

**Witanhurst, West Hill, Highgate.**

**Construction Management Plan  
Gatehouse Works**

## 1. Site Re-Development Proposals

1.1 This report covers the work specifically for the refurbishment and new build elements of the Gatehouse area. The works to Witanhurst in respect of the Basement, Orangery and Tennis Court Works are already the subject of an approved CMP which has also been applied by the owner to all other works on the site.

1.2 The applications cover the following items:

- Construction of a small basement to the rear of the Gatehouse, linking with the existing basement under the forecourt.
- The removal and reconstruction of the two existing single storey buildings to the rear of the Gatehouse and an additional storey to the central rear extension.
- Roofing replacement works to restore damage to the existing roof
- External refurbishment to the existing listed building fabric, windows, doors etc of the Gatehouse
- Internal refurbishment of the Gatehouse.
- Restoration of the landscaping to the front of the Gatehouse



1.3 Witanhurst is located at the top of Highgate West Hill and bounded on the north by The Grove and at the south by the more recent development of Highfields Grove. West Hill is a busy and important route linking Parliament Hill to Highgate Village.

1.4 The Gatehouse construction works are programmed to commence in October 2013 with the demolition of existing rear wings and construction of new basement. The new rear wings buildings will be constructed in June 2014 with the refurbishment and landscaping works continuing until April 2015

## 2. Site Logistics

- 2.1 Access into the site is required to minimize the disruption caused by construction traffic during the course of the works. The current access is through the existing gatehouse, this restricts the size of the vehicle that can enter and leave the site. All deliveries will be made via this entrance (right sided gatehouse as facing).
- 2.2 Some suppliers with smaller bespoke vehicles, for example skips, which are used on a regular daily basis have been able to modify their vehicles to fit within the existing opening. However, this is not a viable approach for general deliveries and HGVs are discouraged from site. The effective clear width is 2.7m and headroom under the springing point of the archway is 3.2m. This restricts the size of vehicles using the gatehouse entrance to 2.4m wide with a vertical clearance of 3.0m.
- 2.3 The sight line for traffic exiting the gate is 12m for traffic heading north and 31m to traffic heading south. A banksman will be required on Highgate West Hill to facilitate vehicles entering and exiting the site. This arrangement is already in place and successfully manages vehicles associated with the wider site works.

