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bespoke basement construction

BASEMENT CONSTRUCTION & TRAFFIC METHOD STATEMENT

Address: **42, Nassau Road, Barnes**

Date issued: **15/06/15**

Revision: **No 4**
Planning Officer requested improvements

Issued by: **Knowles & Assoc. Ltd**

Structural engineer: **Andrzez Plocieniak**

Architect: **Stephen Reyburn Architects**

Project type:

The construction of a single storey basement extension beneath the existing house and part of the garden

Programme –

- Duration 25 weeks with hoarding
- Soft strip and Mobilisation 4 weeks(licence not required)
- Underpinning & basement excavation, external refurbishment and roof works - 20 weeks

Site Hours

The site will work within the allowed hours of 8.00am to 6.00pm on weekdays and 8.00am 'til 1.00pm on Saturdays.

Introduction.

- This method statement should be read in conjunction with the structural drawings and method statement
- This method statement should be read in conjunction with the Stephen Reyburn architectural drawings
- The basement shell will be constructed in key stages which are detailed therein

The key stages are as follows:

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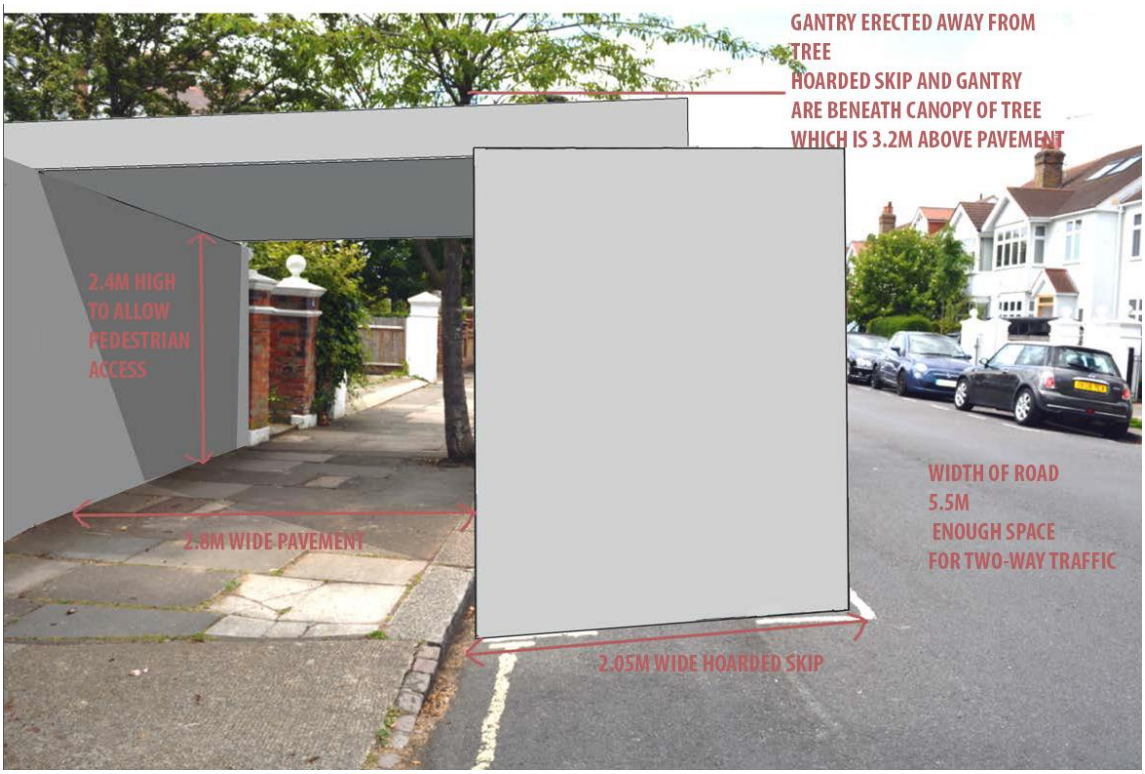
1. SITE ESTABLISHMENT
2. ENVIROMENT
3. CONSTRUCTION

