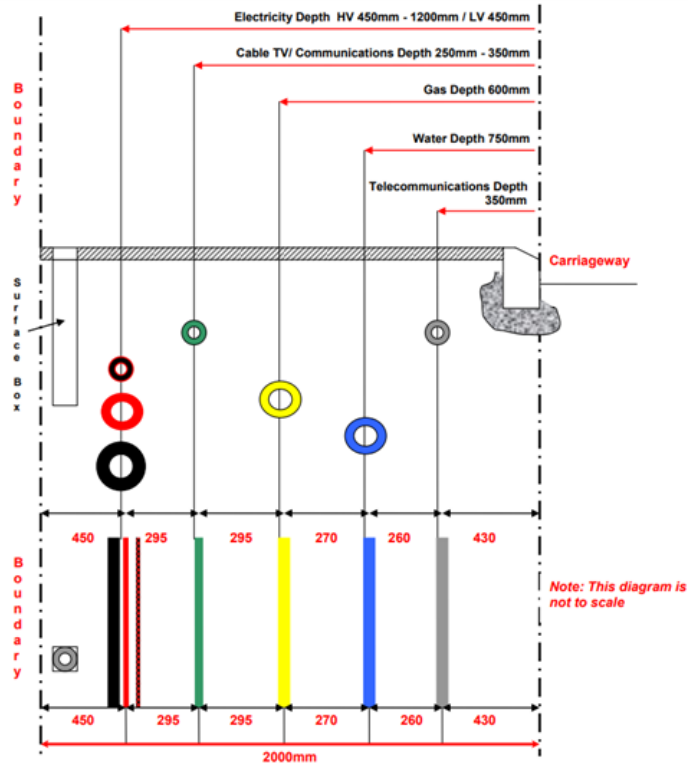
(e) Have provisions made during their excavation to cater for access of persons and vehicles to property of places alongside the route.

(f) In concrete surfaces be cut through the concrete as per the HAUC Specification for the Reinstatement of Openings n Highways.

When machines are being used for excavation and the location of other plant is known, the plant should be uncovered by hand excavation to reduce the possibility of damage. If the excavation is likely to reduce the stability of any part of any structure, work shall not be commenced unless adequate precautions are taken to prevent the structure from collapse or deterioration. Flooding, or vibration from heavy traffic can cause collapse of trench sides and subsidence of adjacent structures. A trench side support system or shoring shall be used to avoid this.

Excavating service trench

Each run opened at any one time will not exceed 50m. Where practicable we will backfill excavations overnight. In the event that excavations are left open, they will be physically barriered off. Fencing will be constructed using chapter 8 barriers or Heras panels double clipped where the excavation over 600mm. Chapter 8 barriers will be carried by one operative maintaining 2m distance from other operatives. Hears panels will be carried by two operatives, one in each side. Heras panels are longer then 2m so social distancing will not be compromised. The face of the excavation will be checked by the foreman before the start of the shift. Any excavation will be checked after events such as heavy rain which might affect its stability. The checks will follow Houlihan & Co.'s checklist. All inspections will be recorded in the Houlihan Record book.



Apparatus must be installed below the carriageway construction layers unless special arrangements have been made with the relevant authorities. Where plant can only be laid in the road, adequate protection should be provided. Ducts to specifications will be laid, sanded and warning tape placed over ducts.

Pre-tender information and Construction Phase Plan will be used and considered in light of additional information from utilities' plan drawings, section drawings from utility companies recording depth of services and commissioned ground probing radar surveys as necessary. A copy of each drawing will be printed and laminated for the team and another copy for the engineer or site supervisor that will be explaining to the team the works required. Discussion and briefings will be done maintaining the social distancing of 2m and looking on their own drawings. The permit to dig will be filled by a member of the digging team by using his own pen. The assumption that live working can be avoided as the default position is set out above and a full justification of any live working must be set out before this is considered. A method statement for live working will be required as live working is not considered to be properly controlled by any permit to work system. HSG47, rev. Feb.2014, states “Where new services such as electrical or gas supplies are being installed, it may be possible to reduce risks by not installing or commissioning them until other groundworks and work on the installation have been completed. This should be considered early in the design process to allow the works to be sequenced accordingly.”

A cable avoidance tool in conjunction with a transmitter will be used by a trained competent person, prior to the commencement and during any work, to identify all services capable of being identified. The intention will be to bring up to date records of existing services and to supplement these records where they are deficient. Services found will be clearly identified to avoid the risk of damage and where necessary, we will hand dig around them to expose the services prior to full excavation. Hand digging will require the use of air picks to expose services, starting immediately under the hard cover. One trained operative with correct PPE will be using the air pick to loosen the ground. He will stand aside. Another operative will remove the loosened spoil with insulated shovel. Record drawings will be red-lined to show the most up to date information, held available on site for consultation and details communicated at inductions, tool box talks and in careful briefing on site prior to excavation.

If any service is exposed, it will be photographed and sketched with off sets noted to inform future re-visits.

Back fill will be with self-compacting granular material to a level where compaction is acceptable and then in suitable material, including selected as dug, which must be possible to excavate with the air pick in future: i.e. dense cohesive material like clay must **NOT** be used. If suitable backfill material as described is not available, the excavation should not proceed.

Warning tape will always be placed, and if it has not been provided by the utility, we will have rolls to use. If physical protection specified (Debris netting), then the backfill will not be completed until the protection is in place.

Great care will be taken to establish what is meant by “terminations” or “diversions” and any assertion that there are “no” services will be treated with caution.

Techniques using ground penetrating radar will be considered where information is clearly deficient and services are congested. This would be arranged with a specialist contractor following distancing procedures similar to these.

Traffic management will be set up through the entire route in stages to keep disruption to a minimum. It will be done by one operative according to TM plan provided. The standards set out in the Street Works Code of Practice will be followed.

The operatives will barrier the work area at all times to keep the general public excluded.

The trench to be excavated will be scanned by one operative using cat and transmitter to mark up all existing services and all appropriate drawings will be read. If in any doubt trial hole will be hand excavated to confirm any existing services. Trial holes will be dug using air pick in the same manner as set out above.

The trench will be marked out in the footpath or verge so the tarmac or turf can be removed so the service trench can be excavated to allow the installation of the service main. All arising to be removed to site by use of a forward tipping dumper, for reuse or removal from site at a later date, as per the SWMP.

Water mains, gas mains and LV electricity cables will be laid by others, into the trench at the correct depth and surrounded with sand or a similar bedding material. Warning tape will be installed and pegged. We will then fill the remainder of the trench with 6F2 or similar and compact it layers, to the underside of the new tarmac reinstatement.

The trench will be reinstated to the HAUC specification. Once the services are laid, installation records will be taken and GPS positions of the services will be noted on the site drawing for the as installed records.

