

Council-led Developments in Gospel Oak Integrated Construction Management Plan

Final Report



## **Council-led Developments in Gospel Oak Integrated Construction Management Plan**

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**Draft Final Report** 

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## **Contents**

| 1 | INTRODUCTION                           | 1  |
|---|----------------------------------------|----|
|   | Purpose                                | 1  |
|   | Scope                                  |    |
| 2 | PROGRAMME AND CONSTRUCTION METHODOLOGY |    |
|   | Development Sites                      |    |
|   | Construction Methodology               |    |
|   | Phasing                                |    |
| 3 | ACCESS                                 |    |
|   | Access Routes                          | 6  |
|   | Time Restrictions                      | 7  |
|   | Vehicle Movements                      | 7  |
|   | Vehicle Sizes and Tracking             | 2  |
|   | Parking and Loading Arrangements       |    |
| 4 | NUISANCE CONTROL                       |    |
|   | Good Neighbours Policy                 |    |
|   | Dust and Dirt Control                  |    |
|   | Noise Control                          | 5  |
|   | Emissions Control                      | 5  |
|   | Waste Removal                          |    |
|   | Site Security                          | 6  |
|   | Ground Water and Surface Water Run-Off | 6  |
| 5 | PEDESTRIAN AND ROAD USER SAFETY        | 7  |
|   | Pedestrian Access                      | 7  |
|   | Pedestrian and Cycle Routes            | 7  |
|   | HGV Safety Training                    | 7  |
|   | HGV Precautionary Devices              | 8  |
|   | Travel Plan                            | 9  |
| 6 | CONSULTATION AND RESPONSES             | 10 |
|   | General                                | 10 |
|   | Consultation Strategy                  | 10 |
|   | Main Contact Details                   | 11 |
| 7 | PROPOSED MITIGATION MEASURES           | 12 |
|   | General                                | 12 |
|   | Signage strategy                       | 12 |
|   | Camden Highways Agreements             | 12 |
|   | Parking Suspensions                    | 12 |
|   | Temporary Road Closures                | 12 |



|          | Highway Works                                   | 12  |
|----------|-------------------------------------------------|-----|
|          | Occupation of the public highway                | 13  |
| 8        | MONITORING AND MANAGEMENT                       | 14  |
|          | General                                         | 14  |
|          |                                                 |     |
|          |                                                 |     |
|          |                                                 |     |
| Tak      | oles and Figures                                |     |
| <b>-</b> |                                                 |     |
| rabi     | e 2.1 Development Sites                         | . 4 |
| Figu     | re 1.1 Site Location Plan                       | . 2 |
| Figu     | re 3.1 Local Constraints and Sensitivities Plan | . 6 |
| Figu     | re 3.2 Weekly Vehicle Numbers                   | . 1 |
| Figu     | re 3.3 Average Daily Vehicle Movements          | . 3 |
| Figu     | re 3.4 Controlled Parking Zone                  | . 3 |
| Figu     | re 5.1 Pedestrian and Cycle Routes              | . 7 |

## **Appendices**

APPENDIX A Site-specific CMPs

APPENDIX B Phasing Plan

APPENDIX C Proposed Construction Traffic Routes

APPENDIX DSwept Path Drawings

APPENDIX E Total Vehicle Flows

APPENDIX F Guide for Contractors Working in Camden

## 1 Introduction

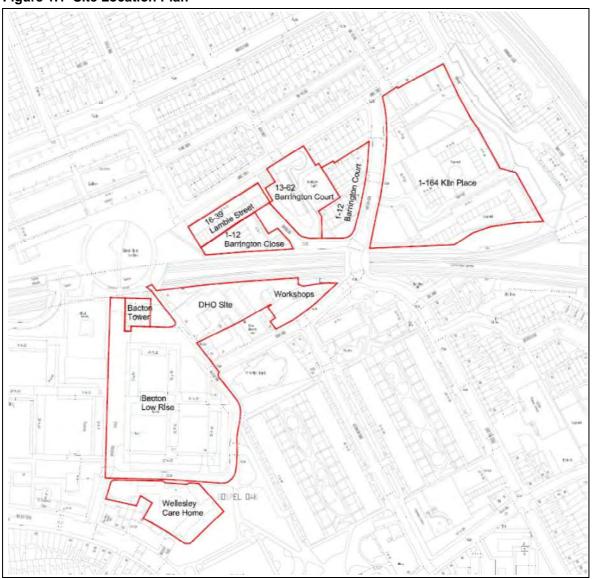
### **Purpose**

- 1.1 This Integrated Construction Management Plan (ICMP) provides a strategy for managing all construction-related activity for Council-led residential developments in the Gospel Oak area, London Borough of Camden.
- 1.2 It outlines how construction work will be carried out at each site and how this work will be serviced (e.g. delivery of materials, set down and collection of skips), with the objective of minimising traffic disruption, avoiding dangerous situations and minimising the impact on local amenity.
- 1.3 This ICMP covers both the demolition and construction phases of development and provides a strategic assessment of the cumulative effects of all sites and provides a strategy for mitigation and monitoring.

## Scope

- 1.4 The Council-led residential developments that are included in this ICMP are listed below and located on **Figure 1.1**.
  - 1. Bacton Low Rise Estate Regeneration (including District Housing Office and Workshops)
  - 2. Wellesey Road Care Home Redevelopment
  - 3. 1-164 Kiln Place Better Homes
  - 4. 1-12 and 13-62 Barrington Court Better Homes
  - 1-12 Barrington Close Better Homes
  - 6. 16-39 Lamble Street Better Homes
  - 7. 1-120 Bacton Tower Better Homes

Figure 1.1 Site Location Plan



- 1.5 The first two schemes listed (Bacton Low Rise and Wellesley Road Care Homes) are new build developments and have therefore been subject to the planning process. Both sites have been granted consent (planning application references 2012/633/8/P and 2013/373/8/P respectively) and have an obligation to submit a CMP and have it approved by the Council prior to any works starting on site.
- 1.6 The scope of works at the remaining sites comprise internal and external works to existing buildings and therefore do not require planning permission and have no statutory obligation to prepare a CMP. However, given the concentration of development sites within the Gospel Oak area, it considered essential to ensure the construction activity at all sites is well coordinated and mitigated, as set out in this ICMP.
- 1.7 Various consultation events have already been undertaken with local stakeholders, to understand their views and to inform the CMPs for each site, including the proposed traffic routes and timings, nuisance control and pedestrian and road user safety, as referred to later in this report.

| 1.8 | More detaile completion d |  |  |  | anticipated | start | and |
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### **Programme and Construction Methodology** 2

## **Development Sites**

2.1 The Council-led residential development sites in Gospel Oak in are detailed in Table 2.1, including the scheme name and reference number, contractor, scope of works and anticipated start and completion dates.

**Table 2.1 Development Sites** 

| Ref | Site Name                                            | Contractor                                                 | Scope of Works                                                                                                                                                 | Anticipated<br>Start Date                                                                         | Anticipated<br>Completion<br>Date |
|-----|------------------------------------------------------|------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------|-----------------------------------|
| 1a  | Bacton Low Rise<br>Estate<br>Regeneration<br>Phase 1 | Demolition –<br>Clifford Devlin<br>Construction -<br>Rydon | Demolition of District Housing<br>Office (DHO) and build 63 new<br>homes                                                                                       | Soft Strip out<br>01/08/2013<br>followed by<br>demolition of<br>structures and<br>new build start | Sept-15                           |
| 1b  | Bacton Low Rise<br>Estate<br>Regeneration<br>Phase 2 | Demolition –<br>Clifford Devlin<br>Construction -<br>Rydon | Demolish south part of Bacton<br>Low Rise and build 140 new<br>homes                                                                                           | Sept-15                                                                                           | Mar-18                            |
| 1c  | Bacton Low Rise<br>Estate<br>Regeneration<br>Phase 3 | Demolition –<br>Clifford Devlin<br>Construction -<br>Rydon | Demolish north part of Bacton<br>Low Rise and build 87 new<br>homes                                                                                            | Mar-18                                                                                            | Nov-19                            |
| 2   | Wellesley Care<br>Home<br>Redevelopment              | Kier                                                       | Demolition of existing 60 bed<br>Care home New build of 60 bed<br>Care home on same site                                                                       | Aug-13                                                                                            | May-15                            |
| 3   | 1-164 Kiln Place<br>Better Homes                     | Apollo                                                     | External works including concrete repairs, decorations and waterproof covering to walkways. Internal works: new kitchen and bathrooms (K & Bs)                 | May-13                                                                                            | Nov-13                            |
| 4   | 1-12 Barrington<br>Court Better<br>Homes             | Apollo                                                     | External works including new windows, doors and roof. Internal works: new K & Bs                                                                               | Oct-13                                                                                            | Jan-14                            |
| 5   | 13-62 Barrington<br>Court Better<br>Homes            | Apollo                                                     | External works including concrete repairs, windows, doors, decorations and waterproof covering to walkways. Internal works: new K & Bs                         | Aug-13                                                                                            | Jan-14                            |
| 6   | 1-12 Barrington<br>Close Better<br>Homes             | Apollo                                                     | External works including concrete repairs, new roof coverings, decorations and waterproof covering to walkways. Internal works: new K & Bs and heating systems | Sep-13                                                                                            | Dec-13                            |
| 7   | 16-39 Lamble<br>Street Better<br>Homes               | Apollo                                                     | External works including concrete repairs, new roof coverings, decorations and waterproof covering to walkways. Internal works: new K & Bs and heating systems | Oct-13                                                                                            | Jan-14                            |

| 8 | 3 | 1-120 Bacton | Apollo | External works including new     | Aug-13 | May-14 |
|---|---|--------------|--------|----------------------------------|--------|--------|
|   |   | Tower Better |        | roof, windows, concrete repairs  |        | -      |
|   |   | Homes        |        | and E.W.I. Internal works: new K |        |        |
|   |   |              |        | & B's and Heating system.        |        |        |

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## **Construction Methodology**

- 2.2 Further details on the demolition and construction methodologies are provided in the CMPs for each site, included as Appendix A for reference. This includes the following documents:
  - Bacton Low Rise Demolition Plan for the Soft Strip and Demolition Works at 115 Wellesley Road, Gospel Oak, London, NW5 4PA. Prepared by Clifford Devlin, dated 17 September 2013.
  - Bacton Low Rise Construction Management Plan, April 2014
  - Wellesley Care Home CMP Rev B, dated 1 October 2013
  - Bacton Tower Traffic Management Plan
  - Kiln Place Traffic Management Plan, including Kiln Place, Barrington Court, Lamble Street and Barrington Court.

## **Phasing**

- 2.3 A phasing plan for all schemes is included as Appendix B, split between demolition and construction.
- 2.4 This shows that all sites will be commencing in either September or October this year (Phase 1 of Bacton Low Rise only), with all Better Homes sites completing by May next year and Wellesley Care Home completing in May 2015. The later phases of Bacton Low Rise continue for longer, completing in November 2019.
- 2.5 This phasing plan will be considered in conjunction with the estimated traffic movements for each scheme, to identify the peaks in construction activity, as detailed in the next section.

Council-led Developments in Gospel Oak

Integrated Construction Management Plan

#### 3 Access

### **Access Routes**

#### **Constraints and Sensitivities**

A Local Constraints and Sensitivities Plan is provided as Figure 3.1, which highlights key 3.1 constraints and sensitivities such as weight, width and height restrictions, Queens Crescent market (every Thursday and Saturday), St. Martin's Grade 1 Listed Church (which has structural deficiencies), Carlton Primary School and Queens Crescent Community Centre Hall.

Athletics Track-Gospel INGTON RD GOS RESTRICTION Depot QUEENS CRESCENT MARKET, THURS & ST MARTINS - GOSPEL OAK CHURCH RAILWAY BRIDGE QUEENS CRESCENT MARKET SIGN PATSHULL LAWFORDE Kentich Town

Figure 3.1 Local Constraints and Sensitivities Plan

- 3.2 The proposed routes for construction traffic are shown in Appendix C, including a strategic and local route plan, with reference to swept path analysis drawings included in Appendix D.
- 3.3 Only heavy vehicle types (50 tonne vehicles, i.e. mobile cranes and low loaders) will route via Queens Crescent, due to the restrictions imposed by low railway bridges on Grafton Road (12 foot, 6 inches in height) and Princes of Wales Road (16 foot, 6 inches in height) and to avoid the Grade 1 Listed Church.

- There is an approximate 12 foot high sign above the market entrance (at the junction of Queen's Crescent / Malden Road). It is not considered that the market sign would need to be removed, as the vehicle load heights using this route are likely to be lower than 3.6m (12ft).
- 3.4 No access to Queen's Crescent market is permitted during the street market, Thursday and Saturday, 07:00 to 17:00 hours. The market itself is open from 08:00 to 16:00 hours. The use of the Queen's Crescent route will also be avoided during Friday prayer time at the mosque.
- 3.5 There is a 7'0" width restriction on Grafton Road to the north of the railway line, which restricts heavy traffic using this route.

### **Time Restrictions**

- Working hours for all sites will be not more than 08:00 to 18:00 hours, Monday to Friday and 08:00 to 13:00 on Saturday.
- 3.7 Deliveries into the sites will be permitted up to one hour before closing i.e. 17:00 hours Monday to Friday and 12:00 hours on Saturday.
- 3.8 No work is permitted on Sundays or bank holidays. Working outside these hours will not be permitted without prior agreement with the Council.
- 3.9 In addition, vehicle movements will avoid the morning and afternoon 'school run' between 08:30 to 09:00 hours and 15:00 to 16:00 hours on Grafton Road, due to the presence of Cartlon Primary School, save for ready mix concrete deliveries at the Bacton Low Rise site.
- 3.10 At the Wellesley Road secondary access to the Care Home, due to the limited number of vehicle movements throughout the day this access will be restricted to a slightly longer duration in the morning, from 08:15 09:15 and also from 15:00-16:00.

### **Vehicle Movements**

- 3.11 Estimated vehicular movements have been obtained from each of the CMPs, to identify the likely number of vehicles week-by-week over the demolition and construction period.
- 3.12 Vehicles have been summarised as 3.5T to 7.5 T lorries (Medium Goods Vehicle, MGV), 7.5T to 40T lorries (Heavy Goods Vehicle, HGV), cranes and 50T low loaders. Where the vehicle category as set out in the site-specific CMPs is not clear, it has been assumed they are HGVs rather than MGVs, as a worst case.

### **Weekly Vehicle Numbers**

- 3.13 The average weekly vehicle numbers, on a week-by-week basis, is shown on **Figure 3.2**. The full data is also provided as **Appendix E.**
- 3.14 Once the Better Homes sites complete at the end of May 2014, the total average weekly vehicles reduce to approximately 80-90 per week, and steadily decline through the latter half of 2014 and first half of 2015 to 10-20 vehicles per week. By August 2015, vehicle numbers begin to rise again, with a peak of 224 vehicles in one week (week commencing 17 August 2015), which comprises cement lorries delivering to Bacton Low Rise Phase 2. This peak occurs for one week only and will need to be carefully managed and local stakeholders informed about in advance.

3.15 After this peak, vehicle numbers equate to approximately 55 to 120 per week until December 2016, at which point there is a significant drop to around 20-35 per week until August 2017, which then rises again to up to 135 vehicles on week commencing 23 October 2017, which accounts for the construction of Bacton Low Rise Phase 3. Vehicles numbers reduce again from April 2018 onwards to 20-40 vehicles per week until completion of all projects during November 2019.

### **Daily Vehicle Movements**

- 3.16 An estimate of average daily movements has been calculated by dividing the weekly forecast by 5.5 (i.e. Monday to Friday plus half a day on Saturday) and multiplying the vehicle numbers by two, on the worst-case assumption that each vehicle creates a return journey movement on the same day. The resultant average two-way daily movements are presented in Figure 3.3.
- 3.17 This shows the same trend though time as the weekly vehicle numbers. Typically, two-way vehicle movements do not reach higher than 40 per day, apart from during the early phases of the programme for the Better Home sites (where there are a large proportion of smaller sized vehicles) and a limited number of peaks at latter stages. The most significant is created by cement lorries delivering to Bacton Low Rise Phase 2 during August 2015, resulting in 82 movements per day over one week period. This peak occurs for one week only and will need to be carefully managed and local stakeholders informed about in advance.