SITE ESTABLISHMENT

1. Carefully protect the original boundary front elevation wall and tree on the pavement – plant and materials will be stored on site. Erect hoarding to outside of proposed property with fully lockable door for visitors. Provide external lighting where required.
2. A container / soil Bund will be located on the front garden. It is proposed that the front garden will be fully hoarded around to a height of 2.4m to ensure that there is no disruption to the neighboring properties (see drawing).
3. The cherry tree on the pavement will be totally free from any interference, with the hoarded skip kept at 50cm distance away from the trunk and the lowest bough being a minimum of 50cm away (above and sideways) from the gantry over the pavement. The tree does not extend over the planned location of the hoarded skip, so is not at risk of any interference. Please also see diagram below and further below…



4. A conveyor will be installed from the existing ground to the proposed skip on the highway this will ensure a smooth excavation of the materials at all times – this skip will be sited on the suspended resident parking bay directly in front of the house – dimensions 2.0m x 5.0m
5. The site office and welfare facilities will be located within the site of No 42 throughout the substructure phase.
6. Knowles intends to make all neighbours aware of phasing with the project and, in addition, will post a Neighborhood Newsletter on the site hoarding.
7. Operatives and visitors will be encouraged to use public transport or, if necessary, to park vehicles in available public parking away from the immediate proximity of the site to avoid congestion.

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ENVIROMENT

Knowles intends to make the site comply with the Considerate Contractors scheme to ensure that the construction works effect on the neighborhood and local environment is kept to a minimum.

Delivery Times/Soil removal

We estimate approx. 6 HGV Lorries (2.6m x 7.8m) a week over the basement construction phase for say 16 weeks – lorries will pull alongside the hoarded skip in direction of traffic.
We will liaise and ensure that deliveries and spoil removal will not happen on the refuse collection times and that local businesses are not affected by the on-going construction works.
We estimate approx. 60 Grab Lorries over the duration of the works over the 5 month period.
As part of our contractor awareness on our projects we always submit our condensed traffic plan/leaflet to our suppliers to ensure that our submitted CTMP is closely followed by our suppliers
On the removal of concrete and any removal of materials which can cause localised dust it is proposed that the spoil and debris will be watered down to ensure that the dust is controlled and does not become airborne.

Recycling - Spoil from site is waste-sorted to optimize re-cycling of all possible particulates, resulting in a 95% re-use of materials. Recycling reports are obtained and reviewed weekly from our haulage providers.

The skip and conveyor belt will be covered with a tarpaulin to ensure any dust created is controlled and further protects the Cherry Tree on the pavement.
Each site visit is accompanied by an inspection by the foreman to ensure that the site and vehicles remain clear and clean. High-pressure wheel clean and pavement/road sweeping is completed within 5 minutes of any delivery or waste removal. This is highly unlikely as the soils are gravels and, unlike clay, does not leave deposits on the road and associated surfaces.

No heavy vehicles will be crossing the pedestrian footway and kerbside cleanliness will ensure visibility between pavement and road. Wheel-wash facilities will be on site if needed.

Supervising deliveries

As above, all delivery and waste material drivers will be in constant contact with the Foreman of the site and to his Lantra qualified Banksman. Particular attention is paid to ensure pedestrians are protected with stewards in high viz ensuring safe passage where deliveries are underway
The site manager/Foreman is in complete control of vehicle delivery and waste management. He will call up heavy lorries when required and ensure correct supervision at time of arrival and departure.
We allow a minimum 15 minutes between vehicle's departure and another's arrival.

Hoarding

We will apply for a bay suspension immediately in front of the site and a temporary structure license to facilitate the erection of a gantry over the walkway to direct waste into the hoarded skip and protect the Cherry Tree on the pavement – please see diagrams below.