On completion of the backfill the traffic management and site equipment will be removed by one operative, and the area will have any surplus materials and rubbish removed.

On completion of the works, or at the end of the working day, all operatives will remove their own tools and equipment and the site left tidy. This process will be the same on all service trenches until all the services are laid. Hand tools will not be shared if possible. If that is necessary, tool handles and all points of contact will be cleaned as tools are returned to store and when taken into use,

When machines are being used for excavation and the location of other services is known, they must be verified - exposed by hand excavation to reduce the possibility of damage. If the excavation is likely to reduce the stability of any part of any structure, work shall not be commenced unless adequate precautions are taken to prevent the structure from collapse or deterioration. Flooding, or vibration from heavy traffic can cause collapse of trench sides and subsidence of adjacent structures. A trench side support system or shoring shall be used to avoid this.

Road Formation

Existing site levels will be established by Houlihan Site engineer working alone.
A reduced level dig will be carried out as far as possible:
The reduced level is taken to mean making up levels as required.
For localised reduced levels, these will be made up or lowered by 13 tonne 360° tracked excavator. Spoil will be taken by dumper to segregated spoil heap awaiting MMP re final destination on or off site.

Excavation- Roads

Our engineer will set out the sections of road required.
A bucket changing area will be established close to the road.
A competent driver will drive the machine and he will be banked for the pick and carry operations.
The depth of the excavation will be to accommodate the road formation and more if there are soft spots.
The bottom of the excavation will be compacted by a Bomag 120 roller.
The capping layer of 600mm Type 6F2 granular material to Clause 616 SHW, Series 600 will be laid and compacted in layers.
Compaction will be by Bomag 120 vibrating drum roller.
The sub-base of Type 1 granular material will be laid as a layer 150mm thick. Compaction will be by Bomag 120 vibrating drum roller.
These materials will be delivered to site as required, tipped and then placed and levelled by the on-site excavator.
The formation will be inspected to confirm uniformity and compliance with the specification. Any instructions will be conveyed at a distance.

Install formation material to underside of tarmacadam level.

Approved fill layers will be formed to a nominal 150mm thickness and shall be compacted using a twin-drum vibrating tandem roller (Bomag 120). Compaction shall be, a minimum 1 No “dead-roll” pass, 6 No passes on full service vibration and a further “sealing” pass to close the upper surface and remove “tram lines”.

Edges of layers shall be benched to provide full compaction of subsequent fill layers against a leading or open edge.

Road Formation

H&Co to commence the work starting with a detailed survey of the area for live cables and services using a **C**able **A**voidance **T**ool and hand excavation methods mark and plot all live services encountered on a relevant drawing. As the drainage has been laid, it is unlikely that cables and services exist in the road formation set out, however, any excavation we carry out will be preceded by use of CAT & Transmitter. One person using CAT and another at a distance recording,

Excavate by machine to formation level using traveler and profile boards, as set-out by the site engineer. If possible, excavations should be dug from reduced levels and backfilled in the same day thus avoiding any risks that open excavations would incur.

A level survey will be carried out to all areas prior to commencement of grading works which will be undertaken by a 360° excavator to achieve the correct construction depths.

The formation will be inspected by one person to confirm uniformity and compliance with the specification. Any corrective work will be communicated maintaining minimum 2.0m. distancing.

Lay Terram- 1 person at each end of a roll using temporary weighting to hold in place, not additional people- to cap formation once approved.

Install formation material to underside of Tarmacadam level by machine.

Approved fill layers will be formed to a nominal 150mm thickness and shall be compacted using a twin-drum vibrating tandem roller (Bomag 120). Compaction shall be, a minimum 1 No “dead-roll” pass, 6 No passes on full service vibration and a further “sealing” pass to close the upper surface and remove “tram lines”.

Edges of layers shall be benched to provide full compaction of subsequent fill layers against a leading or open edge.

New kerb and edging lines will be set out by the engineer using pins with “top of kerb/ edging” levels marked. String lines will be tensioned from a distance of more than 2.0m.

See below for kerb placement.

Following kerb installation, place and set road gullies and connect into new storm water drainage system. This must be reduced to one person operation, Backfill drainage excavations and re-compact.

Carry out final preparation to sub-base using the excavator and Bomag roller. Wearing courses can now be laid. Before the pavements can be installed ducting runs for the new services will be placed in excavated trenches and backfilled. None of this work requires double handling, but awareness of where other operatives are standing to maintain distancing, If necessary, work must be stopped and completed sequentially instead of simultaneously. These sequences must be developed efficiently with a learning curve as the C19 measures will be required for many months.

Install lamp posts / bollards and ducting connection to the main run in the pavement. Mechanical means will be used for lamp columns. Smaller items of street furniture will be wedged or propped in position not held manually, pending concreting in by a second worker.

Macadam surfacing can be subcontracted to a specialist company and will, generally, be constructed by a mechanical paving machine. A method statement confirming that distancing and preventative hygiene measures will be followed. This will be monitored by Houlihan site supervisor.

The paver receives macadam directly from the delivery lorry into the hopper and spreads and levels it behind by the use of a spreader bar. The screwsman is 2.0m. away from the driver.

The macadam is then compacted in the construction layer by a twin drum vibrating roller operated by one man. Inspections and instructions will be conveyed from a distance if necessary. If there is local compaction which the roller cannot reach, tamping will be done by hand after the machine has withdrawn.

External Works

Kerb placement

The excavator will conduct the minor excavations to provide full depth for kerb and for the bedding concrete to be placed.

Kerbs on pallets will be loaded out by the tracked excavator using lifting strops or alternatively forklift attachment and will deposit each stack at a suitable position along the kerb line. Attaching web slings or other lifting accessories can be by the driver working alone or by another operative while the driver dismounts if too close.

Kerbs will be individually lifted by excavator using a scissor grip or vacuum attachment or by one pedestrian operated kerb lifting barrow or Probst lifting dolley.

An operative behind the string line then will direct the placement of the kerb in the position. Using a mallet or a pick kerb will be driven on the required position.

Concrete will be distributed, by excavator bucket, to the line and manually levelled under the string lines and will be left approx. 20mm high to allow for bedding of the kerb.

Note: “Bicycle type” handle lifter must not be used for manual handling but only as lifting equipment for the excavator. This way two operatives will not be working within 2m distance.

Bedding and haunching concrete will be delivered to site ready mixed and will be deposited in a stockpile.

Haunching concrete will be placed by excavator behind the kerb line and will be prepared by an operative using a trowel. When the kerb layer approaches, this operative will withdraw.

PCC edging installation.

New edging lines will be set out using steel pins with “top of edging” levels marked. Tensioning lines as above.

The excavator will then conduct the minor excavations to provide full depth for edging and bedding concrete to be constructed.