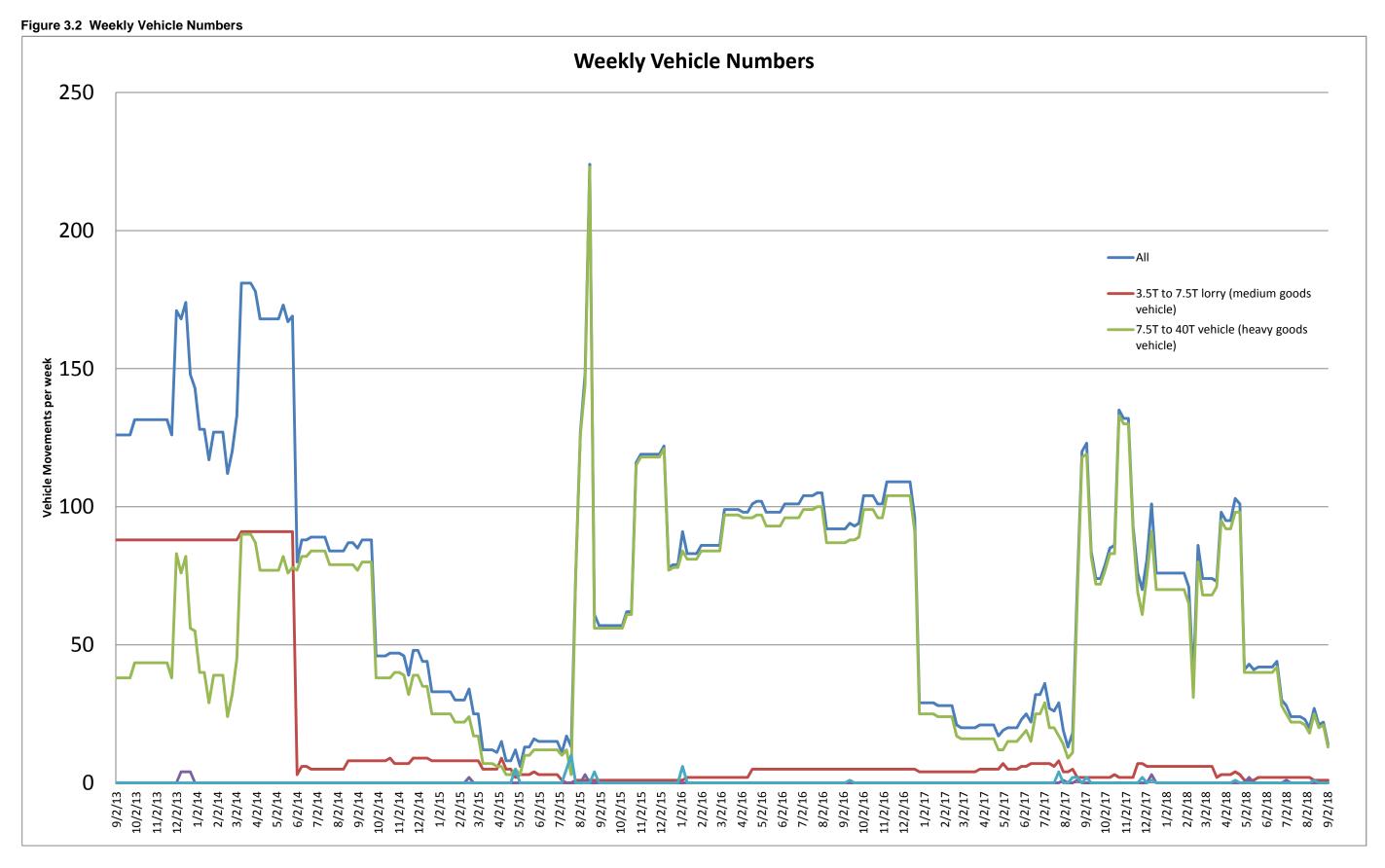
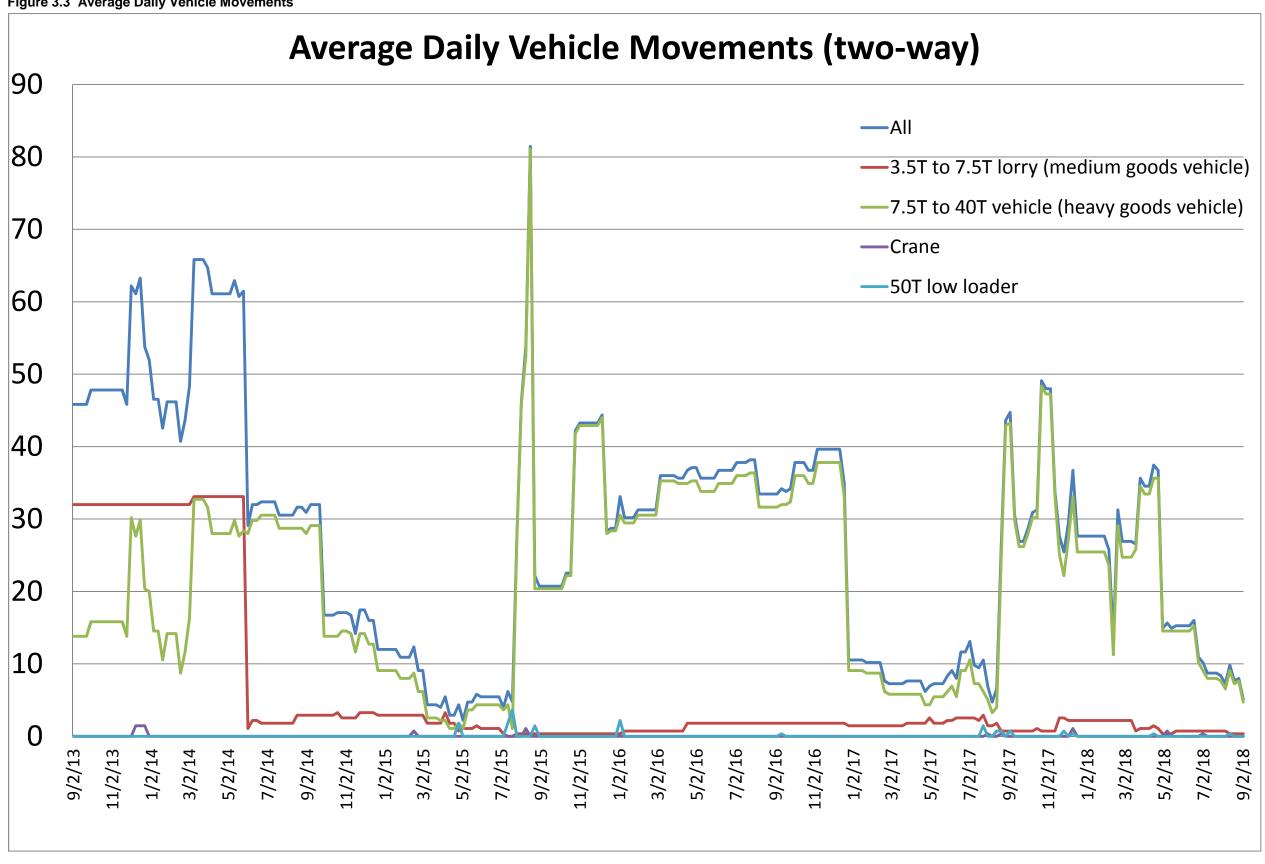




Figure 3.3 Average Daily Vehicle Movements



### **Vehicle Sizes and Tracking**

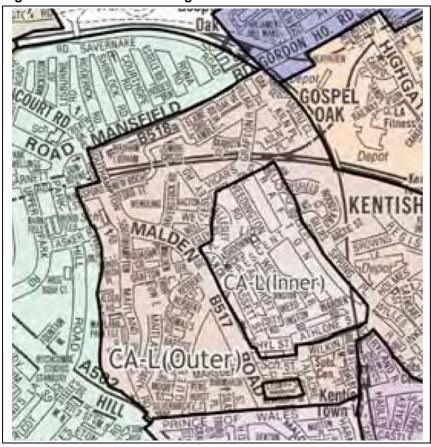
- 3.18 Swept path drawings are provided in Appendix D. All plans have been produced using AutoTrack software overlaid on OS mapping in AutoCAD.
- Plans ST14260-03-01 04 and ST14260-03-09 10 show the swept path analysis for a maximum 3.19 legal HGV, negotiating junctions along the proposed vehicular traffic routes. The swept paths show that a maximum legal HGV can negotiate the majority of junctions proposed, with one exception.
- 3.20 It is not possible for a maximum legal HGV to negotiate the left turn out of Haverstock Road into Malden Road, due to a traffic island situated within a zebra crossing. An alternative route for large HGVs is therefore proposed on the Vehicle Route Plan in **Appendix C.**
- 3.21 The majority of all construction vehicles, other than those carrying large machinery such as the tower crane, would be smaller than a maximum legal HGV.
- 3.22 Plans ST14260-03-05 - 08 & ST14260-03-11 - 12 show the swept path analysis for a 12.0m Rigid truck (4 axle), travelling through the same junctions as the maximum legal HGV. The swept path analysis shows that a 12.0m rigid truck would be able to negotiate all junctions along the proposed routes.
- 3.23 Vehicular tracking for negotiating a maximum legal HGV through Queen's Crescent has been undertaken using AutoCAD. The swept path analysis shows that vehicles would be able to manoeuvre this route unhindered (subject to the height restriction).
- 3.24 It is recommended this is followed up by a 'walk through' with the Queen's Crescent market manager or management committee, to identify any street furniture connected to the market that may need to be temporarily removed or relocated during the construction period.
- 3.25 In some cases large vehicles, such as a tower crane, will be required to access the development sites. For example, a tower crane will be deployed at the early stages of the Wellesley Road care home construction period, to be located on a hard-standing area to the south of the site off Malden Road within the site hoarding. Tower cranes will be controlled by the operator and banksman at all times.

## Parking and Loading Arrangements

- 3.26 All construction vehicles are permitted to park within the site only and not on surrounding roads.
- 3.27 The roads surrounding the sites are subject to a Controlled Parking Zone (CPZ), referred to as CA-L Inner and CA-L Outer, as shown on Figure 3.4.
- 3.28 Parking is restricted during the following times:
  - CA-L Inner Monday to Friday, 09:00-11:00 hours
  - CA-L Outer Monday to Friday, 08:30-18:30 hours St Leonards Square, Monday to Friday 08:30-18:30 hours and Saturday and Sunday 09:30-17:30 hours.
- 3.29 This will act as a deterrent to any construction vehicles parking on surrounding roads and should be regularly enforced by the Council.
- 3.30 A number of parking bays will be suspended to facilitate construction vehicle movement and unloading at the Bacton Low Rise site. These include the following:

- Suspension of 40m of parking bays on Prince of Wales Road to allow for a holding area for delivery vehicles during Phase 1;
- Suspension of 40m of car parking spaces in Vicar's Road, either side and opposite Grafton Road, to allow turning areas for construction vehicles during Phase 1;
- Suspension of six parking spaces in Haverstock Road during Phases 2 and 3; and
- Suspension of parking in an allocated area on a private road opposite Bacton High Rise Block for the unloading of vehicles during Phase 3.
- 3.31 A total of 3 parking bays will be suspended on Wellesley Road as part of the Wellesley Road care home redevelopment.

Figure 3.4 Controlled Parking Zone



- 3.32 Unloading will take place in designated areas within each site, wherever possible. It is noted that the Bacton Low Rose site has limited spaces and therefore some loading will also need to take place on-street, at an allocated area on the private road opposite the Bacton High Rise Block during phase three of development. A holding area for delivery vehicles will also be located on Prince of Wales Road during phase 1. An on-street loading bay on Wellesley Road is required for the Wellesley Road care home redevelopment.
- 3.33 These on-street loading facilities will be carefully managed to minimise disruption to other road users.

- 3.34 Deliveries should be subject to a delivery booking system to enable vehicle traffic to be well planned and staggered through the day / week, in order to minimise queuing and avoid the need for vehicles to wait outside the site.
- 3.35 Storage areas will be designed to allow for a 'just-in-time' delivery system, to provide greater control of vehicular deliveries and scheduling.
- 3.36 Unplanned deliveries will not be permitted access into the site, unless there is a clear space available for the vehicle to unload and no other vehicles are booked during that time period. If no room is available, the vehicle will be asked to return at the pre-arranged delivery time. If no prearranged delivery time has been made the driver will be told to arrange a delivery time through their company. Unplanned deliveries will not be allowed to wait outside the site boundary or impede any of the surrounding roads.
- 3.37 During Phase 1 of the Bacton Low Rise development, two luffer jib tower cranes will be required on site to aid construction. These will be removed once their use is finished with. Mobile cranes will be used to remove the tower cranes and will be positioned on the carriageway.
- 3.38 For the removal of the first tower crane, a mobile crane will need to be positioned on the road south of the Bacton High Rise building, resulting in a section of Wellesley Road and the road south of the building to be closed for one day. To remove the second tower crane, a mobile crane will be located opposite 20 Vicar's Road, resulting in a section of Vicar's Road to be closed for one day.
- 3.39 These road closures will last for one day and will occur on a Saturday or Sunday to cause minimum disruption. The date for road closures will be agreed with LBC and local residents informed though consultation.

#### **Nuisance Control** 4

### **Good Neighbours Policy**

- 4.1 All sites will be registered with the Considerate Constructor Scheme (www.ccscheme.org.uk) and will seek to understand local issues, mitigate impacts wherever possible and effectively communicate with local residents.
- 4.2 Contractors should also follow Camden's "Guide for Contractors Working in Camden", also referred to as "Camden's Considerate Contractor's Manual", included as Appendix F for information.

### **Dust and Dirt Control**

- 4.3 Operations likely to produce nuisance dust will use water spray solutions to create a fine mist to suppress dust levels. This applies, for example, to buildings being soft stripped (e.g. within Bacton Low Rise), an operative drilling a hole in the ground or simply dust being blown around the site in dry weather.
- 4.4 Operatives at each site will be responsible for ensuring the wheels of any vehicles leaving the site are clean and the site entrance and surrounding roads are kept clean at all times. Each site will have designated loading and offloading areas which will also be used as a wash down area for vehicles leaving the confines of the site.

### **Noise Control**

- 4.5 Noise will be kept to a minimum at all times, by implementing the following measures:
  - Restricting working hours to 08:00 to 18:00, Monday to Friday and 08:00 to 13:00 on Saturday.
  - Keep voices and conversation outside the site perimeter to a minimum and low in volume
  - No banging of doors, gates, scaffolding, or other objects.
  - No machinery starting up on site before the designated start times
  - Include within material and subcontractor requisitions details of permitted vehicle arrivals (i.e. not before 08:00 hours or after 17:00 hours)
  - No engines left running on vehicles waiting to enter the site
  - Using low impact and low volume machinery and tools where possible
  - Local residents will be advised of the start and finishing dates/times of particularly noisy works (e.g. demolition and piling) and these will be timed to minimise the disruption to local residents.

### **Emissions Control**

4.6 All construction deliveries should meet the London Low Emission Zone requirements, which require vehicles to meet the Euro IV standard for particulate matter (PM). PM is very fine particulates of soot emitted by vehicles, which have an effect on health. This type of pollution can contribute to asthma, heart and lung disease, and other respiratory illnesses, and therefore it is important for it to be minimised.

- 4.7 All vehicle and machinery engines must be turned off when not in use, to reduce emissions as well as minimise noise levels.
- 4.8 Deliveries and removal of material from site should be consolidated wherever possible in order to minimise the number of vehicle trips.

### **Waste Removal**

- 4.9 The level of waste removal anticipated for each development site should be included within the predicted vehicle movements set out in each CMP.
- 4.10 Waste compactors and recycling should be undertaken wherever possible to minimise vehicle movements wherever possible. A Site Waste Management Plan (SWMP) should be prepared and waste generation measured using a web-based tool (Smart Waste) which enables measurement against targets.

## **Site Security**

4.11 All workers and visitors will sign in at the site-specific security office and visitors escorted around the sites at all times.

### **Ground Water and Surface Water Run-Off**

- 4.12 All ground or surface water run-off will be strictly controlled to prevent pollution of drains and watercourses.
- 4.13 Surface water from potential sources of contamination such as concrete delivery washout points, mortar silos and plaster mixing baths will be separately contained and will not be discharged into the land drainage system.
- 4.14 Emergency spill kits will also be available on each site.

#### 5 **Pedestrian and Road User Safety**

### **Pedestrian Access**

5.1 Each site will have a designated pedestrian access point, separated from vehicular traffic. This will be controlled via a banksman at all times that the site is operational.

## **Pedestrian and Cycle Routes**

5.2 The key pedestrian and London Cycle Network (LCN) cycle routes throughout the local area will remain open throughout the construction period, as shown on Figure 5.1.

Maintained Pedestrian Routes LCN Cycle Route Maintained

Figure 5.1 Pedestrian and Cycle Routes

## **HGV Safety Training**

- 3.1 Road safety risks can be minimised if lorry drivers and cyclists alike are aware of each other and behave responsibly.
- 3.2 All HGV drivers should get the best driver training, which incorporate the behaviours and correct use of the precautions detailed below. Reference should be made to the Fleet Operator Recognition Scheme (FORS) for accredited training courses.

Council-led Developments in Gospel Oak Integrated Construction Management Plan

- 3.3 The training should look to support HGV drivers in applying the following key behaviours:
  - Leave space at junctions for cyclists and not cross stop lines or infringe on Cycle Advanced
     Stop Lines
  - Stay alert and look out for cyclists, particularly on the left side
  - Wait for the right moment to pass cyclists and give them plenty of space when overtaking
  - Remember their vehicle is very large compared to the vulnerable cyclist an adult cyclist may only be the height of the HGV wheels
  - Look out for cyclists when opening doors
  - Remain alert even in stationary traffic pedestrians and cyclists may weave through queues of traffic
  - Reversing manoeuvres should be avoided wherever possible. If vehicles need to reverse
    for any reason, a banks man/traffic marshal must assist.
  - When turning left:
    - Always indicate well before the junction and make sure the indicator stays on, even when waiting to turn
    - Remember though that a cyclist already on the HGV's left hand side or in front cannot see the indicators
    - Actively look for cyclists on the left hand side. If the HGV driver even suspect they are there, they should pause briefly to let them get out of the way especially when pulling away
    - Remember that if the HGV has passed a cyclist just before approaching a traffic light or a junction, it is very likely they will end up on the left hand side or just in front. Assume the cyclist is in one of the blind spots
    - Leave room in front of the HGV when stopped at traffic lights to allow cyclists and motor cyclists a margin of safety
    - Ensure vehicles do not mount footways or damage kerbs.

## **HGV Precautionary Devices**

- 3.4 All contractors should be advised to fit their vehicles with the following precautionary devices:
  - A good mirror system on the vehicle, which includes a FRESNEL lens. Fitting the lens to the passenger side window of the vehicle will improve vision of cyclists on the left hand side of the vehicle
  - Incorporate a side guard or a side sensor to the vehicle to help identify when a cyclist may be on the near-side. Vehicles without sideguards are involved in a disproportionate number of fatal collisions with cyclists. These events tend to occur when vehicles are turning left and mostly from a standing start at traffic lights. If fitting a sideguard is not feasible, consideration should be given to fitting an audible warning device.
  - Stickers can also be included on the rear of a HGV which warn cyclists of the dangers of undertaking on the left hand side.

### **Travel Plan**

5.3 Average staff numbers for each site per day are estimated to comprise:

### **Wellesley Road Care Home**

100 staff

#### **Bacton Low Rise**

#### Phase 1

Demolition: To be confirmed

Construction: 16-18 Rydon staff, 30-150 operatives

#### Phase 2

Asbestos removal: 6 staff

Demolition: 15 staff

Construction: 16-18 Rydon staff, 30-250 operatives

### Phase 3

Asbestos removal: 6 staff

Demolition: 15 staff

Construction: 16-18 Rydon staff, 30-200 operatives

#### **Better Home sites**

- 1-164 Kiln Place 25 staff
- 1-12 and 13-62 Barrington Court 10 staff
- 1-12 Barrington Close 3 staff
- 16-39 Lamble Street 8 staff
- 1-120 Bacton Tower 33 staff
- 5.4 All workers will be expected to travel to and from the site by non-car modes (public transport, walking or cycling). No car parking facilities will be provided for workers, either on- or off-site.
- 5.5 Cycle parking will be provided to encourage workers to cycle to work, as well and showers and changing facilities where possible.

#### **Consultation and Responses** 6

### General

6.1 Various consultation meetings have taken place to discuss construction-related issues, attended by Camden Council, representatives from the local residential and business community, Councillors, local schools in addition to the site contractors.