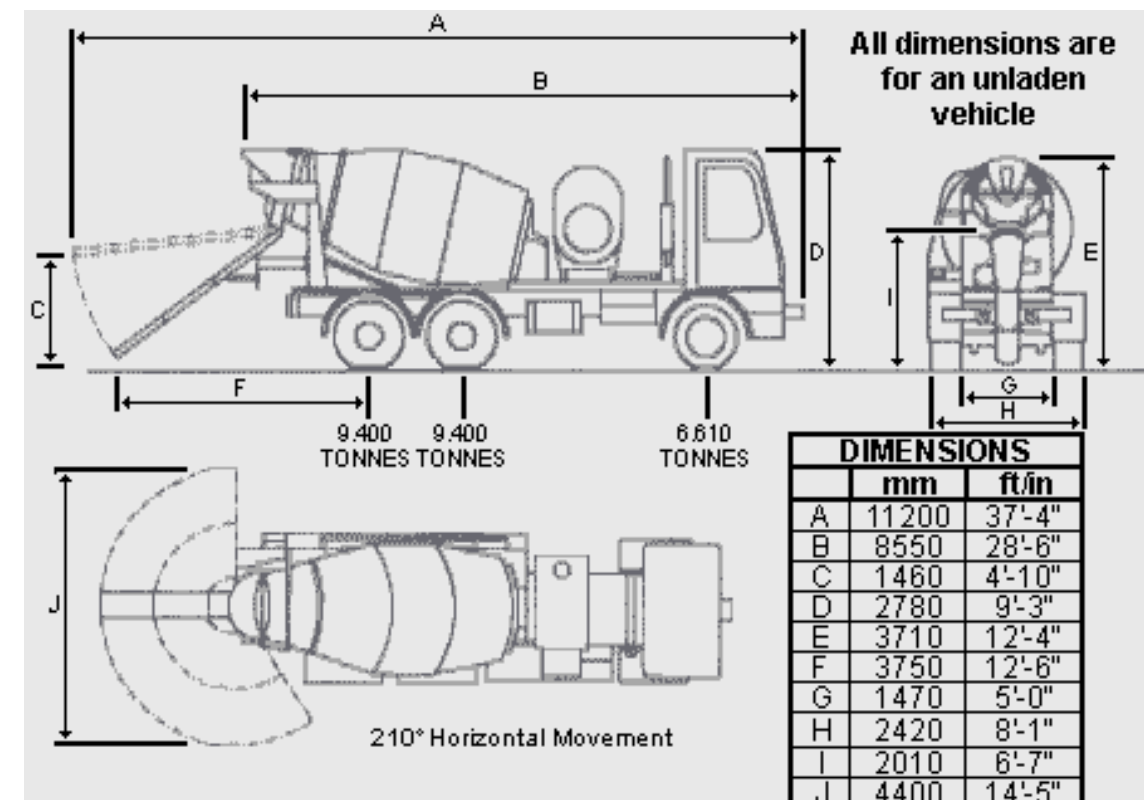




Figure 1 - Concrete Delivery Truck

2.4 Typical vehicles using the site entrance include:

- 8 x 4 wheel drive muckaway for disposal of material arising from the basement excavation. These vehicles are 8.1m long and 2.5m wide with a tare weight of 12t and a maximum fully laden weight of 32t
- Concrete delivery vehicles which have an overall height of 3.7m and are 2.42m wide and 8.55m long. Fully laden when entering the site these vehicles will weigh approx. 25t. See Figure 1
- 6 x 2 wheel drive rigid flat bed lorries with crane loading arms for general deliveries from builders merchants. These vehicles are 8.5m long and 2.5m wide with a typical laden weight of 18t
- 10 x 6 wheel drive articulated vehicles with deliveries of reinforcement for concrete construction. It is unlikely that there will be more than 4no deliveries using this type of vehicle per week. The vehicles measure up to 13m long and 2.5m wide with a maximum load of 32t.
- 4 x 2 wheel drive rigid box vans with specialist equipment for service and decorations. The vehicles will be 8.0m long and 2.4m wide with a height of 3.4m. Typical loads will be 7.5 to 12t



Figure 2 - Route to A1 for Main Delivery Vehicles

- 2.5 A detailed review of the site access was undertaken previously, as part of a previous Planning Application process, which took into account concerns from third parties. The preferences of Camden Council and these third party concerns have therefore been taken into account and these have been adopted in the case of the Gatehouse works. Access within the site is to be reconstructed on completion of the project, by excavating to formation level of the proposed surfacing and providing a hard stand at sub-base level the height of the access under the arch is increased to 3.8m. This will enable all of the vehicles listed in the section 4.8 above to access the site. The maximum loaded weight of vehicles using the access will be 32t. If in exceptional circumstances larger vehicles are required agreement will be obtained from LB Camden Highways prior to the delivery
- 2.6 In the previous consultation with LB Camden Highways, for the previous Planning Application, the most appropriate route to and from the site for major delivery vehicles was established and this has been adopted for the Gatehouse works. All vehicles will enter the site in forward gear by turning right from West Hill and will leave also in forward by turning left to head north up West Hill. All vehicles will be guided onto and off the site by a banksman, who will also be responsible

for checking the vehicle wheels prior to them leaving the site. The gates will be manned during working hours closed when there are no vehicles using the access or anticipated deliveries.

- 2.7 Site working hours will be limited to Monday to Friday 8.00 to 18.00. Weekend working is not envisaged but will be limited to 8.00 to 13.00 on Saturdays as required. Should any unavoidable out of hours working be required the timing will be agreed with London Borough of Camden environmental health prior to the works commencing. All local residents and consultation groups will be notified of any planned abnormal working hours issues.

Weekday Two way Average Traffic Flows HighGate West Hill

TIME PERIOD	TOTAL VEHICLES	MOTOR-CYCLES	MOTOR-CYCLES%	CARS	CARS %	LGV	LGV %	HGV	HGV %	BUS	BUS %
08:00	1022	72	7	848	83	68	7	21	2	12	1
09:00	977	44	4	817	84	86	9	19	2	12	1
10:00	818	30	4	682	83	83	10	12	2	12	2
11:00	732	24	3	609	83	80	11	8	1	12	2
12:00	749	21	3	642	86	64	9	10	1	12	2
13:00	779	24	3	652	84	75	10	15	2	12	2
14:00	811	18	2	694	86	74	9	13	2	12	2
15:00	935	21	2	813	87	77	8	12	1	12	1
16:00	1066	19	2	926	87	88	8	21	2	12	1
17:00	1096	34	3	960	88	64	6	27	3	12	1

SATURDAY TwoWay

TIME PERIOD	TOTAL VEHICLES	MOTOR-CYCLES	MOTOR-CYCLES%	CARS	CARS %	LGV	LGV %	HGV	HGV %	BUS	BUS %
08:00	496	19	4	414	83	43	9	8	2	12	2
09:00	738	16	2	669	91	33	4	7	1	12	2
10:00	806	19	2	718	89	37	5	20	2	12	1
11:00	879	21	2	795	90	43	5	6	1	12	1
12:00	904	14	2	837	93	31	3	10	1	12	1
13:00	954	20	2	863	90	41	4	18	2	12	1