Edgings will be loaded out by the tracked excavator using lifting strops or alternatively forklift attachment and will deposit each stack at a suitable position along the kerb line.

The concrete will be distributed, by the excavator bucket, to the line.

Concrete will be manually levelled under the string lines and will be left approx. 20mm high to allow for bedding of the edges by one operative.

Another operative will distribute the edges along next to the line.

One of operatives will place the edges and using a rubber mallet will drive them into position.

The other operative will place the concrete behind the edging line and using a trowel will be haunching it.

Following kerb installation place and set road gullies and connect into new storm water drainage system. Backfill drainage excavations and re-compact.

Final Road Surfacing

Sacrificial kerbs will be removed and the permanent Kerbs placed on the Kerb Run Concrete Bedding as above..

All new kerbs will be bedded on a new bed.

Once lined and levelled, the road will receive a final clean in preparation for wearing course tarmacadam sub-contracted out to specialists.

Once the kerbs and edgings have been laid tarmac will be called to site. A 100mm thick base (AC28 bin 125) will be laid, levelled and rolled.
A 60mm thick binder course (AC 20 bin 125) will be laid, levelled and rolled. The wearing course will be laid later.
The footpaths will have a 60mm thick dense bitumen macadam binder course (AC 20 bin 100/150) laid on to a 150mm type 1 compacted subbase.
The workforce engaged in laying tarmac surfaces will be experienced or under constant supervision if in training.
Tarmac will be called to site, reversed in to position by onsite traffic marshal. The tarmac will be tipped in a heap and the lorry will move away. An attending 360^0 will spread & level the tarmac.
Plant involved will be Blaw Knox or Barber Green spreaders, a fully caged Bobcat and Bomag ride-on roller with ROPS. Operators will be trained, competent and authorised to drive plant they use. Their method of work will be modified as above.

The main hazard apart from contact with moving plant and the possible presence of C19 virus, is due to the temperature - 170°C - of the tarmac when delivered through to spreading. PPE is mandatory for all who may contact the material. (Basic PPE to be worn during works with tarmac, include covering any areas of uncovered skin which may come into contact with the tarmac, e.g. gloves, long sleeve tops). COSHH hazard data sheets are available for materials to be used on site notice board. Dry powder extinguishers to be present when working with tarmac.

Tarmac lorries must be met at the site entrance and reversed up to the hopper for delivery. The delivery lorry should have a camera to aid reversing in addition to the banksman.
Pedestrians, which include the site workforce not directly involved as well as the public, will be kept away from the works by physical barriers and signage.
A hot works permit in the Principal Contractor's format will be used to cover these works.

Ironworks

Manhole frames are raised 30-40mm. to allow laying of the wearing course of tarmac. This is a one man operation

For site roads or the public highway, we set up standard NRSW signs stating "raised ironworks", in white on red.

If the ironworks are on the footway or highway, we will lay a fillet around the frame and cover. On site roads where there is a speed limit, we will not lay a fillet as the projection is not sufficient to cause a hazard at low speed..

Area of work will be barriered off.

One operative will cut the tarmac around the manhole cover using petrol saw. The operative must be trained on abrasive wheel, must have all correct PPE (Gloves, dust mask FFP3, goggles, ear defenders) and use the dust suppression.

Using a breaker, break and remove the tarmac.

Using a manhole cover lifter then remove the manhole cover, followed by the frame of manhole.

Then place two string above the kerbs on both sides of the road tension on each end by bricks. With engineering bricks or concrete spacers the inner brick base to the manhole will be raised to the correct level. The frame of the manhole will be replaced, checking the correct alignment (parallel with the kerb line) and correct height and correct distance from the string lines. After the mortar has cured the manhole cover will be replaced in the frame using the hydraulic cover lifter. NOTE: cover lifting has been treated as a 2-man lift- this cannot happen anymore.

Laying block pavers

The following is extracted from a specialist contractor's revised method statement:

The paving gang will apply social distancing-rules keeping 2.0 metres apart whilst carrying out all tasks on site.
When the sand (or grit) has been delivered into the area by the dumper driver. One man will spread the infill sand in the area (2 men for a larger area) observing the 2 metres apart rule at all times.
Setting out the area will be carried out by one or two men if a larger area and they will observe the 2.0 metre apart rule at all times.
When the blocks have been placed next to the area by the forklift driver one man will cut the bands on the pallets and using a block cart will transport the blocks off the pallets into the area ready for laying.
The blocks will be laid on the ground by one or two men observing the 2.0 metres apart rule at all times.
When cutting the blocks, the block splitter will be in operation by one man with no-one standing alongside waiting.
When all the blocks have been laid into the area they will then be compacted with a wacker plate which will be in operation by one man.
The men will agree to disclose if anyone is at home isolating or shows symptoms and will agree to stay away from work.

Foundations

Strip footings

Excavate to void level to reduce depth of strip foundation.

No man entry to the excavation is permitted. While excavating, the groundworker will check the depth of excavation using the staff, receiver and rotating level to signal the formation depth. The groundworker will set up a suitable movable barrier to prevent access to the excavation. All dips will be taken from behind this barrier.

Excavate the foundation to the designed formation level, using a tracked 360^0 excavator. Ensure the foundations are pulled straight and level. Any cleaning up to formation level, if required, will be carried out by over digging beyond a corner and blowing loose material beyond the required footing line, using an air lance- NOTE not the air pick.
Where strip footings are to be left open for any time, MGF Walksafe or similar will be installed by excavator

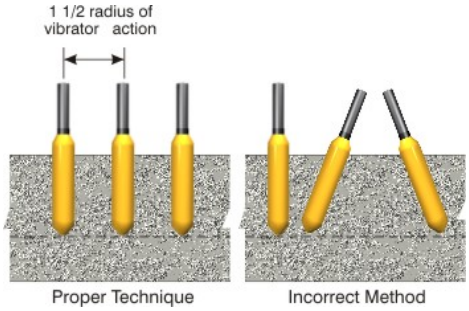
and maintained to provide safe access to plots.

Concreting Foundation
Bank concrete delivery lorries to a safe distance from the excavation and place concrete, by either discharging directly from the lorry (using 3 chutes) or by discharging into the excavator bucket and placing by machine. In either case the discharge and positioning of the chutes will be by the ready mix driver with no assistance NOTE: this is in fact the ready mix company procedure, especially with powered operation of the chutes. The concrete will be poured from the back of the lorry and operative directing the pour will be at least 2.0 m. away.

The strip footings will be backfilled to within 100mm of the top of the beam.