#### Gospel Oak Business Forum

- 6.2 A list of business owners in the Gospel Oak area have been identified as a group to consult with on construction activity in the Gospel oak area. This includes some 20 individuals include cafes, small offices, service providers, retailers and the Queen Crescent Market Manager.
- 6.3 The consultation events that have taken place to date include, but are not limited to:

#### **Bacton Low Rise**

- June 2013 Demolition Update Leaflet
- 25 June 2013 Phase 1 Demolition Construction Group Meeting
- 30 July 2013 Phase 1 Demolition Construction Group Meeting
- 3 September 2013 Demolition and Construction Management Monitoring Group

### **Wellesley Care Home**

- 12 February 2007 Camden's launch of comprehensive consultation on the future of care homes in the Borough (three month consultation including 6,000 booklets and questionnaires, made up of 2,000 residents and 25 meetings)
- 6 May to 17 June 2008 Further consultation on new care homes, including 439 individuals and 15 meetings, followed by three work groups
- 13 July 2011 Exhibition held showing designs of new care home proposals and opportunity for local people to ask questions
- 4 September 2013 Residents Liaison Meeting
- January March 2014 Further local residents meetings

### **Gospel Oak Business Forum**

- 18 April 2013 Business Forum meeting
- 18 June 2013 Business Forum meeting

### Integrated CMP Meeting

6.4 A meeting took place on Tuesday 8 October 2013 with local residents to discuss the Draft Integrated Construction Management Plan.

## **Consultation Strategy**

6.5 All contractors will provide monthly newsletters to advise residents on progress, planning activities and communicate events such as Construction Group Meetings. Newsletters should comprise 1-2 pages of A4 and contain names and contact details for site managers.

- 6.6 A large contact board should also be placed outside the hoarding of each development site providing key information from the site- specific CMP, including a phasing plan, vehicle routings and key contacts.
- 6.7 Construction Group Meetings should take place on a monthly basis to provide residents with an opportunity to raise any concerns and speak directly with the contractors of each site.
- All contractors should take the time to understand and respond to comments received from members of the local community. A complaints register should be maintained throughout the life of the project and reported and discussed at Construction Group Meetings with the aim of resolving each specific complaint.
- 6.9 Each contractor will contact the emergency services before any works commence, including the local fire station, police station and hospital A&E, with full details on the Construction Management Plan.
- 6.10 Presentations to students and staff at local schools will be undertaken to provide an overview of the planned construction activities and highlight the dangers on entering construction sites unsupervised.
- 6.11 Leaflet drops will be undertaken along Queen's Crescent to warn local people when movements by large vehicles will take place and traffic Marshalls will be used to marshall heavy loads through Queen's Crescent.

### **Main Contact Details**

6.12 The main contractor and Camden Council contact details for each site are provided in the site-specific CMPs.

Report No

#### 7 **Proposed Mitigation Measures**

### General

7.1 Proposed highway mitigation measures are detailed in this section.

### Signage strategy

7.2 A clear signage strategy should be developed and implemented to direct all construction vehicles along the correct routes and avoid any confusion as to which route they should be taking.

## **Camden Highways Agreements**

- 7.3 Any proposed parking suspensions, temporary road closures and highway works require discussion and agreement with Camden Council, in consultation with local stakeholders.
- 7.4 Proposals for each of these include, but are not limited to, those listed below.

## **Parking Suspensions**

- 7.5 Proposed parking suspensions include:
  - Car parking bays adjacent to Bacton Tower to be relocated or suspended (Apollo)
  - Suspension of six parking bays in Haverstock Road for vehicle loading area (Rydon BLR Phases 2 and 3)
  - Suspension of 3 parking bays in Wellesley Road (Kier)
  - Suspension of 40m of parking bays on Prince of Wales Road (Rydon BLR Phase 1);
  - Suspension of 40m of car parking spaces in Vicar's Road either side and opposite Grafton Road to allow turning areas for construction vehicles during Phase 1;
  - Suspension of parking in an allocated area on a private road opposite Bacton High Rise Block for the unloading of vehicles during Phase 3.

## **Temporary Road Closures**

- 7.6 Proposed temporary road closures include:
  - Possible temporary closure of Wellesley Road for half a day to install the site cabins in the
  - Wellesley Road / Vicar's Road temporary road closure, to allow access for crane (Rydon BLR Phase 2)
  - One day closure of Wellesley Road for dismantling of tower crane (Rydon BLR Phase 1)
  - One day closure of Vicar's Road for dismantling of tower crane (Rydon Phase 1)

## **Highway Works**

7.7 Proposed highway works include:

- Temporarily infill dropped kerb at corner of Wellesley Road / Haverstock Road to ensure footway width of at least 1.2 metres, to allow access for people with pushchairs around the corner (Kier)
- 7.8 Each contractor will be responsible for erecting signage to clearly show the extent of any parking suspensions, road closures or any other highway works / temporary traffic management orders agreed with Camden Council's Highways Department.
- 7.9 Any works to the highway will ensure that access for refuse collection vehicles and emergency service vehicles are not hindered.

## Occupation of the public highway

- 7.10 The location for hoardings will be subject to a hoarding licence application to be submitted and approved by Camden Council. Vision panels within the hoarding should be considered where appropriate to enable local people to have sight of the work being undertaken.
- 7.11 Any proposed overhang of the public highway (e.g. scaffolding, cranes etc) necessary to enable construction to take place should also be discussed and agreed with Camden Council in advance.

# **8** Monitoring and Management

## General

8.1 Once the engineering report assessing the quality of St. Martin's Church has been issued, the need for monitoring the noise and vibration surrounding the building should be considered and included in the ICMP where required.

# Appendix A

Site-specific CMPs



| REF          | D973-DP-01-D              |
|--------------|---------------------------|
| DATE         | 17th<br>September<br>2013 |
| Page 1 of 49 |                           |

# Demolition Plan For the Soft strip and demolition works At 115 Wellesley Road, Gospel Oak, London, NW5 4PA



#### **AMENDMENT RECORD**

Any amendments or additional parts of revised pages will be marked with highlighted italics

| Issue | Rev | Date       | Description of Amendments                          |
|-------|-----|------------|----------------------------------------------------|
| ED    | А   | 21/04/2013 | Tender issue                                       |
| 1     | А   | 28/05/2013 | For approval of CDM-C                              |
| 1     | В   | 20/06/13   | Following Client Comments                          |
| 1     | С   | 21/06/2013 | Amendments following Consultation                  |
| 1     | D   | 11/07/2013 | Final amendment for issue                          |
| 1     | E   | 5/09/13    | Amended following comments from Transport Planning |
| 1     | F   | 17/09/13   | Amended following comments from Transport Planning |



| REF          | D973-DP-01-D              |
|--------------|---------------------------|
| DATE         | 17th<br>September<br>2013 |
| Page 2 of 49 |                           |

#### Signature of Employees having read the Demolition Plan

Supervisors shall be issued a copy of this Method Statement and shall sign the Office copy to confirm having received and read it. Operatives shall either read the copy or be briefed on its contents by the foreman or more senior Manager and shall also sign the office copy to confirm that this has taken place.

| Date | Name | Position | Signature |
|------|------|----------|-----------|
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| REF          | D973-DP-01-D              |
|--------------|---------------------------|
| DATE         | 17th<br>September<br>2013 |
| Page 3 of 49 |                           |

#### **CONTENTS**

| SECTION NO. | DESCRIPTION                                                       | Page No |
|-------------|-------------------------------------------------------------------|---------|
| Cover       | Amendment Record                                                  | 1       |
|             | Operatives Signature Page                                         | 2       |
|             | Contents                                                          | 3       |
| 1           | Introduction & Scope of Work                                      | 4 - 7   |
| 2           | Location Plan                                                     | 8       |
| 3           | Proposed Site Organisation Chart                                  | 9       |
| 4           | Job Details/Project Directory                                     | 10      |
| 5           | Contract Specific Risk Assessments                                | 11 - 14 |
| 6           | Site Establishment                                                | 15 – 19 |
| 7           | Toxic Materials / Hazardous Substances                            | 23      |
| 8           | Scaffolding                                                       | 24 – 26 |
| 9           | Methods of Work                                                   | 27 – 39 |
| 10          | Approach to Sustainability, BREEAM and local Environmental Issues | 40 - 43 |
| 11          | Consultation and Engagement                                       | 43 - 44 |

Appendix 1 – Vehicle tracking plans

Appendix 2 – Plans showing route to Transport for London Road Network



| REF          | D973-DP-01-D              |
|--------------|---------------------------|
| DATE         | 17th<br>September<br>2013 |
| Page 4 of 49 |                           |

#### 1. <u>INTRODUCTION & SCOPE OF WORKS</u>

The site is located at 115 Wellesley Road, Gospel Oak, London, NW5 4PA and comprises of the existing District Housing Office and 16 employment units which front Vicars Road and back on to the rear of the DHO site.

The agreed contents of the Construction Management Plan (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.

The site comprises three individual buildings which were constructed at different times. There is a front, middle and rear section and all differ in building construction.

#### **Front section**

The front section has three floors ranging from ground to second with an accessible roof and tank room. General construction of this section is solid brick structure and a flat bitumen roof. Internal construction is concrete and plastered walls. The floors are generally solid concrete whilst the suspended ceiling has aluminium frames and man made mineral fibre (MMMF) ceiling tiles. The framework in this section has asbestos insulating board on the majority of the steelwork above the suspended ceilings. This section is believed to have been built around 1960.

#### Centre section

The middle section has a ground and first floor with an accessible roof. General construction is timber and metal walls with a flat bitumen roof. Internal construction is generally plaster and solid walls, MMMF ceiling tiles with aluminium framework, whilst the floors are generally solid and timber. This building is believed to have been built around 1980.

#### Rear section

The rear section has three floors ranging from ground to second and a flat accessible roof with tank room. General construction is timber and metal walls with a flat bitumen roof. Internal construction is generally plaster and solid walls, MMMF ceiling tiles with aluminium framework,



| REF          | D973-DP-01-D              |
|--------------|---------------------------|
| DATE         | 17th<br>September<br>2013 |
| Page 5 of 49 |                           |

whilst the floors are generally solid and timber. This building is believed to have been built around 1970.

There is a rear portacabin extension which has a solid concrete framework, timber floors and plasterboard demountable partitions.

The demolition of the buildings is to be completed in 3 phases, to carry out the soft strip and the demolition works on the site known as the DHO (District Housing Office) site which forms part of the Bacton Low Rise Estate, Phase 1: the District Housing Office (DHO) site which lies between Vicar's Road to the south and the railway line to the north; and Phases 2 & 3: The Bacton Low Rise Estate (BLR) which lies to the north and west of Wellesley Road.

The demolition of the site is constrained by the need to take into account the railway line which runs in a cutting to the north of the site and the fact that there are existing buildings fronting Vicars Road which are not part of the scheme.

The site is also located adjacent to the Grade 1 listed St Martins Church and Grade II listed French School.

Clifford Devlin has identified the need to consult with Network Rail in respect of the demolition works and will carry out all consultation and approvals necessary required in this regard.

The site has existing vehicular access from Vicars Road during the demolition works; all plant will enter the site at the eastern end of Vicars Road using the existing entrance. Pedestrian access to the site will also be from Vicars Road.

#### SCOPE OF WORK:

The completion of a Pre-demolition asbestos survey of the structures, removal of any asbestos containing materials, soft stripping, structural engineering review of the building construction, design and installation of temporary works requirements for demolition and, sequential demolition of the structures, waste stream segregation for recycling and clearance of all arisings.

Due consideration has been made to the local environment when compiling the proposed methodology for the works, detailed in this method statement.



| REF          | D973-DP-01-D              |
|--------------|---------------------------|
| DATE         | 17th<br>September<br>2013 |
| Page 6 of 49 |                           |

The project contains the following elements of work:

- Removal of hazardous materials
- Management of service disconnections
- Erection of hoardings
- Erection of the demolition scaffold.
- Structural assessment, design of any temporary works
- Installation of scaffolding and gantry to Wellesley Road elevation.
- Asbestos removal works
- Soft stripping
- Demolition works.
- Removal of hardstandings and foundations.
- Waste stream segregation
- Crushing of brick & concrete to 6F2 specification
- Clearance of remaining debris arising from site
- Level survey to show the extent of foundation removal.
- Evidence in the form of photographic surveys to demonstrate that the foundations have been grubbed up.

As the project moves forward, we will provide an Environmental Management Plan to consider all aspects of the project and how it may affect the locale and sensitive receptors.

All work will be carried out in accordance with the requirements of the Clifford Devlin Safety Management System and our Quality Assurance procedures.

The site will be registered with the Considerate Constructors Scheme and works will be carried out in accordance "with Camden's Considerate Contractor's Manual".

A more detailed description of the work is contained in Section 6 and Section 9 of this document. Work will be carried out in accordance with the Clients specification and drawings, provided at tender stage.



| REF          | D973-DP-01-D              |
|--------------|---------------------------|
| DATE         | 17th<br>September<br>2013 |
| Page 7 of 49 |                           |

Generally, site hours will be as specified, not more than 08.00 to 18.00 Monday to Friday and 08.00 to 13.00 Saturday, there is to be no working outside of these hours, without the agreement of, and notification to, the Contract Administrator.

Prior to commencement of the works a Site Waste Management Plan will be established and targets set for the recycling of arisings from the project.

We will provide data collection that will demonstrate the achievement of BREEAM (Building Research Establishment Environmental Assessment Method) points, if they are required as a condition of planning, including an estimated Carbon Footprint for the demolition element of the works.



| REF          | D973-DP-01-D              |
|--------------|---------------------------|
| DATE         | 17th<br>September<br>2013 |
| Page 8 of 49 |                           |

## 2. LOCATION

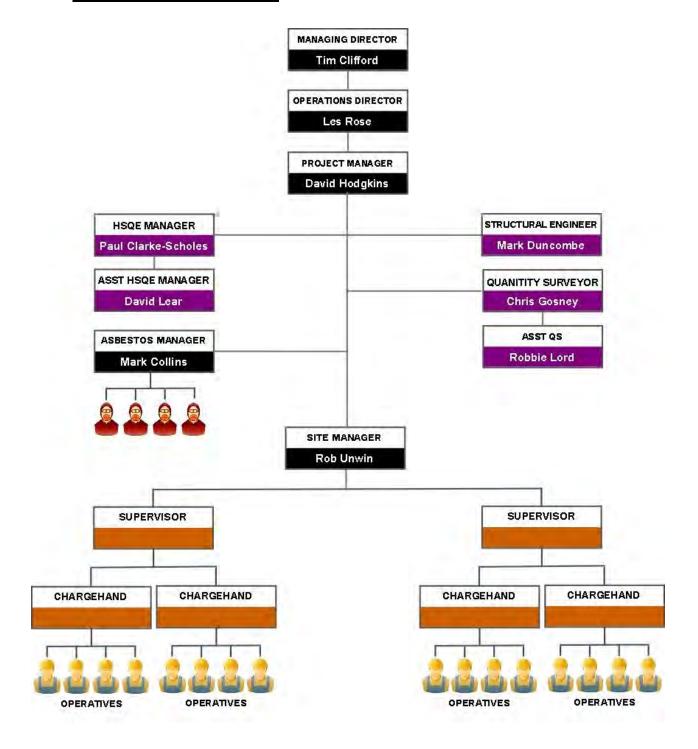
The full site address is 115 Wellesley Road, Gospel Oak, London, NW5 4PA the site is bounded to the north by Network Rail, to the south and east Vicars Road, to the west Wellesley Road. The site is adjacent to two listed buildings, the Grade 1 Listed St Martins Place and the Grade II listed French School.





| REF          | D973-DP-01-D              |
|--------------|---------------------------|
| DATE         | 17th<br>September<br>2013 |
| Page 9 of 49 |                           |

# 3. <u>SITE ORGANISATION CHART</u>





| REF           | D973-DP-01-D              |  |  |  |
|---------------|---------------------------|--|--|--|
| DATE          | 17th<br>September<br>2013 |  |  |  |
| Page 10 of 49 |                           |  |  |  |

# 4. JOB DETAILS

| 4. JOB DETAILS               |                       |                                              |
|------------------------------|-----------------------|----------------------------------------------|
| Client                       | London Borough of C   | Camden                                       |
|                              | Town Hall Extension   |                                              |
|                              | Argyle Street         |                                              |
|                              | London                |                                              |
|                              | WC1H 8NJ              |                                              |
|                              |                       | ulia.Farr@camden.gov.uk)                     |
| Employers agent              | EC Harris LLP         |                                              |
| project agent                | ECHQ                  |                                              |
|                              | 34 York Way           |                                              |
|                              | London                |                                              |
|                              | N1 9AB                |                                              |
|                              | _                     | tthiae (Rachael.Matthiae@echarris.com)       |
| CDM Co-ordinator             | EC Harris LLP         | intrindo (ridoridonividanido Costidirio.com) |
|                              | ECHQ                  |                                              |
|                              | 34 York Way           |                                              |
|                              | London                |                                              |
|                              | N1 9AB                |                                              |
|                              | _                     | Anthony.Hull@echarris.com)                   |
| Structural Engineers         | Rolton Group          | and only in tall @ contain to com            |
| otractarar Engineers         | The Charles Parker E  | Ruilding                                     |
|                              | Midland Road          | Saliding                                     |
|                              | Higham Ferrers        |                                              |
|                              | Northants             |                                              |
|                              | NN10 8DN              |                                              |
|                              |                       | m (Andrew.Chisem@rolton.com)                 |
| Architect                    | Karakusevic Carson    |                                              |
| Architect                    | The Gymnasium         | Alchitects                                   |
|                              | 56 Kingsway Place     |                                              |
|                              | Sans Walk             |                                              |
|                              | London                |                                              |
|                              | EC1R 0LU              |                                              |
|                              |                       | II (ch@karakusevic-carson.com)               |
| Contact Details for Clifford | Office: Tel –         | 0207 538 8721                                |
| Devlin Ltd                   | Onice. Tel -          | Fax – 0207 987 1857                          |
| DOVINI ELG                   |                       | E-mail: info@clifford-devlin.co.uk           |
|                              | Tim Clifford –        | Managing Director                            |
|                              |                       | tpc@clifford-devlin.co.uk                    |
|                              |                       | 07831 569529                                 |
|                              | Les Rose -            | Demolition Director                          |
|                              | LC3 1\03C -           | lar@clifford-devlin.co.uk                    |
|                              |                       | 07836 554041                                 |
|                              | Dave Hodgkins –       | Demolition Divisional Manager                |
|                              | Dave Houghins -       | dwh@clifford-devlin.co.uk                    |
|                              |                       | 07843 598232                                 |
|                              | Paul Clarko-Scholos   | - Health & Safety Manager                    |
|                              | i aui Ciaike-Sciilles | pcs@clifford-devlin.co.uk                    |
|                              |                       | •                                            |
|                              |                       | 07880 794381                                 |



| REF           | D973-DP-01-D   |  |  |  |  |
|---------------|----------------|--|--|--|--|
| DATE          | 11th July 2013 |  |  |  |  |
| Page 11 of 49 |                |  |  |  |  |