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Site Set-Up

General management Issues

Alan Everett, Company Director, will be in regular weekly contact with the site Foreman to review and monitor the ongoing safety and integrity of this CTMP
We have already established the time and date for waste collections and the foreman will ensure that there is no clash between their collections by making sure that no deliveries or waste removal happens within one hour either side of normal collections
The 24 hr contact details of Mr Everett will be posted to neighbours and on the hoarding – 07785 567 978

DIRECTIONS TO AND FROM SITE FOR DELIVERIES AND SPOIL REMOVAL

- The Heavy goods vehicles used to remove the spoil will undertake the proposed route to and from Nassau road
- Travel into London on the A316 and onto the lower Richmond road/A3003
- Continue on A3003 and through Barnes High Street into church road and turn left into Nassau Road.
- On completion of delivery or spoil removal the lorry will be cleaned (if necessary) and then proceed to exit Nassau Road onto Lonsdale Road.
- On Lonsdale Road it will then proceed to travel along the A3003 and enter on A316 then onto the M3

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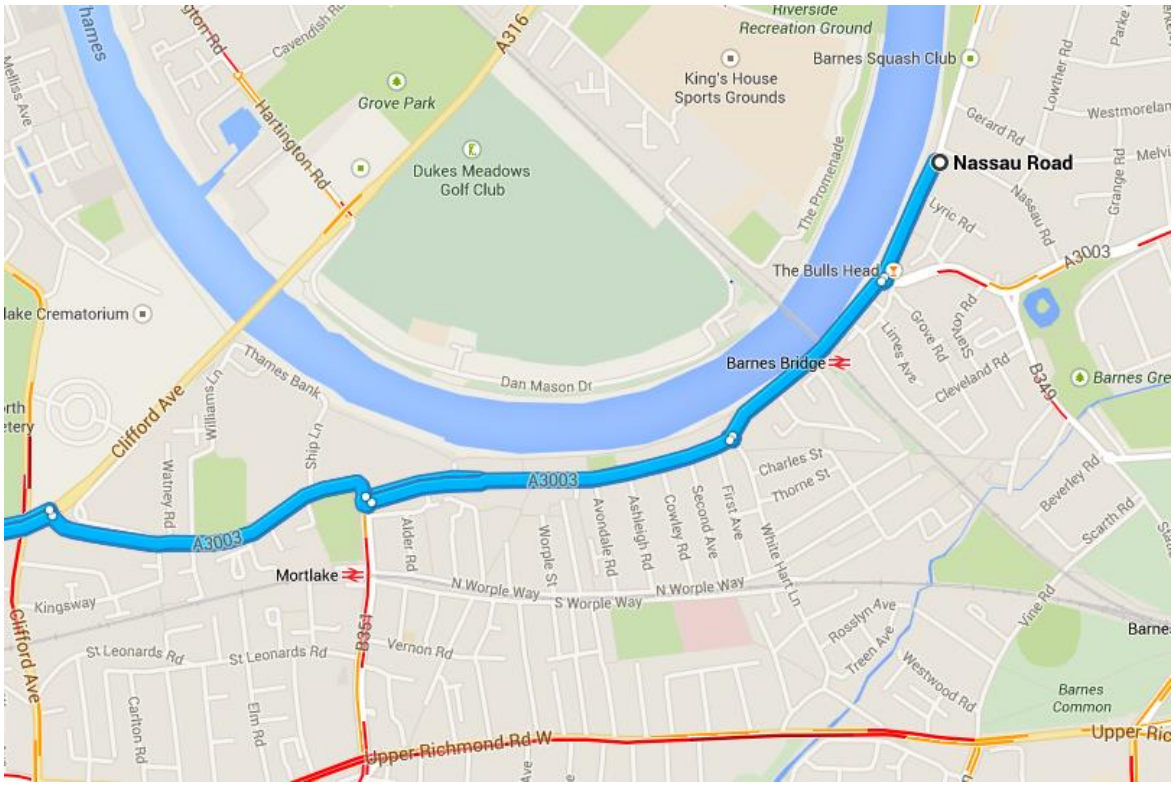

- Verbal and written briefings are provided to all suppliers, contractors and visitors, noting restrictions or terms that are applicable to them. In addition, where possible,
  We request vehicles delivering materials to also take waste materials away on the return trip, thus reducing the number of visits required and reducing environmental impact

CONSTRUCTION PHASING

1. Foundation works
2. Excavation Works
3. Steelwork
4. Reinforced Slab
5. Waterproofing

Estimated Construction Time 18 weeks

1. **Foundation works**
   This stage consists of carrying out reinforced underpinning to the garden boundary and main structural walls of the property including the party wall.
   Underpinning
   To the boundary, party and other main structural walls will be excavated by tunneling to the proposed section of walls. An access trench excavated to approx.1-1.2m wide, directly underneath the wall to be underpinned. The length of the base (pin) will be individually assessed on site. If necessary a sacrificial props and sheet piles will be used to support the foundation and exposed face of the excavation in its temporary condition the maximum length will be 1200mm.
   The spoil will be removed using manual tools and compressed air tools