A vibrating poker will be used to eliminate air bubbles. The vibrators should be completely inserted into the concrete, and one operative will use the poker.. Over vibration should normally be avoided during the compaction of concrete. Do not remove the vibrator head too quickly and do not drag the vibrator head through the concrete, dragging a vibrator through the concrete will form a mortar channel in the concrete, creating a structurally weak area in the finished product. Lower the vibrator vertically into the concrete, allowing the head to descend under its own weight. Internal vibrators should not be forced down into the concrete. The vibrator head should penetrate previously placed lifts of concrete by 6 inches (150 mm). If there is a considerable amount of time lapse between the placements of subsequent lifts, it may be necessary to re-vibrate the previous lift prior to placing additional concrete to minimize the potential for pour lines and cold joints. An insertion time of 5 to 15 seconds will usually provide adequate consolidation. A general rule of thumb is to allow the vibrator to sink under its own weight and then remove the vibrator at a rate of about 3 seconds per vertical 300 mm. Concrete should move to fill the hole left by the vibrator;

otherwise briefly reinserting the vibrator nearby should solve the problem. The vibrator should then be reinserted close enough to the last location so that the radius of action overlaps the last one. In front of the poker another operative again distanced will ensure the concrete is directed as required by using a rake.



All foundations once dug or recently poured must be adequately fenced off with suitable signage 'deep excavations.

After the concrete has cured sufficiently, brickwork and blockwork will then be laid as required to the standards and requirements contained within the contract drawings, specifications and suppliers' recommendations. Bricklayers will be expected to set up and keep to 2.0m. minimum spaced work areas. This will be set up as the hod carriers load out.

Footings deeper than 2.5m

Designers would normally avoid footings deeper than 2.5m and NHBC inspectors may raise objections. In the event we are faced with the need for deeper footings and that this is approved, an Alsipercha system will be required using 2no. Kentledge and 2 fixing points for any operative approaching the trench edge.
Reduce ground level to void level, prior to excavating foundations. Where trench crossing is required due to the layout of the foundations, proprietary trench crossing bridges will be deployed.

Piled Foundations

The specialist piling contractor will provide a set of RAMS for the installation of specified piles. The method statement will cover in detail how all aspects of the piling operation can be carried out with suitable distancing. Houlihan involvement will be limited to pile mats designed by others and constructing connecting routes. This will be done by machines excavating, placing fill and rollers compacting to a MCDHW method compaction. Membranes may be specified and these will be placed by 2 men separated as for haul roads. If testing is required, this will be by a specialist contractor to a C19 compliant distancing strategy, with assistance from one of our excavators as reaction kentledge. On the day positioning of individuals will be monitored by our site supervisor. Houlihan attendance on pilers will be limited to a machine and driver- no-one on foot. Ready mix concrete will be marshalled by us close to the piling position and then handed over to the piling contractor to direct.

Once the CFA pile have been poured, tested, and allowed to cure sufficiently, the 360^0 operator will excavate along the line of the piles, grading back on both sides to provide safe working access. Excavate to levels provided by the Site Engineer. The arisings will be loaded on to the attending site dumper and stored away from the excavation for disposal or re-use at a later date. Once to formation levels provided by the on-site engineer, the edges of the trench will be battered back to allow for safe entry into the trench. Once excavated, the piles cropped and the broken concrete removed, the area will be blinded. The blinding will be allowed sufficient time to cure.
The steel fixers will fabricate the cage to the design specifications.
The reduced level and trenching works will be undertaken by a JCB JS 130 tracked excavator, the material being loaded onto 6T/9T Thwaites dumpers and taken to spoil heap.
All piles will be cropped to 200mm above formation level. Cutting down to level will be by use of munching attachment attached to the excavator. Using an air saw and water suppression, the pile will be trimmed to

finished level, given by site engineer. Concrete blinding to ground beams and pile caps will proceed prior to the fixing of reinforced ground beams and pile caps.
Only final trimming will require handheld tools which will be vibration reduced. One man will operate a breaker, cleaned before and after use.
Formwork shuttering will follow on, once checked for line and level. All formwork erection can be managed by one person for type of shutters we require.

Pile Cropper
Ensure the excavator is capable of carrying the weight of the cropper.

It is essential that operatives have familiarised themselves with the cropper and its operations and have read the Method Statement. Where possible get a demonstration from the Cropper Delivery Team.

Operative-one person- should be aware of hand positions when helping position the cropper, as the controls for the excavator are not in their control..

.The operative and the machine operator must be fully aware of the standard hand signals. The plant operator should always have the operative in visual contact at all times. The operative should never use the hydraulic pipes as a handle.

Operatives that do not need to be in the vicinity, should, for their own safety stay away. The operative working with the cropper should stay well clear of the cropper until he is needed for the final crop at the cut off mark. Operative should avoid working underneath the cropper, but in the eventually that he has to, the plant operator will ensure the excavator is switched off, and the driver's hands are well clear of any operating levers.

Always take the pressure off the hydraulics when detaching the cropper from the machine.

The pile cropper should be moved on a pallet by a fork lift. If this is not possible then certified chains and D shackles will be used from an excavator.

The first step in using the cropper is to lower the cropper over the pile. Operatives should move away. For the best results, the distance between each break should be approx. 200mm. To achieve a clean horizontal fracture at cut off level, ensure that 200mm of uncrushed concrete remains for the last cut. A cut off saw will be used to mark the final cut off position to prevent any fracturing of the pile below that mark. When using the cut off saw, water suppression techniques shall be employed. Cut off saw will be use by a competent operative trained on abrasive wheel.

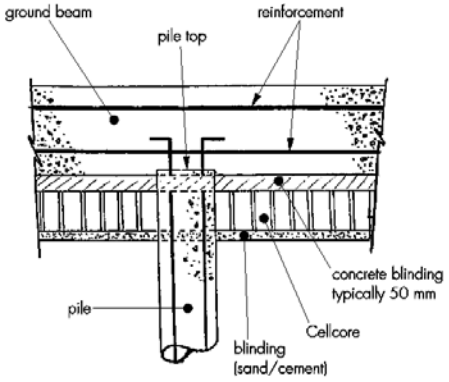
When crushing oversized piles a half link can be used. Ensure the safety plate is positioned and tightened.

After 15 mins of crushing check that all blades and bolts are still secure. A loose blade will cause damage to the piston and a loose bolt will damage the link.

Under no circumstances should the cropper be used for stripping the piles.

Shuttering to Groundbeams
Once the NHBC has passed the excavation after the piles have been munched down to the required level and blinding laid in the trench, pile caps and groundbeams can be set out for the steelfixers.
Blinding will be laid using concrete semi – dry over the width of the trench levelled by a tamper at 50mm height.
Cellcore – placed with Groundbeams & Pile caps
The panels must be stored flat and be protected from high winds and prolonged exposure to sunlight.
Cellcore products must not be exposed to flame or ignition. Careful consideration should also be given to the management of fire risk when in storage; detailed guidance is given in the health and safety data sheet packaged with the product.