# 5. CONTRACT SPECIFIC RISK ASSESSMENT

Following approval of this plan, the site specific risk assessment will be separated as a document that can be reviewed and updated, enabling us to maintain the Construction Phase Plan as an accurate and up to date document.

| SEVERITY               |   | RISK ASSESSMENT MATRIX |    |    |      |      |          |                |
|------------------------|---|------------------------|----|----|------|------|----------|----------------|
| 6 MULTI-FATAL          | 6 | 12                     | 18 | 24 | 30   | 36   |          | VERY HIGH RISK |
| 5 FATALITY             | 5 | 10                     | 15 | 20 | 25   | 30   |          |                |
| 4 MAJOR                | 4 | 8                      | 12 | 16 | 20   | 24   |          | HIGH RISK      |
| 3 NOTIFIABLE           | 3 | 6                      | 9  | 12 | 15   | 18   |          |                |
| 2 MINOR                | 2 | 4                      | 6  | 8  | 10   | 12   |          | MEDIUM RISK    |
| 1 NEGLIGIBLE           | 1 | 2                      | 3  | 4  | 5    | 6    | LOW RISK |                |
| 1 VERY RARE            |   |                        |    |    |      | 6 AL | MO.      | ST CERTAIN     |
| 2 REMOTE               |   |                        |    |    | 5 FR | EQUE | NT       |                |
| 3 OCCASIONAL 4 REGULAR |   |                        |    |    |      |      |          |                |

| VERY HIGH RISK | Intolerable – Do not start work                                                              |
|----------------|----------------------------------------------------------------------------------------------|
| HIGH RISK      | Work can only commence with extensive reassessment of the risk levels and direct supervision |
| MEDIUM RISK    | Tolerable – Reduce where practicable                                                         |
| LOW RISK       | Safe Condition                                                                               |

| RISK                                     | Initial Risk<br>Score | CONTROLS SPECIFIC TO THE PROJECT –                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Action | Residual<br>risk<br>score |
|------------------------------------------|-----------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------|---------------------------|
| UNCONTROLLED<br>COLLAPSE OF<br>STRUCTURE | 18                    | Detailed demolition sequences required for a number of areas, existing roof sections stair-cores and fire escape stairs etc and initial enabling works. These are to be prepared in conjunction with Engineering input and recorded as separate method statements. The overall sequence will be as described in Section 9. Permit to Demolish, will be issued by the demolition supervisor to be used to confirm services diversion/isolation, sign off of temporary works etc. Advise sort from our structural engineer prior to demolition commencing on existing floor loadings to establish size and type of machinery to be used. The buildings will be demolished in a stepped formation and in accordance with the site specific Rams.  The existing buildings will have been assessed by our temporary works engineer prior to the demolition works commencing. | CDL    | 6                         |
| FALLING MATERIALS                        | 20                    | Exclusion Zones etc, individual MS to record detailed sequences of work. Demolition scaffolds will be erected to certain elevations for the demolition works – Scaffolding to be lined with Monar-flex. Exclusion zones will be erected for the internal segregation of areas for drop zones during strip out and demolition works. Liase with Network Rail prior to the demolition works proceeding.                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | CDL    | 5                         |



| REF           | D973-DP-01-D   |  |  |  |  |
|---------------|----------------|--|--|--|--|
| DATE          | 11th July 2013 |  |  |  |  |
| Page 12 of 49 |                |  |  |  |  |

| RISK                      | Initial Risk<br>Score | CONTROLS SPECIFIC TO THE PROJECT –                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Action | Residual<br>risk<br>score |
|---------------------------|-----------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------|---------------------------|
| WORK AT HEIGHT            | 20                    | Majority of the works will be completed working from the demolition access scaffold. Soft strip, when operatives are required to work from height will be undertaken from Mobile Towers, which are to be erected by PASMA trained and competent operatives and also from Podium steps.                                                                                                                                                                                                           | CDL    | 5                         |
| FIRE                      | 18                    | A fire action plan will be prepared for the site. Any hot works to be carried out will be completed under the strict adherence to CDL Hot Work Permit to work system. Appropriate fire points are to be established in accordance with the site fire action plan.                                                                                                                                                                                                                                | CDL    | 6                         |
| SITE ELECTRICITY          | 20                    | Site supplies during works will be supplied via generator with a 110v output.                                                                                                                                                                                                                                                                                                                                                                                                                    | CDL    | 5                         |
| LIFTING OPERATIONS        | 20                    | Lifting plans are to be prepared, subject to detailed planning of final sequence of operations, if required the lifting area to be closed off using barriers and signage, only authorised personnel will be allowed in the lifting area. All slinging and the movement of the loads to be controlled by the slinger/signaller, using hand or radios. A full lifting plan to be in place for the lift, this will be completed by the Appointed person and issued for approval prior to the lifts. | CDL    | 5                         |
| SERVICES<br>GENERALLY     | 20                    | Confirm isolations with statutory providers. A full site survey will be undertaken by our specialist sub contractor prior to any works commencing. Any retained or live services to be clearly marked and detailed to all site staff via induction process. Areas of site to be confirmed for the strip out works by use of a permit to work.                                                                                                                                                    | CDL    | 5                         |
| PUBLIC INTERFACE          | 18                    | Full time traffic marshals will be employed to control all traffic movements and bank vehicles into the site via the site access on Vicars Road at all times, in and out of the proposed site loading areas on the south elevation. All vehicles are to be booked in, in advance by the demolition site supervisor to our transport manager.                                                                                                                                                     | CDL    | 5                         |
| NOISE                     | 16                    | Default assessment remains valid, i.e. operators to wear hearing protection when operating noisy equipment such as breakers or angle grinders etc. Hearing protection zones to be established around machine working areas with signage erecting warning of the potential hazards. Detailed site specific assessments to be prepared during the works.                                                                                                                                           | CDL    | 4                         |
| CONFINED SPACES           | 15                    | Further assessment to confirm during project lead in, but not thought to be a significant risk                                                                                                                                                                                                                                                                                                                                                                                                   | CDL    | 5                         |
| MACHINERY AND<br>VEHICLES | 15                    | A traffic marshal shall control deliveries and vehicle movements on Vicars Road at all times. All plant to be inspected under PUWER and LOLER regulations and operated by qualified competent operatives.                                                                                                                                                                                                                                                                                        | CDL    | 5                         |



| REF           | D973-DP-01-D   |  |  |  |  |
|---------------|----------------|--|--|--|--|
| DATE          | 11th July 2013 |  |  |  |  |
| Page 13 of 49 |                |  |  |  |  |

| RISK                                              | Initial Risk<br>Score | CONTROLS SPECIFIC TO THE PROJECT –                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Action | Residual<br>risk<br>score |
|---------------------------------------------------|-----------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------|---------------------------|
| HAZARDOUS<br>SUBSTANCES<br>AND TOXIC<br>MATERIALS | 16                    | CoSHH assessments required for: Dusts, MMMF, Zinc Oxide fume. Decanting of redundant air-conditioning (CFCs) to be confirmed. Leptospirosis to be included in site induction as significant risk. Assessment to be further developed, particularly with regard to removal of MMMF insulation materials. A full asbestos survey has been completed, all known ACMs will have been removed prior to the demolition/soft strip works commence.  Dust will be controlled by the use of dedicated operatives spraying a fine spray of water whilst soft strip works are in progress and drop zones.  The introduction of the dust boss once the demolition works commences with the use of a larger excavator has been introduced.                                                                                                                                                                                                                                                                                                         | CDL    | 4                         |
| MANUAL HANDLING                                   | 16                    | The majority of the demolition works shall be undertaken by mechanical means; however the soft stripping of the existing buildings will be substantially labour intensive, to this end site and task specific manual handling assessment will be produced on site as required.  Throughout the works operatives will not subject themselves to lifting any weight they are not comfortable with, in any case no repetitive lifting will exceed 25kg.Manual handing assessments to be prepared on site.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | CDL    | 4                         |
| SITE SECURITY,<br>PUBLIC INTERFACE                | 15                    | A site control plan addressing site security as per the specification security plan, control of all contractors and visitors, interface with neighbours etc. will be developed prior to commencement of contract. There will also be a 24/7 security on site. Clifford Devlin will ensure that unauthorised. access to the site, particularly by children, is prevented for the duration of the works.  All arrangements shall be agreed prior to their implementation through inclusion in the Construction Phase Plan.  CDL will provide appropriate security such that unauthorised access to any works is prevented; the following are suggested as the minimum requirements:  — Photographic access passes on completion of a site induction course.  — Provide adequate security resources and management to maintain physical security of the site.  — PC shall establish an access control point for the duration of the site works, and establish a suitable control method to manage authorised access/egress of personnel. | CDL    | 5                         |
| ENVIRONMENTAL<br>CONSIDERATIONS                   | 10                    | Storage, use and disposal of Petrol, Oils and lubricants will be controlled by the guide-lines set out in our Environmental Aspects and Impacts Assessment. A Project Close Out report will be developed detailing the levels of recycling and re-use of material arising from the works. Further                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | CDL    | 2                         |



| REF           | D973-DP-01-D   |  |  |  |
|---------------|----------------|--|--|--|
| DATE          | 11th July 2013 |  |  |  |
| Page 14 of 49 |                |  |  |  |

| RISK                  | Initial Risk<br>Score | CONTROLS SPECIFIC TO THE PROJECT –                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Action | Residual<br>risk<br>score |
|-----------------------|-----------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------|---------------------------|
| VIBRATION             | 16                    | Assessments under 2005 vibration regulations. Monitoring and recording of exposure time to be part of the control regime. We use modern, effective and optimal hand tools in order to reduce HAVS exposure.  All operatives will work within the HAVS guidelines stated within each tools operating manual, their duration and the tools vibration level will be recorded to ensure the operatives do not become over-exposed.  An operative rotation system will also be employed | CDL    | 2                         |
| LOADING<br>OPERATIONS | 16                    | Traffic Marshalls shall control (externally) movement of vehicles on Vicars Road, Plant movements and to control interface with pedestrian traffic. Slinger/signallers to control crane lifts.  Barriers and signage to be erected when necessary. Skip handlers to be operated by trained competent operative and also to be traffic marshal controlled.                                                                                                                          | CDL    | 4                         |
| NETWORK RAIL          | 16                    | Scaffold will be designed and fixed with physical and chemical anchors to the building; pull out tests will also be completed. All demolition scaffold adjacent to the railway boundary will be wrapped in a monarflex sheet. All designs to be submitted to Network Rail Asset Protection Team for approval.                                                                                                                                                                      | CDL    | 4                         |



| REF           | D973-DP-01-D   |  |
|---------------|----------------|--|
| DATE          | 11th July 2013 |  |
| Page 15 of 49 |                |  |

#### 6. <u>SITE ESTABLISHMENT</u>

#### 6.1 PRIOR TO COMMENCEMENT OF WORKS

During this period, all of the resource requirements together with project planning and notifications, Environmental Management Plan and Construction Health and Safety Plans will be established. From this, site-specific preparations, including risk assessments method statement preparation, emergency procedures, fire risk assessment etc. will be initiated.

#### **Surveys and Structural Assessment**

A Pre-Demolition Asbestos Survey will have been carried out before works commence to identify the presence of any asbestos containing materials. A photographic Schedule of Condition of the surrounding roads, footpaths and adjoining buildings will be completed prior to works commencing. The proposed demolition methodology will be reviewed and any temporary works requirements, for approval by the client's engineer. The structure to be demolished will be surveyed including existing basements and depths of foundations.

#### **Programme**

During the lead in period, prior to commencement a final detailed programme and sequence of works will be developed and agreed with the Contract Administrator.

Works commenced on site on the 10<sup>th</sup> June 2013 and will be completed mid November 2013.

#### **Services**

Services are to be disconnected as enabling works for demolition.

Survey and identify above and below ground existing services, This will ensure that all live services have been identified, traced, marked and protected to avoid damage or disconnected as required by the works to be undertaken.

There is also the possibility of unrecorded services within the footprint of the site.

All services are to be capped-off or terminated at the site boundary, the positions of all capped off services will be marked onto drawings and issued with the project close out report.



| REF           | D973-DP-01-D   |  |
|---------------|----------------|--|
| DATE          | 11th July 2013 |  |
| Page 16 of 49 |                |  |

Detailed RAMS for electrical services shut downs (including power, lighting, fire detection/alarm, etc.) in preparation of the removal works; these will be issued by our specialist sub contractor which will be submitted for approval prior to the works commencing.

Before the removal of any vessels, pipes, tanks and equipment containing oil or other hazardous substances, they shall be drained and the contents removed from site and disposed of in a safe manner and in accordance with the relevant handling and disposal regulations.

The vessels, pipes, tanks and equipment shall also be cleaned by our specialist sub contractor, prior to removal and all residues removed from site and disposed of in a safe manner and in accordance with the relevant handling and disposal regulations. More detailed RAMS will be issued for these works.

All live services that remain after the demolition works have been completed will be marked on a drawing & submitted within the project close out report.

All drains and associated manholes, inspection chambers, gullies, vent pipes, will be protected and the normal flow will be maintained whilst the demolition works are on-going.

#### **Waste Management**

We will review and update the initial Site Waste Management Plan for the project, issued to the Council as client. The document and its content will be developed continuously throughout the life of the works. The data recorded in the SWMP will be utilised to provide carbon footprint data in our Project Close Out.



Our overall target for re-use / recycling of arisings from the demolition works will be 95%. This level of recycling has been achieved previously.



| REF           | D973-DP-01-D   |  |
|---------------|----------------|--|
| DATE          | 11th July 2013 |  |
| Page 17 of 49 |                |  |

#### Logistics Plan / Access / Traffic Management

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The following provide the key points in relation to traffic management:

- Vehicle access for delivery of plant to and from the site and deliveries and collection of demolition debris will be via the existing service road, accessed from the eastern end of the site at the Junction of Grafton Road and Vicars Road. A localised highway plan 12-0083/INF/81 P1 attached to this submission shows the access point into the side and swept path analysis for 50 tonne vehicle into the site off the proposed Grafton Road delivery route.
- Heavy goods vehicles of up to 50 tonnes will approach and leave the site using Grafton Road via Queens Crescent on non-market days due to the restricted access and low bridge on Grafton Road, south of Queen's Crescent. The height of the low loader shown on the tracking plans 0083/INF/81 P1 is for illustrative purposes only. Assurance is given that any height on this low loader will not exceed the height of the Queen's Crescent Market sign or if this is not possible because of the size of plant, that agreement will be reached with the Market managers that this can be removed on a temporary basis. It is also committed that this road is used for low loader heavy plan where traffic management and parking constraints as well as further height restrictions on the southern part of Grafton Road restrict use. This will be a maximum of 5 vehicle movements. It is a commitment that no vehicle movements will take place on market days (Thursday and Saturday). We will carry out a condition survey and meet and agree with Council officers to finalise the requirement for vehicle access along Queen's Crescent well in advance of any movement along this road. These vehicles will then access the Transport for London Road Network via Prince of Wales Road and the A502.
- Smaller transport will access the site via Grafton Road from the south east directly from Prince of Wales Road and either the A502 or the A503. Two maps showing the proposed routes for vehicles between the site and the Transport for London Road Network (TLRN) showing the route choices and constraints are appended to this report. A localised highway plan 12-0083/INF/81 P1 appended to this submission shows the swept path analysis for 50 tonne vehicle in relation to the junction and Queen's Crescent and Grafton Road.
- Vehicles will be guided into and from the site by a trained traffic marshal between the hours of 8am & 8.30am, 9.30am & 3pm and between 4pm & 6pm, avoiding the 'school run'. Suitable brick and concrete materials are to be crushed on site, greatly reducing lorry movements. It is envisaged that around 40 'rolon-off' loads of material will be transported off site between September and November.



| REF           | D973-DP-01-D   |
|---------------|----------------|
| DATE          | 11th July 2013 |
| Page 18 of 49 |                |

- 7.5 tonne caged lorries and 32 tonne 'rolon-off' skip vehicles and tipper lorries will be used to remove demolition debris from site at times to avoid the 'school run' in the morning and afternoon. On days when deliveries and collections are taking place a banksman will be on duty at Carlton Primary School at lunch time.
- Scaffolding will be delivered / collected from site on rigid bed vehicles accessing the site from the Vicars Road / Grafton Road entrance. Frequency of visits will be to suit the progress of the works but overall, would expect 40 lorry movements in total over a 3 week erection and 2 weeks striking periods.
- Machine deliveries and collections will be carried out using low loader transport accessing the site from Queens Crescent on non- market days at times to avoid the 'school run'. One machine is currently on site, this will be supplemented by one possibly two more which we total to 5 more vehicle movements between mid-September and mid-November.