Figure 3 – Traffic Survey March 2010

- 2.8 A traffic survey was carried out in March 2010 to determine the number of vehicle movements on Highgate West Hill during working hours. The typical hourly rate for various classes of traffic is indicated in Figure 3.
- 2.9 Figure 3 indicates that the morning and afternoon peak hour flows are approximately 40% greater than the notional off peak period. This is mainly the result of more cars and bikes on the road during peak hours with very little increase in the number of vans, buses and HGV. The anticipated traffic flows from the construction site are not likely to have a significant impact on the overall traffic count on the road.
- 2.10 The impact of construction traffic from the works will be dependent on the phase of the construction. The peak anticipated vehicle movements into and out of the site each hour, for the period under consideration in this report are as follows:

- Gatehouse Works – Oct 2013 to April 2015 2no. HGV & 1no. LGV

- 2.11 Typical anticipated maximum weekly deliveries to the site generally in this period can be summarized as follows:

- Oct 2013 to April 2015 80 no. LGV 50no. HGV

- 2.12 The timing of deliveries will also be dependent on the site activity at the time. For example waste disposal tips open at 08.00 and close at 16.00, this will mean that the first lorries will enter the site at 08.00 with the last vehicle being loaded at around 15.30. Whereas, large concrete pours will require equipment and pumping set up when works commence at 08.00 with the first delivery of concrete not scheduled until 09.30. The last vehicle will arrive at site no later than 17.15 to complete the pour and allow the pump and truck to wash out on site prior to leaving.

- 2.13 No vehicles will be allowed to enter the site prior to 08.00 and it is not proposed to stack any vehicles on the highway. All hauliers will be advised of site restrictions and will not be permitted to park outside the site on local roads. All vehicles leaving the site will have wheels check for cleanliness prior to entering the public highway. Where required a vacuum brush will be used to clean the forecourt within the site and adjacent highways.

- 2.14 No works are required to the highway and there will be no requirement for any traffic management or other restrictions. The works are to be carried out a significant distance from the public highway and therefore there will be no requirement for scaffolding or hoarding licences for these activities.

### 3. Site Construction

- 3.1 The methodology has been developed by engaging experienced designers and contractors and there has been a full consultation with English Heritage and other interested parties. Specialists have been engaged to ensure that the design can be implemented with the minimum risk to the fabric of the existing building and adjacent properties as outlined above.
- 3.2 A detailed method statement will be prepared for the Gatehouse construction works
- 3.3 The structural design team and advisers will be retained to supervise, inspect and monitor the works during the construction phase. The Gatehouse construction works are programmed to commence in October 2013 with the demolition of existing rear wings and construction of new basement. The new rear wings buildings will be constructed in June 2014 with the refurbishment and landscaping works continuing until April 2015
- 3.4 In addition to the Gatehouse works other operations will be ongoing concurrently. This includes:
- Hard landscaping works to the front forecourt and Orangery
  - Soft landscaping and planting to lower garden and forecourt
  - Internal finishes to the main house.
  - New basement construction and finishes works
  - West Hill Wall reconstruction

- Finishes works to the Orangery and colonnade

3.5 The site will be operated in accordance with the “Guide for Contractors Working in Camden”. As the site is self-contained and deliveries can be co-ordinated within the site it is not envisaged that there will be any impacts to or from other construction projects occurring in the area.

#### 4. Construction Method Statement

4.1 All works will be carried out in accordance with the Construction Management Plan with works monitored and reviewed on a regular basis to check for compliance to ensure procedures are carried out safely and to enable corrective action to be identified and implemented where necessary. Precautions will also be implemented to minimize the risk of nuisances through noise, dust and vibration to neighbouring properties.

4.2 The construction sequence will be as follows:

1. Isolate existing services and erect safety barrier fencing and TPP protective fencing
2. Carefully dismantle existing single storey buildings at rear of Gatehouse
3. Existing curved brickwork to staircases to be temporarily supported and retained
4. Clear debris from site and neatly stack materials to be retained
5. Install temporary support King post piles parallel to access driveway and around existing retained tree (number 223)
6. Carry out underpinning to existing foundations of Gatehouse
7. Reduce level dig to prepare area for piling mat
8. Install piling mat
9. Set out and install contiguous piled wall to perimeter of new basement
10. Construct capping beam to piles
11. Reduced level dig and install temporary supports for excavation
12. Excavate reduced level dig to formation level for basement base slab, including the disposal of arisings
13. Set out and cast the concrete raft foundations for the proposed new structures, including provisions for drainage and services.
14. Construct concrete substructure walls to all elevations in line with the proposal.
15. Construct basement roof slab in line with the proposal
16. Erect scaffolding to all elevations. Scaffold to be erected in accordance with TG20:10. Scaffold operatives to work in accordance with SG4.10
17. Carry out refurbishment of existing roof and external envelope of existing Gatehouse.
18. Construct the two replacement brick single storey buildings at rear of the Gatehouse and the additional storey to the central rear extension.
19. Carry out internal refurbishment of existing Gatehouse and fit out of new structures.
20. Dismantle scaffolding and install landscaping paving, bed and planting in line with proposals.