Cellcore must be placed on a firm, level surface and the bottom of the excavation properly compacted and blinded with a layer of concrete or a sand/cement blinding.
Cellcore panels are not heavy and are easily be lifted by one operative.
For piled ground beams, the top of each pile should be trimmed so that it extends slightly above the proposed underside of the ground beam each pile should penetrate the void former to allow for an approximate 50 mm thickness of concrete blinding on top where applicable, and a keying depth of approximately 25 mm into the ground beam.
(See typical detail below)



When required, the product can be cut to shape with a fine-toothed saw. Care should be taken to ensure that, after cutting, exposed ends of the cellular stiffening ribs do not exceed a maximum length of 50 mm.
Joints between panels should be sealed with formwork tape supplied by the Certificate holder.
Reinforcement should be fixed and adequately supported to ensure that the correct depth of concrete cover is achieved, and to ensure that the maximum imposed load beneath each support is appropriate to the grade of panel being used. The panels should be covered with a 50 mm thickness of concrete blinding where heavy reinforcement is proposed, or where the reinforcement will be subjected to significant point loads from foot traffic or other imposed loading.
During construction, spreader boards are recommended to reduce the imposed load transmitted to the panels.
Concrete should be placed with care to avoid overloading the panels.

Internal Drainage

(To follow the groundbeams or strip footings and prior to the installation of the Beam & Block Floors.)
Excavations are generally at or below 1.2m.b.g.l. are typically described below:
Identify access, movement and storage areas and erect safety exclusion fencing to enclose the works.

Place shingle bedding using the excavator bucket or by a site dumper being banked to the point of discharge. Note that during the placement of any material to trenches that all operatives will evacuate the excavation.

Manually place pipes of 150∅mm or below and align using either a string line or pipe laser, as appropriate.

Test the section prior to placing shingle protection as noted above.

Backfill in the appropriate layers using excavated material and compacting with a trench or standard vibrating plate compactor.

All these operations can be carried out maintaining distancing and taking care when working in adjacent plots.

Beam & Block Floors:

Once all the services have been installed, the internal course of blockwork will be built to the underside of the beam and block floors. Removal of top soil and any vegetable matter is required. Provision of a void between the underside of the floor and the ground level of at least 75mm (150mm for clay).

The bearings for the beams should be clean, level and free from debris. The mortar in the masonry must be cured and have sufficient strength to support the floor. A continuous damp-proof course should be laid along the support wall below the floor in accordance with CP 102:1973. For masonry construction the beams should have a nominal bearing of 100mm. In cavity construction, beams should not project into the cavity.

Placing beams and infill blocks may be carried out by a specialist contractor. Their working methods will have to be modified. Beams may be lifted in by crane or excavator. The number of beams slung will have to be limited, ideally to allow placing single beams in their final position. Manual handling can be limited by lifting in 3 beams: the centre beam is placed in its final position and then the beams either side have only one block width each to be moved by hand. Contractors sometimes choose to lift in 5 beams which involves longer sideways movement and increases manual handling. This manual handling even for 3 beams requires 2no. individuals in close contact at each end of the beam for 2 of the beams. As the beams sit on DPC which must not be torn, they can't be slid across requiring a clean lift and placement. This must change so that either the crane or excavator lifts one beam at a time to its final position, requiring only one person receiving the beam to guide it to its final centre.

Where two or more beams are placed side by side, the space between the beams above the flanges must be filled with in-situ concrete of minimum compressive strength 30N/mm2 with 10mm maximum sized aggregate. The concrete must be allowed to cure to the necessary strength before loads, such as partition walls, are applied. The beam shall not be worked on site in any way ie, by drilling, notching, and cutting or in any other manner, without a design by the beam suppliers. Place floor beams at the centres shown on the drawing, positioning infill blocks between the extreme ends of the beams as work progresses in order to ensure the correct spacing. Design will be provided along with installation guidelines.

Blocks can be omitted to accommodate service penetrations, and the holes can be made good with concrete.

Scaffold Bases

Install 150mm minimum stoned and compacted scaffold base to the perimeter of each dwelling, extending 2.5m from the building face.
Compaction will be done using a roller where possible and compacting plate where unable for the roller to get access.
Scaffold base to include base for any loading bays. Base for loading bays to be deeper. A temporary works design will be required, not just a specification in the tender,
Scaffold base to all screen and retaining walls, is required. Specification as above.
Scaffold base to be laid in conjunction with path / patio bases when possible. Engineer will mark out.
Perimeter of building to be cut / filled to correct level prior to laying scaffold bases to allow correct setting out of scaffold lifts.
Allow the laying of scaffold bases, patio bases and path bases to be completed at time of over-site.

Reinforcement for Groundbeams

The steel reinforcement will be delivered by flatbed lorry and mechanically lifted into position by the use of lifting chains or continuous web slings attached by the steel stockholder when then lorry was loaded.
The banksman will attach the slings to the excavator chains.
The slings will have been placed by the stockholder to be accessible from ground level at the point of delivery. No access is required or permitted to the bed of the delivery lorry.
.The off loaded steel will be stored in a designated storage area, and fenced off. Any web slings that come with the steel bundles delivery, due to new legislation, the breaking load safety factor now has to be 7:1 and therefore does not necessarily need to be disposed of after just one use. Single use slings for lifting, loading,

transporting and unloading certain types of cargo; they are designed to be attached/fitted to the load for the very first lifting operation, they will stay with the load throughout its journey which may or may not include loading and unloading multiple times, until it arrives at its final destination. Once the bundles are in place at the fabrication area, the web slings are to be removed from the bundles and destroyed and disposed of in the correct skip, as per the SWMP. Under no circumstances are the web slings to be discarded around site, stored on site, or reused. The web slings must be cut/destroyed and discarded.
Small steel sections will arrive separated by shape either in a single use bag or slung together with a continuous sling. Mixed shapes in a bag will be sent away.
The unloading area will be barriered off, and no operatives will be in the area while the off-loading is taking place.
All reinforcement where practicable will be pre-fabricated to the engineer's drawings, where this cannot be achieved this will be carried out in a designated steel yard kept fenced off. Steelfixers must socially distance when working. If the fabricated cage would be too heavy to lift and position by excavator, it will have to be tied in situ.
Any fabrication will be carried out in a fenced off area, as discussed with the site management team. The steel will be tied by hand and checked for accuracy by our engineer
A reinforced cage will be fabricated to specifications in the schedule, in an area where the steel has been stored. Once fabricated, the cage will be lifted in to position by the on-site suitable 360 excavator. Certified lifting chains and lifting shackles will be attached to the cage. DO NOT USE THE DELIVERY WEB SLINGS, these should have been disposed of. Steel will be fabricated as required and lifted into place by excavator. If necessary a crane will be used if beyond the safe working envelope of the 360°.
Under no circumstances is anyone to be in the excavation when the fabricated cage is being lowered in. The cage will be lifted in to position and the steel fixers will follow the cage in to the excavation. Then the cage may be lifted again just clear of the ground for final positioning. 2no. fixers may be required for this and they will have to position themselves at opposite ends of the cage.
Once the cage has been positioned, any subsequent cage will be secured using splicing bars. The splicing bars will have sufficient ties to secure the bars to the cage. The steel fixers will fix sufficient spacers to establish and maintain specified concrete coverage and to avoid unit deflection under load from loose back fill.
Mushroom caps will be placed over exposed ends of steel. If the mushroom caps fall off, site personnel are to replace the caps.
Once placed, the reinforcement will be cleaned off and inspected by the Principal Contractor's representative as necessary.
Any cutting of reinforcement will be carried out using a disc cutter prior to which a 'Hot Works Permit' will be obtained from the Principal Contractor. A suitable fire extinguisher is to be on hand.