•

| Vehicle                     | Size       | Route                                      | Number of total movements                       | When<br>required on<br>site and<br>weekly<br>spread                                                                                | Time of<br>vehicle<br>movements                                 |
|-----------------------------|------------|--------------------------------------------|-------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------|
| Caged lorry                 | 7.5 tonnes | Grafton Road<br>to Prince of<br>Wales Road | 6                                               | Once a<br>week                                                                                                                     | 8am &<br>8.30am,<br>9.30am &<br>3pm and<br>between<br>4pm & 6pm |
| Roll-on off<br>skip lorries | 32 tonnes  | Grafton Road<br>to Prince of<br>Wales Road | Approx 40<br>Nr loads to<br>remove from<br>site | 8-10 loads off site during first 3 days of demolition, week commencing 16 <sup>th</sup> Sept. After that no more than 1 load / day | 8am &<br>8.30am,<br>9.30am &<br>3pm and<br>between<br>4pm & 6pm |
| Rigid bed<br>lorry          | 7.5 tonne  | Grafton Road<br>to Prince of<br>Wales Road | 40                                              | Week commencing 16 <sup>th</sup> Sept. 1 Nr vehicle 20 days over an 8 week period.                                                 | 8am &<br>8.30am,<br>9.30am &<br>3pm and<br>between<br>4pm & 6pm |
| Low Loader                  | 50 tonnes  | Grafton<br>Road,<br>Queen's<br>Crescent to | 5                                               | 2 more<br>machines to<br>be delivered<br>to site, one                                                                              | 8am &<br>8.30am,<br>9.30am &<br>3pm and                         |



| REF           | D973-DP-01-D   |  |
|---------------|----------------|--|
| DATE          | 11th July 2013 |  |
| Page 19 of 49 |                |  |

| Vehicle | Size | Route                   | Number of total movements | When<br>required on<br>site and<br>weekly<br>spread                                                                                     | Time of<br>vehicle<br>movements |
|---------|------|-------------------------|---------------------------|-----------------------------------------------------------------------------------------------------------------------------------------|---------------------------------|
|         |      | Prince of<br>Wales Road |                           | in the first week of October and the other 2 weeks later. All 3 machines removed off site over 2 day period at completion of the works. | between<br>4pm & 6pm            |

- No vehicles will be permitted to wait on the public highway causing traffic issues and irritation
  to local residents and businesses. Vehicles delivering or collecting materials will be parked &
  unloaded / loaded within the confines of the demolition site and will enter and exit the site in a
  forward gear.
- No parking bay suspensions or temporary traffic management orders are required for this
  phase of the demolition works.
- No works to the existing highway are necessary for this phase of the demolition works.
- Vehicle movement and mileage travelled will be recorded so that fuel consumption data can be factored into our carbon foot print calculations for the project, post completion.
- Drivers will receive induction training and reminded of their responsibility to the environment of local residents and businesses, in terms of noise, pollution and nuisance.
- All plant deliveries will be controlled by a trained traffic marshal and will be scheduled at times least likely to cause disruption the local occupiers / residents.
- Protection will be laid to the road surface wherever plant is removed from low loader transportation, if it is not possible to unload directly on to the foot print of the site.
- Emergency environmental spill kits will be available for immediate use in the unlikely risk of loss of fuel.
- Local residents / businesses will be kept informed with the use of a newsletter drop and provision of a contact number for enquiries.
- Much of the hardcore arising from the demolition will be crushed and retained on site for future construction work reducing the need for vehicle movements.



| REF           | D973-DP-01-D   |  |
|---------------|----------------|--|
| DATE          | 11th July 2013 |  |
| Page 20 of 49 |                |  |

#### Site rules for all drivers

- Hand held mobile phones or site radios must not be used whilst driving.
- Obey all traffic signage and traffic marshals.
- No children, animals (other than security team guard dogs if applicable) or unauthorised passengers are permitted on site.
- Seatbelts are to be worn at all times when driving to and from the site.
- Do not stop on the surrounding roads and only park in designated areas or where instructed to by traffic marshals. All parking of vehicles will be on site, no on-road parking will take place and controlled vehicle timings will ensure there is no off site waiting.
- All drivers must comply with local rules including briefings, access routes, escorts and exit arrangements.
- No manoeuvring operations are to be carried out without a vehicle banksman or traffic marshal in attendance. The banksman will be at the site entrance on the corner of Vicar's Road and Grafton Road.
- Drivers must wear a safety helmet, high visibility clothing, gloves, eye protection and safety footwear unless in an enclosed cab.
- Drivers needing to take legal rest breaks must do so in the appropriate areas and not on the main local roads.

The traffic to and from the site will be managed by the Project Manager and the CDL Transport Manager. Traffic Marshals will wear red hi visibility vests or coats and red hard hats to give instant recognition. They will be responsible for maintaining unhindered traffic flow and road safety compliance on the existing roads.

To minimize misrouting of loads by contractors on public roads, off site signage will be utilized to identify entry points and access routes.

#### Pedestrian access

The pedestrian access point will be from Vicars Road, all operatives and visitors will sign in at security, and proceed to the welfare area, visitors will be held at the security office whilst security call the demolition site supervisor to escort all visitors around the site.

No parking will be available on site for the workforce and no offsite parking facilities will be provided, the workforce will be encouraged to use public transport.



| REF           | D973-DP-01-D   |  |
|---------------|----------------|--|
| DATE          | 11th July 2013 |  |
| Page 21 of 49 |                |  |

A single point access / egress route for personnel will be as site established by CDL on Vicars Road where a full signing in and out procedure can be operated.

#### Site rules for pedestrians

- · Access and egress will be through Vicars Road.
- Only use designated safe walking routes, do not walk on roads.
- Cross at designated pedestrian crossing points.
- Follow direction, instructions and advice given by traffic marshals
- Failure to comply with any of the site rules outlined above will lead to disciplinary action being taken against offenders by their employer.
- Repeating offenders will have site passes removed.

#### Obligations for the operation of large vehicles

It is confirmed that all contractors and sub-contractors operating large vehicles over 3.5 tonnes will meet the following conditions:-

- Operators will be a member of TfL's Fleet Operator Recognition Scheme (www.tfl.gov.uk/fors) or similar at the Bronze level.
- All drivers will have undertaken cycle awareness training such as the Safe Urban Driver module through FORS or similar.
- All vehicles associated with the construction of the Development will:
  - have Side Guards fitted, unless it can be demonstrated to the reasonable satisfaction of the Employer, that the Lorry will not perform the function, for which it was built, if Side Guards are fitted.
  - have a close proximity warning system fitted comprising of a front mounted, rear facing CCTV camera (or Fresnel Lens where this provides reliable alternative), a Close Proximity Sensor, an in-cab warning device (visual or audible) and an external warning device to make the road user in close proximity aware of the driver's planned manoeuvre.
  - have a Class VI Mirror



| REF           | D973-DP-01-D   |  |
|---------------|----------------|--|
| DATE          | 11th July 2013 |  |
| Page 22 of 49 |                |  |

- bear prominent signage on the rear of the vehicle to warn cyclists of the dangers of passing the vehicle on the inside - This is section has been incorporated within the shadow S106 CMP requirements and Clifford Devlin are requested to confirm that vehicles used for demolition would comply with these safety requirements.

#### 6.2 ON POSSESSION OF THE SITE

#### Welfare

Temporary office and welfare facilities will be established by CDL on the existing hard standing on the east elevation, these will consist of an office, canteen, drying room, toilet and washing facilities, with hot and cold running water.

A 2.4m high hoarding line will be established around the perimeter of the site as shown on the drawing below.

A new set of hoarding gates will be fitted across Vicars Road; a security cabin will also be established at the site entrance.

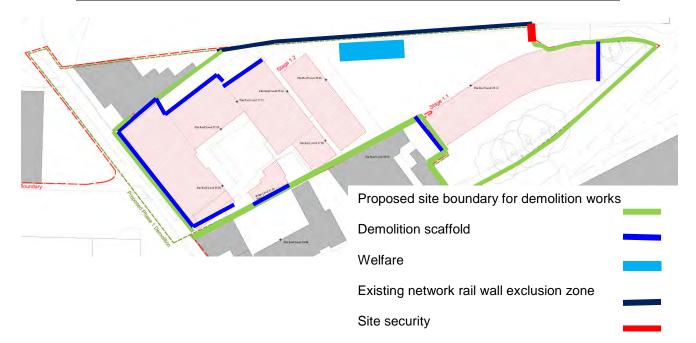
An exclusion zone will be placed along the length of the Network Rail boundary wall using heras fencing.

The units will be maintained throughout the life of the project. Welfare will be in accordance with the Construction (Design and Management) Regulations 2007 schedule 2.

CDL shall include in all monthly progress reports a statement for the Client confirming the suitability of welfare provision as the works progress.



| REF           | D973-DP-01-D   |  |
|---------------|----------------|--|
| DATE          | 11th July 2013 |  |
| Page 23 of 49 |                |  |



#### **Site Hoarding**

The site hoarding on the façade on Wellesley Road will be attached to the demolition scaffold whilst the demolition works are on-going, once the demolition has been completed this will be moved to the agreed hoarding line with the client.

#### Security

No unauthorised persons to be allowed within the demolition site. Site entrance gates to be maintained in closed position unless deliveries / collections are taking place.

All visitors will signed in and held at the security area until the Project Manager collects them, all visitors to the site will have a visitors induction and must escorted around the site at all times.

#### Signage and access control

Fix warning signs at site entrance / exit points and around work perimeters detailing the potential hazards of the area. Works specific signs will be located in prominent positions within the studio areas, whereby their warnings can be clearly read and their instructions complied with. Maintain signs in good and legible condition throughout the course of the works. Liaise with other contractors working in close proximity.

A general rule applies of *NO ACCESS* to demolition work areas and drop zones. Whilst demolition is in progress the Demolition Foreman has absolute control of the working area. Anyone wishing to access the area *SHALL ONLY DO SO WITH HIS EXPRESS PERMISSION* 



| REF           | D973-DP-01-D   |  |
|---------------|----------------|--|
| DATE          | 11th July 2013 |  |
| Page 24 of 49 |                |  |

and will normally be accompanied during any site inspection. It will become necessary during demolition tasks of significant size to implement a permit to enter system; this will be controlled and issued by Clifford Devlin.

#### **Induction Training & Site Specifics**

Prior to commencement of any work operations, all staff and operatives will receive site / project specific induction training. The induction training will emphasise the policy and objectives of the project, the potential hazards of the site, specific site rules, access / egress routes, fire drill and fire fighting procedures, as well as both generic and site specific risks and control measures.

Only experienced labour that can, through current training and reference, demonstrate a suitable

Only experienced labour that can, through current training and reference, demonstrate a suitable level of competence will be employed on the contract.

Suitably trained operatives experienced in the use of flame cutting equipment and abrasive wheels will be adequately incorporated into the workforce, together with first aiders and fire marshals.

#### Wheel Cleaning

It is not envisaged that wheel washing facilities will be required for this phase of demolition works, particularly as brick and concrete arisings are to be crushed on site thereby greatly reducing the number of lorry movements. However, specific operatives will be tasked with ensuring that the wheels of any vehicles leaving the site are cleaned and the site entrance and surrounding roads are kept clean at all times.

#### **Health & Safety**

On site noise assessments will be carried out to ensure that operatives are not exposed to excessive noise. Site boundaries will also be monitored during demolition works to ensure the public are not affected by the work being undertaken.

All site staff will be issued with a hi-visibility waistcoat with corporate logo on rear, hard hat with corporate logo, safety footwear, gloves, ear defenders, eye glasses. The clothing and equipment will be worn at all appropriate times. Gloves and glasses are compulsory when working unless in an area designated non-PPE area.

The Site Project Manager will hold the project Site Packs and Health and Safety Plan, which will contain copies of all method statements, training information, report forms etc.



| REF           | D973-DP-01-D   |
|---------------|----------------|
| DATE          | 11th July 2013 |
| Page 25 of 49 |                |

# **Monitoring Health & Safety**

A member of the company's HSQE team will visit site at least one day per week, and a weekly independent site safety audit will be conducted for all activities on site. Copies of the written report will be retained both on site and made available to the contract administrator. In addition, safety sampling will also be completed by visitors to the site on escorted walks around the site, these walks will also include 2/3 site operatives, sub-contractors will be encouraged to arrange their own audits specific to their individual activities.



| REF           | D973-DP-01-D   |
|---------------|----------------|
| DATE          | 11th July 2013 |
| Page 26 of 49 |                |

#### 7. TOXIC MATERIALS / HAZARDOUS SUBSTANCES

#### Sharps:

Extreme caution will be needed prior to any asbestos removal or soft stripping activity taking place. Properties that have been void or abandoned for any amount of time are often subject to drug taking activity by intruders. In many cases, used needles and other drug taking paraphernalia is left unguarded throughout. Before any work is undertaken in the individual properties, an inspection will be carried out to identify abandoned needles / sharps. If present, they will be collected by operatives wearing suitable PPE and stored in specific sharps containers, prior to be collected by a registered waste disposal contractor.

#### Asbestos:

A Management Asbestos Survey for the presence of asbestos will have been provided with the tender documents. A Pre-Demolition intrusive asbestos survey will be carried out prior to commencement of demolition and all identified asbestos containing material will be removed in accordance with site specific plans of work and current legislation by our own directly employed in house teams.

The waste will be disposed of via a toxic waste container temporarily stored on site or by transfer to our toxic waste transfer station at our headquarters in Bow, London E3. The ultimate decision will be subject to a final assessment of the expected volume to be removed.

#### Fluorescent Tubes:

Fluorescent tubes will be removed and stored at our headquarters in Bow, London E3. Our site has Environment Agency exemption to permit the storage and re-handling of a number of materials, to facilitate and increase recycling opportunities. FT's are included within the exemption.

Further inspections will be made on possession of site, and a CoSHH Register shall be maintained in the Site Pack together with all individual assessments made. The client or their agent will be requested to make available details of terminations and removals of refrigerants conducted and any materials remaining shall be removed by specialists or in accordance with a method statement.

Handling of MMMF insulation materials will be subject to a specific RAMS which will contain details of measures necessary to reduce exposure to fibres.



| REF           | D973-DP-01-D   |
|---------------|----------------|
| DATE          | 11th July 2013 |
| Page 27 of 49 |                |

#### 8. SCAFFOLDING AND TEMPORARY WORKS

#### Scaffolding

Independent access / protective scaffolding will be erected to all elevations of the building fronting Wellesley Road, to the northern elevation and part return of the 2 & 3 storey rear structures, to both ends of the workshop building and to the southern boundary of the courtyard house. All scaffolding will be clad with fire retardant monarflex sheeting. On the Wellesley Road elevation a scaffold gantry/crash deck will be erected to the underside of the existing concrete canopy to facilitate demolition of the canopy.

The scaffold gantry/crash deck will be double boarded and have a monarflex sheet between the boards and will span across the footpath in front of the District Housing Office, maintaining pedestrian access beneath. The scaffold structure will require a license to be issued by the London Borough of Camden before the structure is erected.

The demolition scaffold will be struck and cleared progressively with the demolition works.

Scaffold edge protection comprising double rail and toe board, will be provide to all leading edges and openings.

A separate site specific method statement will be provided by the specialist scaffolding sub contractor prior to commencement

Typically scaffold and screen protection will extend for at least 2 metres above the top level of the structure to be demolished and will be progressively struck with demolition.

CDL will supply the project team with design drawings for review and comments prior to commencing the works.

#### **Temporary Works**

A structural assessment of the building will be made to ascertain the loadings of the existing floor slabs for the use of mini plant and following a review of the full scope of work and our proposed method of working, additional temporary works may be required.



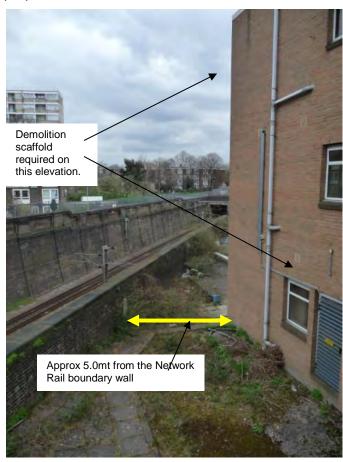
| REF           | D973-DP-01-D   |
|---------------|----------------|
| DATE          | 11th July 2013 |
| Page 28 of 49 |                |

Our structural engineers will detail all proposed erection methods for any temporary works and once all of the required temporary works have been installed the structural engineers will inspect, sign off and issue a permit to load.

All temporary work designs will have been issued for approval prior to erection.

#### **Network Rail**

Prior to the commencement of any works on site, CDL will contact Network Rail to inform them of their intention to commence works. This must be undertaken a minimum of 6 weeks prior to the proposed date of commencement.



The demolition and scaffold erection of buildings near to the operational railway infrastructure must be carried out in accordance with an agreed method statement. Approval of the method statement must be obtained from Network Rail's Asset Protection Team before the development can commence: these will be submitted for approval prior to the works. The demolition and scaffold erection of buildings near to the operational railway infrastructure must be carried out in accordance with an agreed method statement. Approval of the method statement must be obtained from Network Rail's Asset Protection Team before the development can commence: these will be submitted for approval prior to the works.

The railway adjacent to the site is operational 24 hours a day and any overhead electrified equipment present is energised at 25,000 volts. No plant, material or equipment is to be placed in a position where, in the event of accident, malfunction or failure it could fall within 3 metres of the nearest operational railway line or overhead electrified equipment.



| REF           | D973-DP-01-D   |
|---------------|----------------|
| DATE          | 11th July 2013 |
| Page 29 of 49 |                |

Detailed written method statements, including risk assessments, are required for the demolition works adjacent to Network Rail's boundary.

These will be submitted to Network Rail well in advance of the works (a minimum of four weeks' notice should be assumed) for approval, these documents will be supported by drawings showing the positions of the plant to be used movements, reach, etc and specify plant to be used.

Network Rail will provide an acceptance of method statement form template for the CDL to use and give advice on format and information required.

Scaffold design drawings, including calculations, and a form C plus an independent design check certificate must be submitted to Network Rail for acceptance not less than 10 days prior to the works commencing.

Any scaffolding on or near Network Rail property is to be tied back, have fully boarded decks and be fully screened from the Railway with boarding or debris netting.

The erection of the demolition scaffold on the Wellesley Road elevation will be completely wrapped in monarflex this will mitigate the dust combined with the use of a dust boss and hose pipes spraying a fine mist will also be used by dedicated operatives.

Before any works commence adjacent to the operational railway, Network Rail's Site Manager will hold a site safety meeting (location to be agreed). This meeting is to be minuted by Network Rail's Site Manager and CDL site manager.

Network Rail's Site Manager will produce a set of emergency procedures that set out how trains are to be stopped in case of emergency.

These procedures will be part of the site induction and are to be displayed on the site near the operational railway when works are taking place. All site staff must be made familiar with the procedures.



| REF           | D973-DP-01-D   |
|---------------|----------------|
| DATE          | 11th July 2013 |
| Page 30 of 49 |                |

#### 9. METHOD OF WORK

The following paragraphs are intended to provide an overview of the project giving an outline of the work to be conducted and the systems of work to be adopted. It is subject to review and finalisation of planning. Where appropriate, discreet elements of the work shall have an risk assessed method statement issued. All subcontract works shall be subject to a specific risk assessment and method statement.

Prior to works commencing all services will have been identified and either disconnected or isolated to allow the asbestos/soft strip works to commence.

All services will have been identified and marked by our sub-contactor using paint, all services to be removed will be marked in **GREEN** and services that are to remain will be marked in **RED**, any services that are not marked will be treated as live.

#### **Enabling works.**

Following site establishment on the existing hard standing and in conjunction with the existing services validation works the erection of a site hoarding which will consist of 2.4m high hoarding and new vehicular access gates will be erected, through Vicars Road will commence, heras fencing will be installed prior to this work commencing at the rear of the existing footway whilst this work is ongoing, the hoarding will also be painted in the colours the client requires.