2. **Excavation**

Once the excavation is completed to the design depth and width. This will be checked by the engineer and building control prior to concreting. A single sided shutter will be erected and concrete poured to form the base and stem. The underside of the existing foundation will be dry packed with a mixture of sharp sand and cement (3:1)
A further adjacent section will not be excavated till a further 24hrs has elapsed
A record will be kept of the exact sequence which will be in strict accordance with the recognized industry standards and as built records will be updated if required.
Using manual labor and mini excavators the spoil will be removed and using the conveyor belt system put then into the skip. We will ensure that the propping recommendations to the walls are adhered to as specified by the engineers
Temporary Works Generally in all stages of the works excavations will require shoring in the temporary stage. This will be implemented as required and dependent on ground condition and the surrounding environment. The excavation of the remaining soil will continue to the basement slab formation level The under slab drainage, sump tanks will be installed in conjunction with the proposed architectural and mechanical layout

3. **Structural Steelwork**

Will be installed throughout the underpinning and excavation phase. These will be installed by needling and propping walls with RSJ 100 x 100 needles and 250 x10 plates to ensure no movement to the above walls .The steels will then be packed and dry packed above. Beams and plates will be supported by Supa props and acrows subject to the point loads given by the engineer. The acrow and supa props will be sited on temporary concrete pads formations. On completion of the installation of the temporary supports/works we will them install the permanent steelwork.

4. **In situ reinforced concrete slab**

The design steel reinforcement can then be fixed in the basement slab position. Before the installation of the reinforcement and slab is laid, we propose to install 100mm underground drainage pipework throughout the slab area with drainage points to approx. every 15-25 m/sq. This pipe will connect to a main pumping station to the plant room. Housed in the pumping chamber will be a 2 no pump set up with alarms and battery back up to ensure a fail-safe pump system
Concreting of the basement slab will be fixed in the walls as per the detailed layout and will be laid at falls to ensure any groundwater falls to the drainage gullies. The engineer and the building control inspector prior to concreting will check this.
The concreting of the basement slab will be via a pumped concrete pump and supply truck to ensure the correct mix. Concrete will be supplied by an approved and reputable ready mixed concrete supplier
Remove all temporary propping on completion

5. **Waterproofing**

Once the basement slab is complete the Delta MS cavity drain waterproofing membrane will be installed as per the architectural layouts and manufacturers technical specification
The internal membrane will be applied to all soil retaining walls and laid to the concrete floor slab.
Screed by others

6. **Noise, Dust & Vibration**

Works will be carried out in accordance with best practice within BS5288:2009 Code of Practice

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ADDITIONAL INFORMATION

About Knowles & Associates:

- Founded by Robin Knowles who has worked in the basement and waterproofing industry for 25 years.
- Founder of The London Basement Company in 1994 that was the original company pioneering basement construction beneath residential properties and gardens since 1994
- With experience and over 1000 domestic and commercial basement built in the London Boroughs and Home Counties.

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Knowles Sustainability Policy

Knowles is committed to sustainability and promoting a broader sustainability agenda in our management of our construction site is integral to our professional activities. We aim to follow and promote good practice on all levels to reduce the environmental impact our activities have on the local and wider environment

Our principles:

- ✓ **To comply and exceed where practicable all legislation, regulation's and code of practice**
- ✓ **To ensure all staff are fully aware of our policy and to ensure that they consider the environment in their duties**
- ✓ **Minimize the impact on sustainability on all construction and transportation activities**

Construction phase

During the construction phase we aim to:

- ✓ **To adhere to the Considerate Contractors Scheme**
- ✓ **All waste suppliers will need to have a robust sustainability policy**
- ✓ **Recycle materials deemed no longer "fit for purpose"**
- ✓ **Reuse materials as much as possible**
- ✓ **Any mechanical & electrical plant will be turned off when not in use**