In certain circumstances, most commonly for pad footings, cages have to be fixed in situ. If the cage is large enough with heavy steel specified, man entry to the cage may be required for final tying. If this is the case, a design must be produced showing how collapse of the cage will be prevented. We would expect this to be pre -empted by triangulation of steel members, even temporarily until no-one is required to enter the cage,
All steel tying can be done by one person, but if fixers chose to double up on a cage they must maintain separation over the length of a beam cage.

Formwork
The formwork comes in standard sizes corresponding to the depth of the beam. Cutting and shaping will be by use of a Stanley knife.
Jointing is by standard straight connectors and joint clips.
The beams are spaced apart by sheet ties which fit into the formwork directly.
Continuous spacers are supplied as part of the system.
The shutters will be backfilled, externally, to within 100mm of the top of the beam.
These operations can be done by one person with separation within the whole foundation area.
Concrete can now be poured continuously as for strip footings.

Forming the splash courses/ brick and blockwork

The "ground-level DPC" is actually required to be at least 150mm above the ground level.
The bricklayers will come to site and be inducted prior to commencing work.
The bricks will be to the specifications, and will be brought to the work area. A hod carrier will lay out the bricks and the spot boards. The hod carrier will mix a consistent mortar to specification. He will wear a dust mask, to FFP3, and will wear fresh clothing each day. The mixer will be set up on a solid base, next to the sand and cleaned out at the end of each shift. The cement will be delivered in bags and stored off the ground on a wooden pallet and kept covered to protect from the rain and frost. The bags are date stamped for use by dates which will be a maximum of 6 months from manufacture. This date must not be passed as at 6 months from manufacture, the CrVI contaminant will become available again. The iron compound added at manufacture reacts with the CrVI but this reverses after 6 months.
A source of water will be available to the mixing area.
The hod carrier will mix mortar to specifications.
The hod carrier will load up the spot boards and bricks and blocks BEFORE the bricklayers arrive at their work stations.
Bricklayers will start laying bricks from different corners and there is plenty of space for them to maintain the social distancing while working. When opposite corners are built, lines will be pulled by one bricklayer while the other stands off by at least 2.0m.
When bricks, blocks or mortar need to be topped up, the bricklayers will distance themselves while the hod carrier carries this out. It will not be acceptable to pass on a scaffold or in restricted area in a trench so the bricklayers move for the hod carrier and no anticipating this.

Scaffold mats
Once to splash, a scaffold mat will be laid. Crushed concrete will be laid with a Type 1 layer, or similar, compacted on top. Paving is kept at least 150mm below the DPC and slopes away from the wall at around 1:60. This may need to be increased to 1:40 for some 'difficult to drain' paving, such as riven flags, or may be decreased for well-draining paving, such as blocks or plain concrete.

Delivery to site and vehicle movement on site

Before a site entrance and haul road has been constructed, plant will have to be unloaded on the highway. Protection for tarmac surfaces will be placed.- full sheets of ply will allow 2-handed lifting at 2.4 m. separation when the sheets are lifted at the long ends. Plant will be driven off by the low loader driver and banked off the highway by one person.

All deliveries will be directed on and off site by site traffic marshals.

Shared access arrangements - daily delivery schedule to be co-ordinated to avoid congregation of drivers, possibly dismounted at the site entrance,.

All Houlihan & Co deliveries are to be booked in by head office, taking into account access restrictions for timing, size of plant and type of plant..

Groundworkers are to follow the site traffic management plan, designated car parking (which should be set out to allow distancing) and use pedestrian footpaths to move around the site. There should be distancing on shared walkway routes.

Groundworkers are to set up and maintain exclusion zones around plant, and excavations as excavations/ongoing works take place..

If sub-contractors or any pedestrians need to speak with plant operators, ensure eye contact is made, the THUMBS UP is given by the plant operator, and that the plant is stopped prior to approach. The pedestrians should stand off from the plant to talk to the driver..

Welfare Facilities

Contracts Manager and Site Foreman will check and make arrangements for the use by all operatives of adequate welfare facilities not only as laid down in the Construction (Design and Management) Regulations 2015 but to comply with CLC guidance " Site operating Procedures , Protecting your workforce during coronavirus,Covid-19".

Contract Manager will make sure there is provision in place for cleaning and social distancing by PC for each welfare facilities.

Canteen

Hand cleaning facilities or hand sanitiser should be available at the entrance to rooms where people eat and should be used by those when entering and leaving.

Staggered breaks are planned for appropriate numbers.

If queuing occurs this should be controlled by PC appointed marshal, and not left to chance.

All areas used for eating must be thoroughly cleaned at the end of each break and shift, including chairs, door handles, vending machines.

Drinking water should be provided with enhanced cleaning measures of the tap mechanism and cup dispensers..

Our workforce will be asked to bring pre-prepared meals and refillable drinking bottles from home and take breaks where possible in their vans.

Toilets

Restrict the number of people using toilet facilities at any one time e.g. use a welfare attendant, if required to manage this process.

Wash hands before and after using the facilities and provide disposable hand towel to dry hands.

Provide suitable waste bins for hand towels with regular removal and disposal.

Enhance the cleaning regimes for toilet facilities particularly door handles, locks and the toilet flusher.

Portable toilets should be avoided wherever possible, but where in use these should be cleaned and emptied more frequently.

Changing Facilities and Drying Rooms

Based on the size of each facility, determine how many people can use at any one time to maintain social distancing and monitor the number of people using the facilities at one time.

Consider if the size of facilities, and make sure it is adequate for our workforce.

Make sure there are suitable waste bins in these areas with regular removal and disposal.

Where the conditions are not met issue must be raised with PC and work must be put on hold until remedial action is taken. Health and safety of the workforce is paramount.