The existing metal gates at the junction of Grafton Road and Vicars Road will be utilised and incorporated within the new hoarding line, a site security hut will also be situated at the entrance to control the access/egress from the site

#### Phase: 1, 2-16 Vicars Road

A risk assessment will have identified any toxic materials such as fluorescent light tubes to be set aside for separate disposal.

Prior to any work commencing an exclusion zones will be set up using pedestrian barriers and relevant signage; this will be inspected by the CDL site supervisor to ensure the area is clean & safe for the works to commence.



| REF           | D973-DP-01-D   |
|---------------|----------------|
| DATE          | 11th July 2013 |
| Page 31 of 49 |                |

A variety of work methods may be used but all are essentially hand demolition techniques, using mattocks, sledgehammers, crow / nail-bars and the like. Work at height is generally limited to underside of slab above usually requiring access to less than 4 meters. Access is achieved from small scaffold towers, tagged and erected by a competent person, or from "Podium" steps effectively a cross between a ladder and a scaffold, having the ease of use of a ladder but with the stability of a tower.

Cutting operations are typically with disc cutters and reciprocating saws, operators being trained to use and change abrasive wheels and equipped with goggles and hearing protection. Specialist or abstruse cutting will be undertaken with oxy-propane cutting equipment, again with trained operators, typically using hot work permit and on larger works having a dedicated fire-watchman with fire fighting equipment.

Debris arising from soft stripping activity will be transferred to the existing ground level via existing windows into designated 'drop zones' outside the building, 40yd rolon-off skips will be placed directly under the existing windows. These drop zones will be formed using mesh panel fencing to prevent access to the areas, and will be suitably signed.



Wastes are generally sorted so that skips can be filled with a single type of material for recycling wherever possible, with usually only nil value organic waste being disposed of as "rubbish". Waste movement to 'drop zones' is typically on barrows or "wheelie" bins to reduce the manual handling elements. Pipe work and trunking are cut into lengths suitable for both handling and fitting into skips. Once the skip has been loaded it will then be exchanged for a 2<sup>nd</sup> 40yd bin.

The drop zone will be moved along the front elevation during the soft strip works.

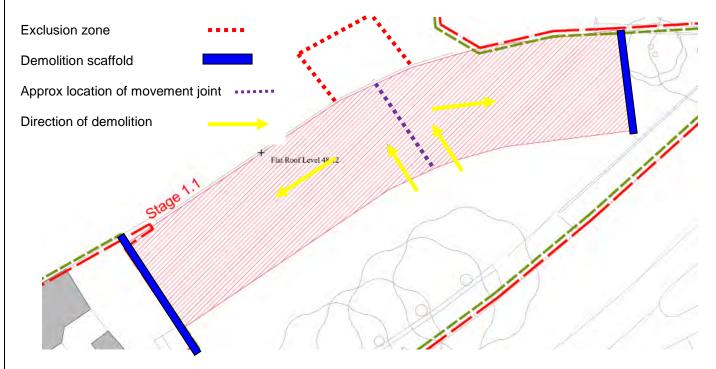
The above procedure will be repeated for the soft stripping of the whole building working from the west to the east direction.



| REF           | D973-DP-01-D   |
|---------------|----------------|
| DATE          | 11th July 2013 |
| Page 32 of 49 |                |

At the ground floor level the debris will be loaded into skips using a 360 excavator fitted with a grab, the debris will be loaded into the bins for disposal.

A demolition scaffold will be erected on each end of the building and clad with flame retardant Monarflex sheeting. Prior to the demolition works, an exclusion zone will also be established to the rear of the building on the existing hard standing. The zone will have appropriate warning signage posted and will be patrolled by a banksman.



Using a 360 excavator fitted with a pulveriser the face brick work on the front elevation will be pushed into the footprint of the building, approx on either side of the existing movement joint, this will then expose the existing roof slab/beams. The jaws of the pulveriser will then be placed over the roof slab and closed over the roof slab, this will then demolish the concrete which will be demolished progressively on either side of the movement joint, back to the beams on the east and west elevations.

The excavator will also work into the building demolishing the 1<sup>st</sup> floor slab as it progresses, once the building has been demolished from front to back the excavator will then turn east and carefully commence to demolish the building working as described above progressively to the Grafton Road junction.



| REF           | D973-DP-01-D   |
|---------------|----------------|
| DATE          | 11th July 2013 |
| Page 33 of 49 |                |

The building will be demolished in a stepped formation at all times, when the demolition has been completed on the east elevation the excavator will then commence on the west elevation as described above.

#### Phase 2 works

The phase 2 works consist of the demolition of portacabins, 40yd bins will be placed on the hardstanding adjacent to the portacabins.

Using a 360 excavator fitted with a grab, the existing portacabins will be demolished, the excavator will place the debris will be processed and placed directly into the 40yd bins adjacent to the works.



The low level portacabin will be demolished down to the existing ground floor slab; all debris will be cleared progressively with the demolition.

#### Phase 3 works

Phase 3 consists of the demolition of the remaining structures on the site.

The site will have been subject to a Pre-Demolition / Refurbishment Survey and all identified asbestos materials removed as part of the contract, under the direction of a specifically prepared Plan of Works. Non-licensable work may be undertaken as soft strip but a Work Plan to comply with the Control of Asbestos Regulations 2012 will be written for all such activities.



| REF           | D973-DP-01-D   |
|---------------|----------------|
| DATE          | 11th July 2013 |
| Page 34 of 49 |                |

The soft strip of the remaining buildings will be completed by placing 40yd bins under the windows, and exclusion zones will be formed around the bins on the ground floor.

Existing windows will be carefully removed above the bins, working in a top down sequence the soft stripping of the structures will commence with the removal of all non-structural items for sorting within the building for recycling / disposal.

This would normally include all floor coverings; timber fixtures and fittings up to and including doors and doorframes. This is principally to avoid mixing organic and inorganic wastes; non-load-bearing partitions (often timber and plasterboard), all electrical installations (cabling and ducting to be recycled), sinks, toilets and baths etc, ceilings and all cables above, pipework together with radiators, tanks and the like; MMMF matting from ceilings, ductwork and partition infill; air conditioning / ventilation ductwork.

The debris will be sorted on the existing floors, using the windows previously removed the debris will be placed down into the 40yd bin within the exclusion zones, this will be repeated on a floor by floor sequence.

On the ground floor the debris will also be passed through the existing windows, this will then be processed and placed into the relevant skips using a 360 excavator fitted with a grab.

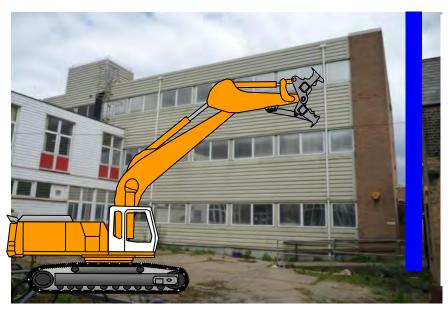
A designed demolition scaffold will have been erected and signed off by Network Rail on the north elevation of the building, the south will also have a designed demolition scaffold erected.

Generally, the works will be carried out using a combination of hand and machine demolition techniques, working in a stepped formation, leaving the structure self supporting at all times.

Using a long reach excavator/45t excavator fitted with a pulveriser, the existing roof slab will be carefully demolished working from the north elevation, and the demolition will progressively work into the building.



| REF           | D973-DP-01-D   |
|---------------|----------------|
| DATE          | 11th July 2013 |
| Page 35 of 49 |                |



The construction of the units is concrete planks which sit on steel trusses; the excavator will demolish the building 1 bay at a time working in a top down sequence, ensuring the steel trusses are left intact; the brick work on the north elevation will be demolished by demolition operatives using hand held tools.

The debris will be cleared from the floor slab on a regular basis, ensuring the floor slab is not over loaded during demolition works.

The steel trusses will be demolished using the excavator with a shear attachment, as they are cut the excavator will lay them down carefully on the existing floor slab, once both ends have been cut the trusses will be removed from the floor slab and placed into the relevant bins.



The boundary wall will be checked by the structural engineer prior to demolition works commencing, to ascertain if temporary works are required.

The caretakers lodge will require a demolition scaffold erected on the south side St Martins Church elevation this will be wrapped in monarflex.

Working from the north elevation the building will be soft stripped as described above.

Using the 360 excavator fitted with the pulveriser attachment the caretakers lodge will be demolished down to the ground floor slab.

The debris will be cleared from the existing ground floor slab; the foundations adjacent to the existing wall will be left in-situ, until investigation works confirm that they can be removed.



| REF           | D973-DP-01-D   |
|---------------|----------------|
| DATE          | 11th July 2013 |
| Page 36 of 49 |                |

#### 115 Wellesley Road;

115 Wellesley Road will have a full demolition scaffold erected around all elevations, the soft strip will be completed as described above, with the debris being loaded into 40yd bins which will have been placed under the existing windows.



A mobile crane will be rigged to the rear of the building on the south elevation to lift Mini excavators and Skid steer loaders up to the roof of the building (a detailed lifting plan will be submitted to the client and Network Rail for approval prior to the works commencing).

These machines will be employed to undertake the majority of the demolition works – down to approx 1st floor level at which point a larger excavator can be introduced to dismantle the remainder of the structure to ground floor.

The demolition to level 1 of the building will be completed on a floor by floor basis, using mini excavators, CDL have taken into account the proximity and impact of the local area that shares the south boundary and we believe this is the correct way to demolish the building. The scaffold will be struck and cleared in progression with the demolition works.

The scaffold will be cleared from the rear once the building is at level 1 and a larger excavator will then be used to complete the demolition works down to the ground floor. The hoarding line will then be fixed to the specified locations as agreed on site with the client.

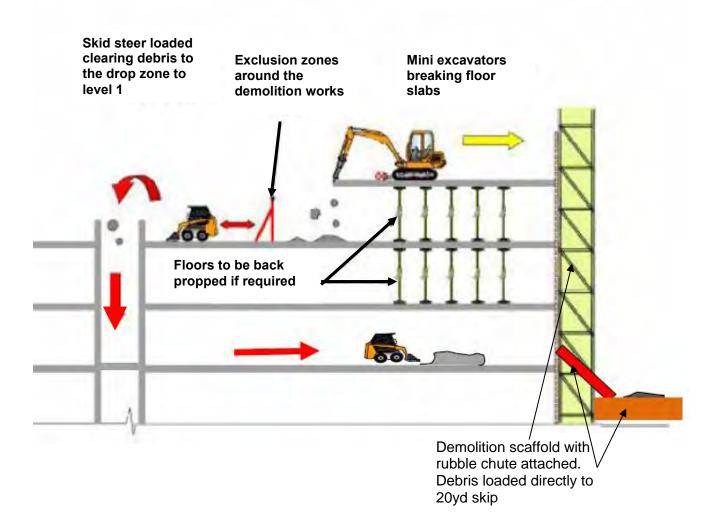
The ground floor slabs will be demolished using excavators fitted with a breaker, the slab will be pot holed and the slab will then be pulled up, along with any foundations this will be recorded on a drawing and will be issued with the close out report, showing the areas which have been removed. The hardstandings will also be removed as described above. All debris will be placed into skips for recycling except the asphalt from the hardstandings.

The remaining ground will be landscaped to suit the new levels.



| REF           | D973-DP-01-D   |
|---------------|----------------|
| DATE          | 11th July 2013 |
| Page 37 of 49 |                |

Typical Section showing the use of mini excavators progressively on a floor by floor basis with all the debris being transported to the drop zone down to level 1 and out through the building.



The drop zone on level 1 will have a full exclusion zone erected and signage this area will be strictly controlled by the Project Manager and the Demolition Supervisor whilst in operation by radios.

The drop zone will be closed and the level 1 floor will be cleared of debris using either a skid steer or wheel barrows, this will be carted to the rear of the building, the debris will then be placed into the rubble chute and directly into 20yd bins.

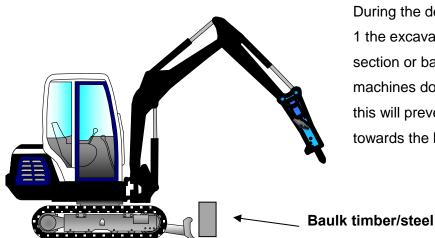


| REF           | D973-DP-01-D   |
|---------------|----------------|
| DATE          | 11th July 2013 |
| Page 38 of 49 |                |

The external walls will be demolished using the 360 mini excavators, the existing external brick walls will be demolished approx 3-4 courses at a time as the brick work becomes loose, the excavator will then pull the loose bricks into the footprint of the building.

The debris will then be cleared to the drop zone on a regular basis, a proportion of the hardcore debris will be used to form a ramp to the level below this is normally the existing stair core area as this is the strongest part of the building, to enable the machines an access route down to the next level down, this ramp may have to be back-propped to ensure the concrete slab below can support the ramp and machines travelling down it (Structural engineer to confirm).

The above procedure will be repeated down to level 1.



During the demolition of all floor slabs to level 1 the excavators will place a steel beam section or baulk timber in front of the machines dozer blade – secured into position this will prevent the machine travelling towards the leading edge.

Once at ground level the debris will be carted to the processing/loading area on the south of the building, where the material will be sorted / processed and loaded into 'rolonoff' skip containers, using 360 degree excavator fitted with grapple and / or pulveriser attachments.

Wastes are generally sorted so that skips can be filled with a single type of material for recycling wherever possible, with usually only nil value organic waste being disposed of as "rubbish".

Debris arising from the works will be removed to local recycling centres.



| REF           | D973-DP-01-D   |
|---------------|----------------|
| DATE          | 11th July 2013 |
| Page 39 of 49 |                |

All wagons will be booked by our logistics manager as per the CDL logistics plan, all drivers will be site inducted by CDL, wagons will be guided into the Vicars Road/Grafton Road by traffic marshals, once the loads have been loaded they will then be guided back out of the site area and into the flow of the local traffic.

## Craneage

Lifting plan will be issued to Network Rail for approval prior to the works.

Radius and weight of the loads to be lifted will be assessed by the appointed person; the mobile crane will then be selected to complete the works.

The crane will be set up and rigged to the south of the site and the rear of 115 Wellesley Road; a lifting area/exclusion zone will then be placed around the crane, this will then be checked by the crane supervisor.

The slinger/signaller will direct the crane over the load using a 2 way radio system; the mini excavators/skid steers will then be slung by the slinger/signaller.

The slinger/signaller will direct the crane to take the load and hold; approx .500mm above the wagon this is to ensure the stability of the load to be lifted, the load will be carefully lifted and slewed to the required area on the roof of the building.

A full and more detailed lifting plan will be issued for these works prior to the commencement of the works.



| REF           | D973-DP-01-D   |
|---------------|----------------|
| DATE          | 11th July 2013 |
| Page 40 of 49 |                |

# **General Progress of Demolition Works**

The Site Project Manager with the site supervisors will carry out a daily inspection to ensure that no partially demolished or unstable projections remain, at the end of each shift.

Security arrangements will be made in accordance with the specification which will be 24/7. No unauthorised persons to be allowed on site.

'Site housekeeping' will receive high priority from Clifford Devlin Limited and its sub-contractors, with emphasis placed on maintaining good access to and egress from the workplace.

Daily site inspections will be carried out in accordance with Clifford Devlin's quality and health and safety procedures, to ensure a high standard of 'housekeeping' is achieved. All vehicles leaving the site with demolition arisings will be adequately sheeted to prevent dust being emitted from the load. Entry / exit gates will be kept clean at all times.



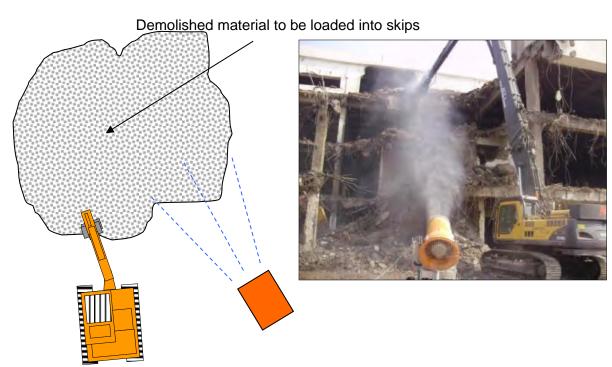
| REF           | D973-DP-01-D   |
|---------------|----------------|
| DATE          | 11th July 2013 |
| Page 41 of 49 |                |

# Dust Control Plan (See also more detailed separate Dust Control Plan)

Throughout the works wherever and whenever operations are likely to produce nuisance dust, hand pump spay bottles will be used within the rooms being soft stripped to create a fine mist to suppress dust levels. Clifford Devlin will utilise specific employees to keep demolition / loading operations dampened with constant water spray hosing, to limit nuisance dust emission during the floor by floor demolition, a dust boss will be used from level 1 to ground.



Nuisance dust can be further controlled at ground level during masonry loading operations with the utilisation of the 'Dust Boss' water misting suppression system, depicted in the following schematic.



The Dust Boss would be located behind and to the rear of the demolition excavator, spraying a fine mist of water over the loading operation / dust source.



| REF           | D973-DP-01-D   |
|---------------|----------------|
| DATE          | 11th July 2013 |
| Page 42 of 49 |                |

## **Post Demolition**

On completion of works, carry out inspection of site with the Project Manager, provide relevant information for the Health and Safety File and remove plant and equipment from site.

A formal close out report will be issued giving details of the project from start to finish, including all waste records, recycling achievement details and a Carbon Footprint assessment for the project. Detailed topographical survey will be completed post demolition this will show all features remaining on site.

- Location of any foundations left behind
- Location of all footings removed.
- · Retained services.



| REF           | D973-DP-01-D   |
|---------------|----------------|
| DATE          | 11th July 2013 |
| Page 43 of 49 |                |

## 10. APPROACH TO SUSTAINABILITY

Clifford Devlin can contribute to the projects objectives for sustainability in a number of ways as follows:

Being locally based, a large proportion of our employees are resident close to the proposed works and many rely on public transport to reach their workplace. The company provides shared transport by mini-bus from our yard to site, thus reducing the need for the use of private cars.

Imported materials will always be responsibly resourced so far as reasonably practicable. For example, timber for hoardings will be purchased from a demonstrable sustainable resource and certificated to an appropriate standard.

The company has examined many ways of maximising re-use of materials and routinely expects to recycle more than 95% of the materials taken from site. We will look to recycle all metal, all timber, any plasterboard, providing separate skips for the storage of such material, and even the so-called "rubbish" (EWC 17 09 04) will be further processed at local transfer stations who report that up to 85% of the materials are recycled.