4.3 The proposed new structures are to have raft foundations. These will be constructed as 450mm thick reinforced concrete slabs. Sub grade is to be excavated to 500mm below the finished level and proof rolled, a 150mm hardcore layer is then compacted to distribute loads in the slab and a nominal 50mm blinding layer concreted. The base slab will be set out on the blinding and provisions made for drainage and services. The base to have bar reinforcement set out on wire chair spacers and the concrete can be placed using a concrete pump and finished with hand float.

4.4 The new structures will be accessed from the existing entrance driveway at the front of the Gatehouse. Concrete and road going muckaway vehicles will be cleaned suitably before exiting the site.

4.5 All materials used in the works will have a COSHH assessment: - Mortars, Oils, Greases, drainage compounds, concrete/cement, wooddusts, diesel (fuels). COSHH assessments will be in place with relevant material safety data sheets for each material or substance used on site. All operatives will be briefed and given a copy of the relevant COSHH assessment for any substance they will be using on site. Signed records of COSHH briefings will be retained in the site file.

4.6 The works are will be checked and tidied on a daily basis at the end of each shift and at regular intervals during the day. Waste is to be disposed of in the site skip which will be collected, emptied and returned on request.

4.7 Materials to be retained , such as bricks and tiles will be stacked on pallets and wrapped for protection and stored within the site compound. Loose material which can be salvaged or recycled will be separated and categorised and stock piled within the site compound.

4.8 Waste material will be disposed of away from the works area, to the main skip area at the site. The site skips are covered as much as possible in order to stop dust from being released in the air whilst being filled. Skips are exchanged as necessary by the site foreman. Delivery vehicles will be banked on and off the site by a WCML vehicle banksman, whilst other operatives will ensure that the vehicle’s wheels are free from dirt before they leave. Daily records will be kept by the site gateman and delivery tickets and skip lorry tickets will be retained in the site office.

4.9 Noise will be measured and monitored on a regular basis by a competent person. Noise levels have been monitored at the site and confirmed to be within acceptable limits. Noise levels for the Gatehouse works will be below the ambient noise level for this section of the site and in accordance with Standards. Council agreed site working hours for the site are between 8am and 6pm on weekdays and 8am and 1pm on weekends, where there shall be no loud noise generated by the works carried out outside of the allotted hours



- 4.10 No activities for the Gatehouse works are to generate unnecessary amounts of dust. As across the site, general dust suppression measures will be taken. Where works may cause dust, materials and surfaces will be sprayed with water to minimise any dust produced. During construction, works surfaces will be kept swept down and damp.
- 4.11 Daily inspections will be carried out by the site supervisor and recorded. Safety inspections will be carried out by the safety advisor on a weekly basis.
- 4.12 Protective fencing will be maintained around the RPA of the Copper Beech tree (number 223) in accordance with the Tree Protection Plan as detailed on Simon Jones Associates Ltd drawing SJA TPP 13074-01 and detailed within Simon Jones Associates Arboricultural Implications Report June 2013. Within the protective fenced area, there will be no changes in ground levels, no soil stripping and no plant, equipment or materials will be stored. Oil, bitumen, diesel and cement will not be stored or discharged within 10m of the tree. Areas for the storage or mixing of such materials will be agreed in advance and be clearly marked. No notice boards, or power or telephone cables, will be attached to any of the trees. No fires will be lit within 10m of any part of the tree.
- 4.13 The existing tarmac around the Copper Beech tree (number 223) which is to be returned to soft landscaping will be removed by manual excavation under arboricultural supervision to ensure that unacceptable damage to roots or its rooting environment as a result of unintentional over dig within its RPA does not take place.

## **5. Agreement of Construction Management Plan**

- 5.1 Consultation was undertaken previously, as part of previous Planning Applications for Witanhurst, which took into account concerns from third parties. The preferences of Camden Council and these previous concerns from third parties have therefore been taken into account and these have been adopted in the case of this Construction Management Plan for the Gatehouse works.
- 5.2 The agreed contents of the CMP must be complied with unless otherwise agreed with the Council. The person responsible for implementing the CMP shall work with the Council to review this CMP if problems arise in relation to the construction of the development. Any future revised plan must be approved by the Council and complied with thereafter.
- 5.3 For all issues relating to this Construction Management Plan contact the site office 020 7209 5175. Contacts for the works are John Bell 07786 251386 and Russell Seagroatt 07764 200271.