Plant in use

Excavators will be allocated to a designated driver.

The excavators must be thoroughly cleaned using disinfectant wipes by the operator on the first day of return to work and when he will be asked to use another machine previously used by another operator. Cleaning must include

1. Door handles.
2. Levers and the other gages.
3. The seat and windows.
4. The grid of the heaters.

Once finished cleaning the cloth/tissues must be disposed of in the nearest appropriate bin.

The operator will have 70% alcohol hand sanitiser in the cab for use on entering and leaving.

All plant must be kept CLEAN- there is no point trying to disinfectant wipe clean if the machine is covered in concrete or mud. Each drive must leave any machine he operates CLEAN, not waiting for the end of shift or the end of the week.

Excavators have monitoring cameras fixed in the rear of the machine. Any machine that is not carrying out bulk earth works will be accompanied by a Banksman.

All round vision is not an accurate description of the control measures required of a driver : the information from screens covering 360° around a machine together with the need to be observant of the slung load or bucket, the route being taken, approaching traffic beyond camera range and the other information about speed and performance results in an overload of information confusing judgements. All round awareness is the correct goal. This will be achieved by the use of cameras, mirrors, and communication with banksmen and on the part of pedestrians increasing awareness.

Storage of tools & materials

Small tools will be kept in the storage container when not in use. Points of contact on tools will be cleaned before and after use. Plant is to be left in-situ on site but will be secured and immobilised.
All small drum oils to be kept in CoSHH store.

Interface with other trades

Co-ordinating work with other trades.

From the arrival of other trades on site, work will be co-ordinated by our Site foreman with any problems as to priorities referred to the Principal Contractor's site manager or the Client's representative.

Our workforce will be arranged in small groups - cohorts. The cohort working together will constantly check social distancing of 2.0m. is being maintained within the work pattern of their task and in relation to other trades on site.

Our works will be segregated from other trades.

Excavations will be guarded to prevent unauthorised access. We will not undermine scaffolding at later stages of the job, and will not work underneath scaffolding. Our machinery has flashing hazard lights and all reversing will be kept to a minimum.

Note that flashing lights interfere with laser levels. Manufacturers have found no way round this problem. And so lights should be switched off when the laser level is in use, but only in the area our site engineer defines as where interference could occur. This is not a blanket excuse for the whole site.

Housekeeping

Materials will only be stored in designated areas. Work areas will be cleared of waste as soon as practical, including materials surplus to a task. If this does not happen in a timely fashion, the working area will become constricted and separation will become difficult. If we leave behind waste or surplus materials, this makes distancing difficult for others. We should require this of other trades before we enter a new work area.

Any waste materials to be disposed of in the appropriate skip.

Waste from disposal bins around site including in offices must be removed on regular basis during the day.

Clear access at all times must be maintained should the emergency services be required.

Refuelling Area and Procedure

A dedicated bunded refuelling area will be constructed on site and will be fenced off, with appropriate signage displayed. Adequate spill kits will be provided. No fuels or chemicals will be stored near drains, bare ground, soakaways, or other sensitive areas.

All refuelling, greasing and other operations involving oils are to be carried out at the refuelling area by the individual operating plant, working singly.

All fuels will be kept in this controlled area, as well as the CoSHH stores and bins required. All refuelling will take place in this area, including refuelling of small items of plant. Any fuel, if carried out on site, must be in the correct container. Plant nappies are to be used during refuelling. If refuelling has to take place elsewhere, plant nappies must be used and a spill kit is to be placed at the remote refuelling location. All fuel containers are to be returned to the CoSHH store when refuelling is complete.

All Houlihan & Co diesel fuel will be stored in 500l/1000/2000l fuel cube bunded bowsers. (110% bunded tanks in accordance with PPG2, PPG26, (Pollution Prevention guidelines) and the Control of Pollution (Oil Storage) Regulations 2001.
These cubes are fully compliant with current regulations and UN approved for transporting diesel on the highway) even when full.

Lockable door opens with gas strut for improved access
Stackable design, Fuel cubes can be lifted full of fuel using the lifting eyes
GPI HP-100 high-flow hand pump with 3 metres of hose and trigger. Fitted with strainer to remove dirt and other debris. One person will carry out the entire procedure from unlocking through refuelling to locking again and cleaning up.

The bunded tank will be inspected regularly and any diesels in the bund will be over pumped to a 500 litre container and returned to H&Co yard for correct disposal. This will be carried out by one fitter.

All containers will be clearly labelled. Any CoSHH items no longer required on site will be removed.

Up-to-date, full CoSHH assessments for all materials used and stored on site are available on the notice board in the site office.

Any spillages are to be cleaned up immediately using the spill kits provided. Spill kits should be stored correctly with the lids securely fastened to prevent ingress of water, rendering the spill kit unusable and used material will be restocked immediately'.

All materials used for cleaning up spills will be placed in the relevant drums in the compound.

Labour, management, training resources

Sufficient time and resources will be made available to undertake the work involved. The introduction of new methods of working with control measures to prevent the spread of the C19 virus will have to be reviewed as the control measures are applied. New working procedures have been subject to consultation and this will continue to be the case as evidence of successful preventative measures and eventually mitigation measures

are made available. We will take account o all authoritative advice and guidance, in the expectation it will be evidence based in these difficult circumstances where not enough is definitively known in regard to spread, prevalence and virulence of the virus, and vaccines or immunity.

The works described will be undertaken by small gangs cohorting under the supervision of a competent Supervisor and Site Engineer. The Contracts Manager will visit the site as often as required. The Contracts Manager will report to our Construction Director, who in turn will visit site on a weekly basis. The Health and Safety Advisor will visit at least monthly to monitor compliance with the Method Statement, Risk assessments. He will also carry out inductions and a regular programme of tool box talks carried out in small groups and one to one if necessary, and investigates all site accidents and near misses.

Contract Manager and Site Supervisor will explain and monitor Social Distancing, Personal Hygiene and other measures, put in place to prevent contracting and spread of virus Covid-19. **Work will not start on any site without an initial induction to these new ways of working.**

Incidence of exposure to Covid 19 virus or appearance of symptoms

Should an event occur whereby an operative or colleague develops a high temperature (this means they feel hot to the touch on the chest or back) or a persistent cough (this means coughing for more than an hour, or 3 or more coughing episodes in 24 hours) whilst at work, they will advise the site management immediately and identify/advise the area where they were working and will fully comply with the following:

- Ensure they return home immediately, wearing a face mask to aid in containing the virus. Do not go to places like a surgery, pharmacy, or hospital.
- Ensure they avoid touching anything.
- Ensure they cough and/or sneeze into a tissue and put it in a bin, or if they do not have tissues, cough and/or sneeze into the crook of their elbow.