The Project will have a Site Waste Management Plan and opportunities will be sought both at tender and during a project to identify materials that can be re-used. We hold an exemption for our main depot to where various materials (ranging from bricks to slates) can be held until a viable re-use opportunity is identified. We also have permission to segregate small waste loads for recycling purposes.

We monitor all vehicle movements to site so that we can report on the carbon generation from transport activities (BREEAM M05) and we will actively look for efficiencies in transportation by finding local markets or disposal points for materials taken off site and by ensuring deliveries to site are matched with removal operations so that lorries are loaded on both inward and outward journeys.



| REF           | D973-DP-01-D   |
|---------------|----------------|
| DATE          | 11th July 2013 |
| Page 44 of 49 |                |

## **BREEAM (Building Research Establishment Environmental Assessment Method):**

A small but significant number of points are available from the BREEAM section M05 associated with management of site activities and the company has established procedures to ensure that the maximum number can be attained by complying with six or more of the headings, namely;

- a) Monitor and report CO2 or energy arising from site activities.
- b) Monitor and report on water consumption from site activities.
- c) Monitor and report transport to and from site to enable CO2 emissions arising from transport to be calculated.
- d) Monitor construction waste on site.
- e) Sort and recycle construction waste on site.
- f) Adopt best practice policies in respect to air (dust) pollution.
- g) Adopt best practice policies in respect to water (ground and surface) pollution.

We will conduct Environmental Impacts and Aspects assessments and prepare an Environmental Management Plan and then ensure that it is implemented and the appropriate monitoring takes place. This will include matters such as liaison with neighbours, controlling and monitoring site

generated pollution in terms of noise and dust, and we will also tightly control our own fuel deliveries to avoid ground pollution and take into account site ground conditions and plant and equipment to ensure that any potential polluting materials are identified and removed before demolition. Where necessary we will incorporate measures for ecological protection from retention and protection of trees to protection of protected species to removal of invasive species such as Japanese Knotweed.

We can also operate sites in accordance with the Considerate Constructors Scheme.

We routinely produce a Project Close Out Report which provide the evidence necessary to satisfy a BREEAM assessor that these actions have been met. We will calculate Transport Carbon generation and Site activities Carbon generation. We will report on the sorting and recycling of wastes as identified in the SWMP and on the water consumption during work.

The company is committed to successful environmental management via its 3<sup>rd</sup> party registered ISO 14001 compliant systems and will continue to strive for innovation and excellence.



| REF           | D973-DP-01-D   |
|---------------|----------------|
| DATE          | 11th July 2013 |
| Page 45 of 49 |                |

#### LOCAL ENVIRONMENTAL ISSUES:

St Martins church is grade 1 listed, and the railway runs to the north of the site

Most of the techniques for control of environmental issues will be normal demolition operational controls, which are referred to in the main body of this demolition plan, but these can be summarised as follows:

**Vibration Control:** minimise impact hammer work, and maximise use of munchers and pulverisers. Ensure that "drop zones" have a carpet of crushed concrete at the base for materials to fall onto, reducing the effects of rubble debris striking a solid slab. Monitoring can be conducted to demonstrate that levels are acceptable.

**Noise Control:** essentially as above, minimising the impact levels. In addition, the positioning of machines can have an influence as can the situation of external walls and scaffolding. Generally machines are positioned behind a certain amount of screening which prevents transmission of noise along horizontal paths to the adjacent property. External walls will be demolished to cill level so that the actual demolition of the slabs and the machines engines are not in direct line of sight to adjacent

properties. Where particularly noisy periods or activities need to be mitigated, additional controls can be utilised such as acoustic barriers.

Control can also be achieved by use of quiet periods when the work would otherwise be inconvenient to neighbours, early mornings and late afternoons will be particularly useful (together with the known holiday periods) to maximise hammer work before the school is open and after it closes, particularly for nearby works. At



other times, the machines can be moved further away so that progress is achieved but nuisance minimised.

Close reporting is also useful so that there are good lines of communication are maintained. Again, monitoring can be conducted to demonstrate compliance and to identify particularly difficult elements of the work.



| REF           | D973-DP-01-D   |
|---------------|----------------|
| DATE          | 11th July 2013 |
| Page 46 of 49 |                |

**Dust Control:** Again, many standard techniques produce a range of benefits and the screening of the work noted above will also minimise transmission of dusts off site, particularly if scaffolds have Monarflex (or equivalent) external cladding. The most effective localised control of dust comes from the damping down of the arising as they are generated and also before further processing and the most effective forms of damping use the finest practicable mist sprays as the water particulate size needs to match the dust particle size.

The actual demolition process will therefore be damped as it takes place and the resultant debris piles thoroughly wetted before being moved for tipping into chutes. Further damping can be conducted in the chute and the chute can be largely enclosed, preventing escape of dust.

### 11. CONSULTATION AND ENGAGEMENT

Clifford Devlin has attended two meetings of the Bacton Low Rise Monitoring Group, which is a group facilitated by the London Borough of Camden and includes representatives of local community groups and interests, together with Councillors. The proposed approach to demolition has been outlined at these meetings. In addition a further update of likely timescales was presented to this group when Clifford Devlin was unable to attend on 3<sup>rd</sup> September. Further reports on progress and feedback in relation to any concerns will take place through this group.

In addition a presentation has been made to the Bacton Low Rise Tenant and Residents Association about the proposed demolition approach.

A meeting has also taken place with the head teacher of Carlton Primary School on Grafton Road.

Key concerns that have been articulated at these meetings have included:

- Potential impact on the Grade 1 Listed Church in Vicar's Road through vehicle movements
- Concern at possible movements through Oak Village if construction traffic was accessed north and east of the site
- Concerns over volume of vehicle movements through residential areas
- Concern over impact on the market and retailers in Queen's Crescent.
- Possible suspension of parking bays
- Impact of vehicle traffic on children attending Carlton Primary School
   Clifford Devlin Ltd.



| REF           | D973-DP-01-D   |
|---------------|----------------|
| DATE          | 11th July 2013 |
| Page 47 of 49 |                |

These issues have been recognised in producing the plan. In particular the plan recognises the need to stop heavy traffic moving down Vicar's Road to avoid any impact on the church, no vehicles going across the Grafton Road bridge over the railway lines and minimising use of Queen's Crescent to a very limited number of vehicles. In addition no suspension of parking bays is required and traffic movements have been aligned to take place outside the school run.

Clifford Devlin and its client have held a number of discussions and shared information with other contractors currently involved in works in the immediate vicinity to the District Housing Office site. These include works to the Bacton Tower, Wellesley Road and also redevelopment works to a care home site on the corner of Wellesley Road and Haverstock Road. Discussions about vehicle movements have seen the routes for vehicles associated with these two projects going via Haverstock Road and Prince of Wales Road which in the immediate locality is separate from the majority of the demolition traffic subject to this plan which will go via Grafton Road.

In the immediate future a meeting will take place with representatives of traders in Queen's Crescent to advise on the timing of the limited number of heavy goods vehicles which will travel down that road.



| REF           | D973-DP-01-D   |
|---------------|----------------|
| DATE          | 11th July 2013 |
| Page 48 of 49 |                |

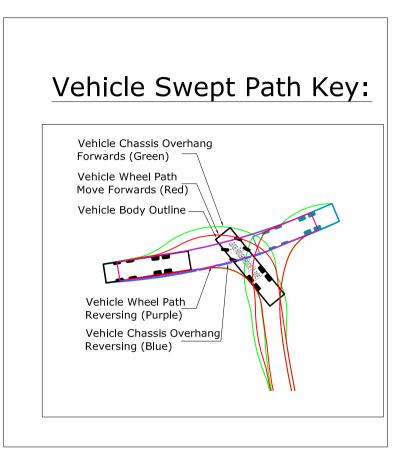
Appendix 1

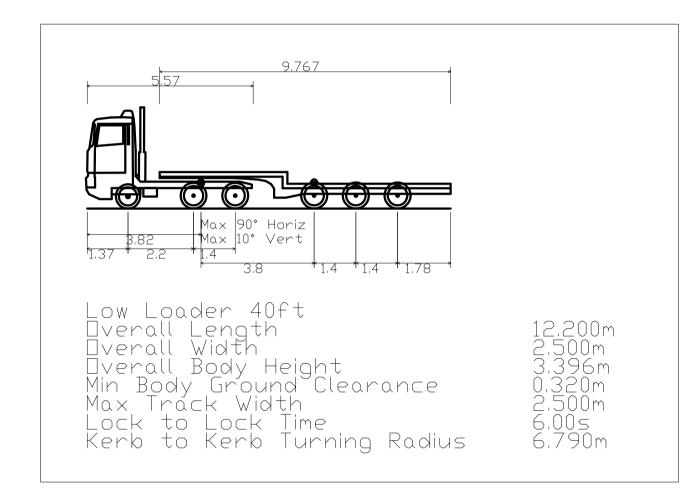
Vehicle tracking plans

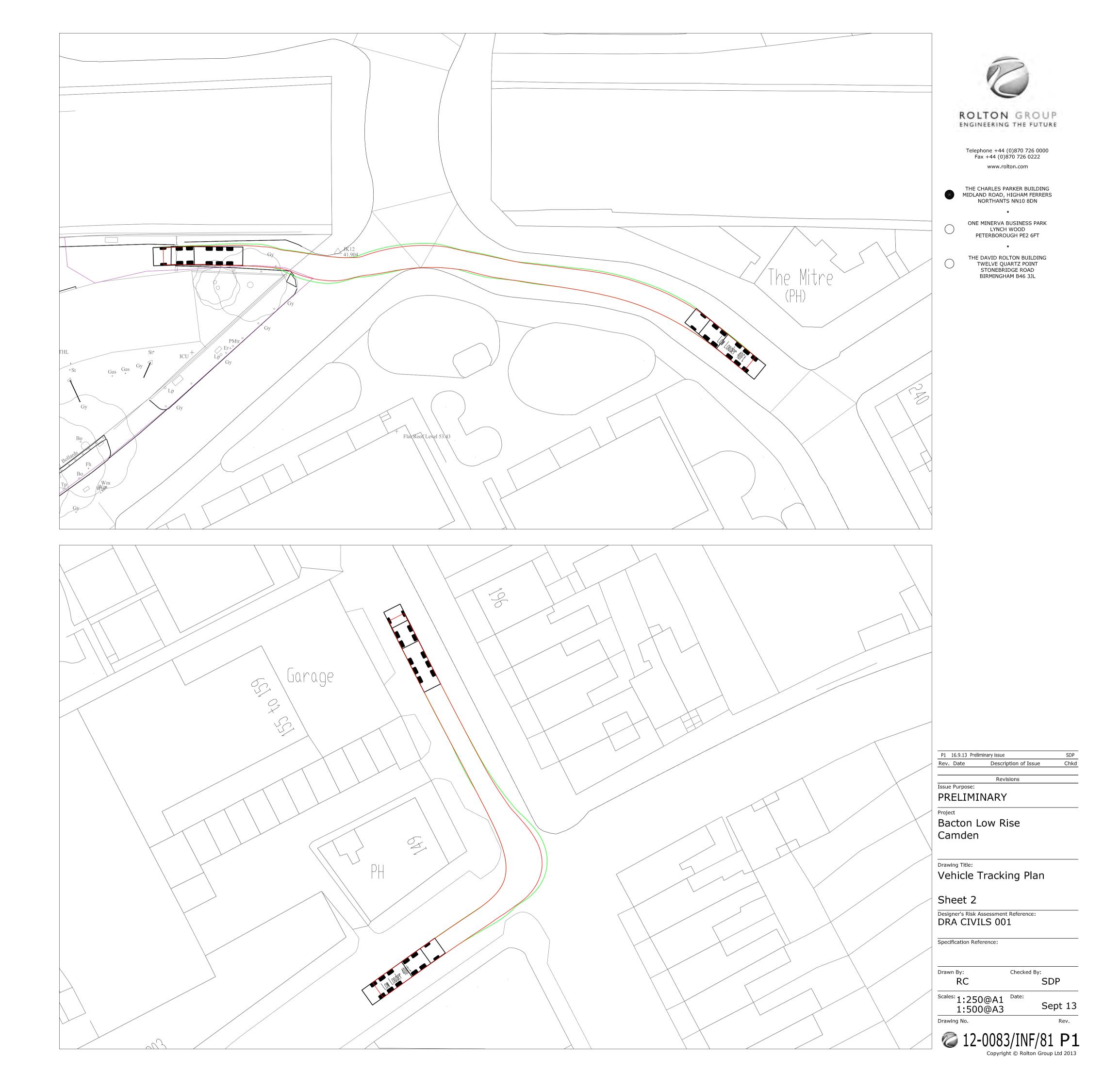
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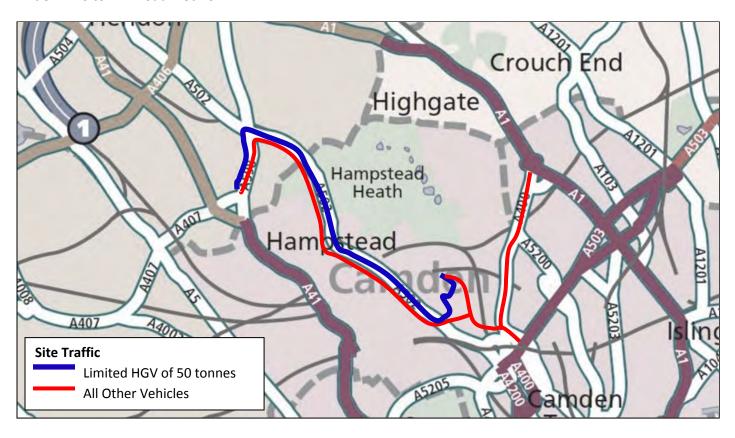


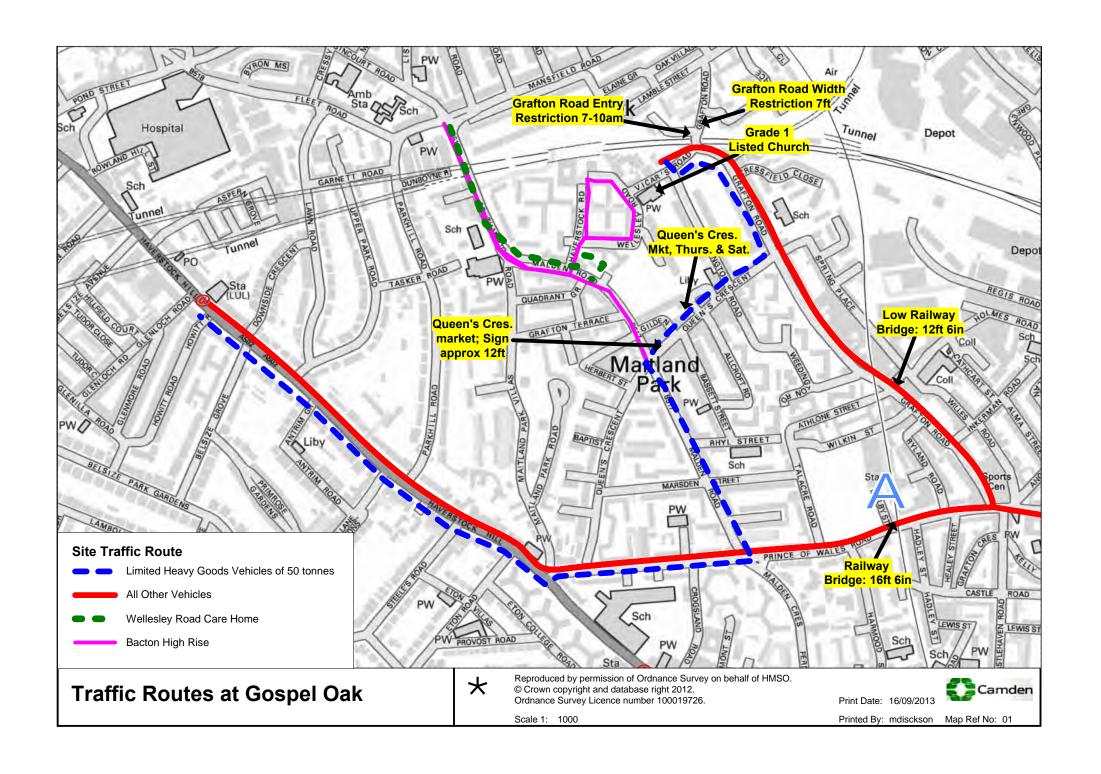
| REF           | D973-DP-01-D   |  |  |
|---------------|----------------|--|--|
| DATE          | 11th July 2013 |  |  |
| Page 49 of 49 |                |  |  |

Appendix 2

Route to Transport for London Road Network

# Wider links to TFL Road Network





# **BACTON LOW RISE**



# **REDEVELOPMENT**

CONSTRUCTION MANAGEMENT PLAN



# Content

| Section 1 |     | Introduction                                                              |
|-----------|-----|---------------------------------------------------------------------------|
|           |     | Site History                                                              |
|           |     | Pre Application Engagement                                                |
|           |     |                                                                           |
| Section 2 | 2.0 | Methodology                                                               |
|           | 2.1 | Programme                                                                 |
|           | 2.2 | Construction Methodology                                                  |
|           | 2.3 | Demolition                                                                |
|           | 2.4 | Excavation & Foundations                                                  |
|           | 2.5 | Superstructure Frame & Envelope                                           |
|           | 2.6 | Internal Finishes                                                         |
|           | 2.7 | Landscaping                                                               |
|           | 2.8 | Tower Crane Erection and dismantling                                      |
|           |     |                                                                           |
| Section 3 | 3.0 | Access                                                                    |
|           | 3.1 | Access Routes                                                             |
|           | 3.2 | Vehicle Sizes & Tracking                                                  |
|           | 3.3 | Vehicle Movements                                                         |
|           | 3.4 | Over sized verticals for Tower Crane,<br>Excavator & Pilling Rig Delivery |
|           | 3.5 | Phasing & Peak Movements                                                  |
|           | 3.6 | Light Goods Vehicles                                                      |
|           | 3.7 | Interface with Adjoining Sites                                            |
|           | 3.8 | Pedestrian and Cyclist Safety                                             |
|           | 3.9 | Pedestrian and Road User Safety                                           |

| Section 4                        | 4.0 | Nuisance Control                                                           |
|----------------------------------|-----|----------------------------------------------------------------------------|
|                                  | 4.1 | Dust Control                                                               |
|                                  | 4.2 | Wheel Wash                                                                 |
|                                  | 4.3 | Noise Control                                                              |
|                                  | 4.4 | Site Security                                                              |
|                                  | 4.5 | Consultation with Local Residents                                          |
|                                  | 4.6 | Travel Plan                                                                |
|                                  |     |                                                                            |
| Section 5                        | 5.0 | Proposed Mitigation Measures                                               |
|                                  | 5.1 | Considerate Contractors Scheme (CCS)                                       |
|                                  | 5.2 | DHO/BLR Emergency Access Strategy                                          |
|                                  |     |                                                                            |
|                                  |     |                                                                            |
| Section 6                        |     | Summary                                                                    |
| Section 6                        |     | Summary                                                                    |
| Section 6 Appendices             |     | Summary                                                                    |
| Appendices                       |     |                                                                            |
|                                  |     | Summary  Gant Chart Programme                                              |
| Appendices                       |     |                                                                            |
| Appendices  Appendix A           |     | Gant Chart Programme                                                       |
| Appendix A Appendix B            |     | Gant Chart Programme Site Management Plans                                 |
| Appendix A Appendix B Appendix C |     | Gant Chart Programme Site Management Plans Construction Vehicle Route Maps |

# **SECTION 1**

## Introduction

This document describes the construction methods of the Redevelopment of Bacton Low Rise. The project will be constructed in three phases over a 4.5 year time line. At this stage some things may be subject to modification during the construction period. Any major changes or modification will be discussed with the London Borough of Camden's planning department and this document will be updated to reflect the change and resubmitted for approval.