They will then follow the Government's guidance on self-isolation and not return to work until the period of self-isolation has expired.

First-Aiders will still be required to carry out their role; however, whilst carrying out first-aid they will require to be wearing the following:

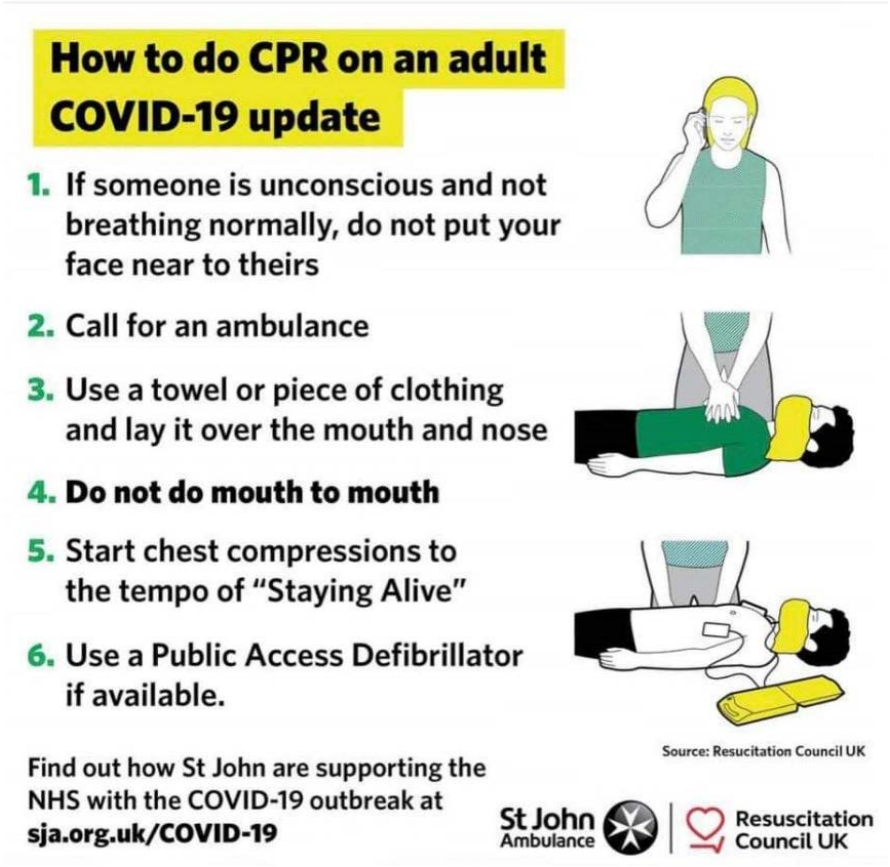
- Disposable face mask
- Disposable latex or nitrile gloves
- Plastic visor or eye protection that has been thoroughly cleaned and sanitised before and after each use.
- An apron if supply can be obtained without adding to NHS shortages.

If CPR is required, then the following guidelines have been extracted from the latest Resuscitation Council UK Statement on COVID-19 in relation to CPR and resuscitation:

Because of the heightened awareness of the possibility that the victim may have COVID-19, Resuscitation Council UK offers this advice:

Recognise cardiac arrest by looking for the absence of signs of life and the absence of normal breathing. Do not listen or feel for breathing by placing your ear and cheek close to the patient's mouth. If you are in any doubt about confirming cardiac arrest, the default position is to start chest compressions until help arrives. Make sure an ambulance is on its way. If COVID 19 is suspected, tell them when you call 999.
If there is a perceived risk of infection, rescuers should place a cloth/towel over the victim's mouth and nose and attempt compression only CPR and early defibrillation until the ambulance (or advanced care team) arrives. Put hands together in the middle of the chest and push hard and fast.
Early use of a defibrillator significantly increases the person's chances of survival and does not increase risk of infection.

If the rescuer has access to personal protective equipment (PPE) (e.g. face mask, disposable gloves, eye protection), these should be worn.
After performing compression-only CPR, all rescuers should wash their hands thoroughly with soap and water; alcohol-based hand gel is a convenient alternative. They should also seek advice from the NHS 111 coronavirus advice service or medical adviser.



A driver must be allocated who will take any injured person that need medical attention for cases ie; burns, eye injury etc. to A&E, or give them a lift back home when they are unable to drive themselves. First choice will be a driver that commutes with the IP. If IP commutes alone then another member of the team must be available to provide a lift: this should be arranged as part of standing emergency procedures, and the consent of a driver must be obtained.

In any case the driver must use PPE while he is driving gloves, mask eye protection. The same will apply for the IP. IP must wear any PPE that is mentioned above unless prevented by the nature of the injury.

Any accidents whatsoever arising out of or in connection with the site works on or off Site which cause personal injury, property damage shall be reported to the OHSEQ department immediately, in writing giving full details and statements of witnesses. In the event of a reportable accident the Health & Safety Executive shall be informed and an F2508 submitted.

All accidents to be recorded in the Accident Book and reported to the Principal Contractor.

All near misses will be reported to the Principal Contractor.

Trained First Aiders will be responsible for all treatment to operatives on site.

First Aid equipment and facilities shall be available in the Houlihan & Co site office.

Use of new substances potentially Hazardous to Health

Safety data sheets have been obtained for all the materials necessarily introduced to combat the prevalence and spread of Covid 19 virus.

COSHH assessments have been carried out for all cleaning and sanitising materials and control measures are in place to ensure safe use and disposal.

PPE specified before C19 including task specific is still required

Safety helmets EN 397

High visibility vest / jacket EN 471 Class 2

Safety Gloves EN 388 and see full glove selection policy

Hearing protection EN 352-1/EN 352-2 mandatory when using breakers, or working in areas where noise levels rise above 85 dB(A).

Safety glasses to EN 166-F when placing concrete.

Safety goggles to EN 166 B when cutting concrete products or steel products.

Safety boots to EN 345: S1-P

Suitable footwear when standing in concrete wellingtons to EN 345 S4

Face shield when using air pick

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Gloves can be used to keep hands warm, but should not be relied upon to provide protection from vibration: vibration reduced tools are used, always for less than lower action level

PPE specified for working on site during C19 pandemic, to be worn unless higher specification PPE as above is required.

Travel to and from work, a disposable face mask will be worn and hands will be sanitised.

If away from areas we control and have assessed on site, then face masks or coverings will be worn.

Issued by:

Print Name: Alasdair McSween Signature: Alasdair McSween

Date: 26.04.2020, rev.22.06.2020

Attachments:

1. Authorisation letter for travel
2. Acceptance of zero tolerance policy and consultation
3. PPE issued form
4. Pre start Survey form
5. Site cleaning record
6. COSHH assessments

7. Risk assessment for working on site during the Covid 19 pandemic