For this reason stated above the following assessment is based on reasonable assumptions in the construction programme and experience in relation to other development sites of a similar size and nature. The site is located in north London, within the London Borough of Camden and within the Gospel Oak ward. The site is bound to the north by the mainline railway line which runs between Kentish Town and West Hampstead, to the east by Vicars Road and Wellesley Road, to the south by Wellesley Road and to the west by Haverstock Road.

The site is adjacent to two listed buildings, the Grade 1 Listed St Martins Place and the Grade II listed French School and Church.

The area subject of the planning application is split into two parts. First is the Bacton Low Rise Estate (BLR site) comprising Flats 121-180 Bacton, Haverstock Road, NW5 4PS and Flats 181 to 219, Haverstock Road, NW5 4PT.

Second is the District Housing Office site (DHO site) comprising the Gospel Oak District Housing Office, 115 Wellesley Road, NW5 4PA (note there is a vacant building, 113a Wellesley Road, within the courtyard) and employment Units at 2 - 16 Vicars Road, NW5 4NL.

Bacton Low Rise TRA Hall and Wendling Estate Hall, 117 Vicars Road, NW5 4PA are also included within the planning application boundary but no changes are proposed to these assets.

# History

The redevelopment of the Bacton Low Rise Estate is part of the Council's Community Investment programme, a long term programme designed to modernised the Council's community assets including its retained housing stock.

Feasibility studies commenced with the local community in 2011 leading to a planning submission in November 2012 and a resolution to grant planning consent at the Council's Development Control Committee in March 2013

# **Pre Application Engagement**

Prior to the submission of the planning application a series of public consultation events was held with the local community, initially from the early stage of feasibility studies in Autumn 2011 through RIBA Stage C consultation exercises at evening and weekends through 2012.

Since then further engagement has taken place with the tenants and the community around further construction programme activities including:

- June 2013 Demolition Update Leaflet
- 25 June 2013 Phase 1 Demolition Construction Group Meeting

- 30 July 2013 Phase 1 Demolition Construction Group Meeting
- 3 September 2013 Demolition and Construction Management Monitoring Group

# **SECTION 2**

# 2.0 Methodology

# 2.1 Programme

The project will be developed in three consecutive phases over a 4.5 year time scale as laid out below.

| Activity                       | Construction | Construction |
|--------------------------------|--------------|--------------|
|                                | Start        | Completion   |
| Demolition of the DHO site     |              |              |
| Phase 1 Enabling works         | 10.03.2014   | 09.04.2015   |
| Phase 1 Construction Start     | 09.04.2014   | 25.09.2015   |
| Phase 1 Completion             |              | 25.09.2015   |
| Decant & Re Housing            | TBC          | TBC          |
| Demolition of the phase 2 site | 25.09.2015   | 20.11.2015   |
| Phase 2 Enabling works         | 20.11.2015   | 26.01.2016   |
| Phase 2 Construction Start     | 26.01.2016   | 20.03.2018   |
| Phase 2 Completion             |              | 20.03.2018   |
| Decant & Re Housing            | TBC          | TBC          |
| Demolition of the phase 3 site | 20.03.2018   | 01.05.2018   |
| Phase 3 Enabling works         | 01.05.2018   | 18.06.2018   |
| Phase 3 Construction Start     | 18.06.2018   | 15.11.2019   |
| Phase 3 Completion             |              | 15.11.2019   |

## A gant chart programme can be found in Appendix A

The table below gives an indication of the number of people working on site at the various stages of each of the project. The numbers are based on reasonable assumptions in the construction programme, experience in relation to other development sites of a similar size and nature, and the best judgement.

Phase 1

| Activity                 | Approx<br>Duration<br>in weeks | Site<br>Management<br>team | Traffic<br>coordinators | Operatives | Total |
|--------------------------|--------------------------------|----------------------------|-------------------------|------------|-------|
| Enabling Works           | 12                             | 6                          | 2                       | 12         | 2     |
| Groundwork's             | 18                             | 6                          | 2                       | 18         | 26    |
| Frame Construction       | 36                             | 6                          | 2                       | 7          | 15    |
| Cladding & Roofing       | 28                             | 8                          | 4                       | 42         | 54    |
| Fit Out                  | 44                             | 10                         | 4                       | 76         | 90    |
| Commissioning & Finishes | 17                             | 10                         | 4                       | 76         | 90    |

## Phase 2

| Activity                 | Approx<br>Duration<br>in Weeks | Site<br>Management<br>team | Traffic<br>coordinators | Operatives | Total |
|--------------------------|--------------------------------|----------------------------|-------------------------|------------|-------|
| Demolition               | 18                             | 4                          | 2                       | 25         | 31    |
| Enabling Works           | 12                             | 6                          | 2                       | 12         | 20    |
| Groundwork's             | 24                             | 6                          | 4                       | 24         | 34    |
| Frame Construction       | 24                             | 6                          | 4                       | 35         | 45    |
| Cladding & Roofing       | 36                             | 10                         | 4                       | 56         | 70    |
| Fit Out                  | 56                             | 12                         | 4                       | 92         | 108   |
| Commissioning & Finishes | 24                             | 12                         | 4                       | 92         | 108   |

### Phase 3

| Activity                 | Approx<br>Duration<br>in weeks | Site<br>Management<br>team | Traffic<br>coordinators | Operatives | Total |
|--------------------------|--------------------------------|----------------------------|-------------------------|------------|-------|
| Demolition               | 12                             | 6                          | 2                       | 12         | 2     |
| Enabling Works           | 18                             | 6                          | 2                       | 18         | 26    |
| Groundwork's             | 18                             | 6                          | 2                       | 24         | 32    |
| Frame Construction       | 28                             | 8                          | 4                       | 42         | 54    |
| Cladding & Roofing       | 44                             | 10                         | 4                       | 76         | 90    |
| Fit Out                  | 17                             | 10                         | 4                       | 76         | 90    |
| Commissioning & Finishes | 12                             | 6                          | 2                       | 12         | 2     |

# 2.2 Construction Methodology

In the following section explains the intended way of carrying out the construction of Bacton Low Rise.

To start we enclose a table of plant that is expected to be used on site, more detail will be given at each stage of the document.

#### **Schedule of Mechanical Plant**

| Plant                                   | Stage        |                |         |  |
|-----------------------------------------|--------------|----------------|---------|--|
|                                         | Substructure | Superstructure | Fit-out |  |
| Tracked / wheeled 360 degree excavators | ✓            |                |         |  |
| Breakers                                | ✓            |                |         |  |
| Crushers                                | ✓            |                |         |  |
| Dumpers                                 | ✓            |                |         |  |
| Tower & Mobile<br>Craneage              | ✓            | ✓              | ✓       |  |
| Muck away trucks                        | ✓            |                |         |  |
| Air Compressors                         | ✓            |                |         |  |
| Diamond cutting tools / saws            | ✓            | <b>✓</b>       |         |  |
| Power Tools                             | ✓            | ✓              | ✓       |  |
| Hand / power tools                      | ✓            | ✓              | ✓       |  |
| Wheel Washing Plant                     | ✓            |                |         |  |
| Scaffold                                | ✓            | ✓              | ✓       |  |
| Delivery trucks                         | ✓            | ✓              | ✓       |  |
| Skips and Skip trucks                   | ✓            | ✓              | ✓       |  |
| Forklift trucks                         |              | ✓              | ✓       |  |

<sup>✓</sup> Indicates plant will be used during that stage of works

## **Craneage Strategy**

The craneage strategy is to use tower cranes; a lifting plan will be drawn up for each crane. All oversailing rights and agreements with Network Rail I will be agreed before the cranes are erected. Each crane will have radio contact with the banksmen on site and will be guided by them. The drawings in Appendix B show the position of each crane and the operating radius.

#### **Materials and Resource Use**

Wherever possible, waste construction materials will be re-cycled. Demolition material will be crushed on site and reused under the new road and car parking. Waste timber will go to a timber recycling company such as the Shore Trust. Any surplus usable materials will be collected via Bio Regional and taken for resale for charitable causes

### **Hours of Work**

Working hours for demolition and construction will be as set out below:

- 08:00 18:00 hours on weekdays;
- 08:00 13:00 hours on Saturdays; and
- No working on Sundays or public holidays.

Any work outside these hours will be subject to prior agreement, with reasonable notice (typically 14 days) to the London Borough of Camden which may impose certain restrictions.

# 2.3 Demolition of Existing Buildings

The demolition of the buildings to clear the phase 1 site known as DHO site is not part of Rydon Construction work and is covered by a separate CMS. However the following paragraph we believe to a brief description of the works to be done.

To control dust emissions during the works, scaffold will be fully sheeted in fire retardant plastic sheeting. In addition to this, excavators will also be fitted with boom and dipper arm mounted water spray attachments that spray water directly onto the work area. The water will be supplied from temporary water supplies on site.

In general, demolition works to the proposed buildings within each Phase will be undertaken by large reach excavators mounted with hydraulic shears and crackers that will systematically cut the masonry and reinforced concrete into manageable sections which in turn will be stockpiled.

The debris will be removed from the upper levels of the building and for the residential elements of the project through the existing shafts. The raisings will be cleared from the existing lift shafts and then be loaded into roll on off bins and skips by secondary excavators fitted with grapple / bucket attachments for transportation off site to recycling facilities.

The programme for demolition works can only be indicative at this stage and should be adequate for hazardous substances removal, strip out and demolition works.

#### Phase 2 & 3 Demolition

All following phases phase 2 & 3 will be covered by the works carried out by Rydon Construction. Before works start the site will have a 2.4m high hoarding erected on the boundary. See drawing in Appendix B for a description of the works as we see them at this stage of the project.

## **Asbestos and Removal Method**

The enclosure will be constructed of 1000g Poly sheeting. All doorways that do not need to be accessed within the flats will be sheeted off with polythene, using Spray glue and staples covered with cloth tape.

Airlocks used will be a minimum size of  $1m \times 1m \times 2m$  in size, constructed of 1000g poly. There is no available space for a bag lock.

CCTV will be used on this project together with, where appropriate, the use of vision panels.

The balcony area will be sheeted off using lengths of 2x2 timbers and 1000g poly sheeting. This will also be secured and fixed using spray glue, staples and cloth tape.

NPU's situated in the upper flats will have a NPU2000 with a suitable roving head, to reach all floors within the flat space. NPU's will be vented to atmosphere.

Flats on the ground floor will also have a 3 stage airlock connected to the doorway inside the Garage area. A screen will be erected across the lounge room allowing access to the 1<sup>st</sup> floor riser. There will also be a NPU attached to the ground floor part of the enclosure situated as near to the bottom or the riser and at furthest point away from the airlock for best airflow.

The AIB riser panels are screwed into a metal frame. Operatives will initially remove the front panel by using a shadow vacuum technique and screwdriver. As the first panel is pried away from its fixing, the unpainted side will be sprayed with surfactant from an air pressure sprayer to ensure fibre release is kept to minimum levels. Once thoroughly wet, it will be placed immediately into a red asbestos waste bag. Once access to the riser has been gained, operatives will spray the remaining unpainted sides of the AIB with the surfactant mixture. All panels once thoroughly wetted, will be unscrewed with hand tools and Vacuumed at point of work, again to minimise any fibre release. All panels will placed in Red Asbestos waste bags. Waste bags will be tied using cloth tape. No waste will be left on the floor

The metal framing within the riser will be removed with hand tools and wrapped in 1000g poly sheeting and disposed of as asbestos waste. All remaining surfaces inside the riser and enclosure will be vacuumed off and then wiped down with wet rags and tac-rags. All floors will be hoovered and wiped over as well.

All red asbestos waste bags will be wiped over and then placed in a clear asbestos waste bag and tied at the neck with cloth tape. These will be passed out through the airlock and taken to the allocated skip on site.

The enclosure and airlocks will be thoroughly cleaned with H-type Vacuums and wet rags prior to a Visual inspection.

## **Soft Strip**

All flats and garages will be checked prior to work commencing for signs of drug use, on discovery, the site manager will be informed and appropriate measures taken.

Operatives using small hand tools will commence stripping out doors, frames, floor coverings, internal stud partitions fixtures and fittings etc using small hand held tools, starting on the upper floors.

Skips will be positioned to the front and back elevations of the buildings, the skips will have temporary Scaffold shoots with heras fencing erected around them and double clipped to prevent any persons entering the area. The heras fencing will have signs erected to alert persons of a drop zone. Banksmen will be positioned within the building and at ground floor adjacent to the skip. The banksmen will be in contact with each other using mobile radios.

All arisings will then be dropped into the skips.

All arisings from the ground floor soft strip will be placed into piles on the ground outside the flats, on completion; all arising will then be loaded into skips using an excavator equipped with a rotating grapple.

All loads removed from site will be logged by the site manager and copies of all disposal tickets will be forwarded to for entry on to the smart waste tracker.

#### **Demolition of the structure**

Floors will be cleared as the soft strip proceeds as not to overload any area. Floors will also be kept clear to maintain all fire escapes.

The building will be checked for persons prior to any demolition commencing and all site operatives and staff will be accounted for.

A 34 tonne long reach excavator equipped with rotating pulveriser will start to demolish the roof of the main building, removing one bay at a time; working in small increments, to expose the building frame, the walls to the same bay will then be demolished down to third floor level, and all materials will be allowed to fall onto the ground below. Once the external walls to one bay have been demolished the excavator will commence munching away at the concrete beam floors, this will continue until the floor has been demolished back to the next supports. The same method will be adopted until all the floors have been removed down to ground level.

During the Demolition progress a M.E.W.P will be placed adjacent to the building to enable an operative to control any dust emissions created by the Demolition works with controlled damping down. This will continue as the Demolition progresses.

On completion of the removal of the first bay, the excavator will then commence removing the next bay, using the same method as above.

All arisings will then be moved to the side to allow the long reach to proceed with the demolition; a 34tonne excavator equipped with a rotating grapple will assist in the demolition of the building.

Once the building has been demolished to first floor level, additional excavators equipped with various attachments will assist in the demolition.

The building will be constantly monitored as demolition progresses to ensure the integrity of the structure.

All arisings will then be moved to a stockpile ready for crushing.

## **Removal of Foundations**

A permit will be issued prior to breaking out of any slabs and any services still present, located and marked.

On completion of the demolition of the buildings, the existing ground floor slabs and building foundations will be broken up using the excavators with hammer attachment. Additional care will be taken as not to disturb any manholes, and drain runs, which may be present within the site, unless to be removed.

All materials from the slab and foundation removal will be transported to a central stockpile ready for crushing.

#### Crushing

A Pegson 1100  $\times$  650 tracked crusher or similar will be employed along with the excavators to crush the materials and stockpile them in separate piles for future re-use.

All crushed concrete /hardcore material will be left onsite for re use for the piling mats.

All voids will be backfilled as works progress using surplus crushed materials.

To reduce the number of lorry movements the majority of crushed material will be kept on site for use as the piling mat. The mat will be subject to design by the piling company. We have included below a table showing the expected lorry movements for the demolition.

## **Monitoring**

During all demolition works monitoring will be carried out keeping close control over Dust, Vibration and Noise. All logs from the monitoring process will be kept on site for inspection if needed.

Dust Monitoring will be carried out to BS 6069.

Vibration Monitoring will be carried out to BS 4142

Noise Monitoring will be carried out to BS 5228

# 2.4 Excavation & Foundations

Any Tree Protection measures required will be in place and signed off by the LB of Camden arboriculture officer.

All necessary permissions and consultation will take place prior to any works starting. Amongst others consultation will take place with the following bodies. When agreements are in place the works will start.

- Network Rail
- National Grid
- Thames Water
- British Telecom
- Virgin Media
- SGN
- London Borough of Camden Highways Department

This piling mat will be laid in line with the design by the piling contractor. On completion of the mat the rig will be delivered to site and set up along with other associated plant such as the agitator. Piles will be set out to the engineers drawing using an EDM.

Piles will be constructed using a CFA piling rig. The rig will complete approximately 15 piles per day. If needed, a second rig will be used to keep to the contract programme.

A permit will be issued prior to breaking out When the piles have been allowed to cure for 7 days excavation of the pile caps will commence using a 35 ton 3600 excavator and the piles will be reduced by using a "Pile cracker" the concrete will be removed, using the pile cracking tool attached to an excavator and should be done without the use of hand tools in line with HSE guidance, the de-bonding sleeves that will be pre fitted to the pile during the casting stage will assist this process.

The pile caps will be cast in situ along with the ground beams in line with the structural engineers design. As the beams are completed the drainage and service

ducts will be placed and the sub structure brickwork installed. On completion of the brickwork the ground floor slab will be pored in situ.

# 2.5 Superstructure Frame & Envelope

As areas of the ground floor slabs are completed the construction of the concrete frame will commence. The frame will be constructed in situ. First the reinforcement cages will be made up in a designated area of the site and then the cages will be lifted in place using the tower crane, pan shutters will be erected around the reinforcement and the concrete will be pored in place again using a hopper lifted by the tower crane. When all of the columns and shear walls have been cast the table shutters will be erected to form the temporary support for the following floor / roof and the reinforcement placed and spaced off the table shutters and concrete will be pored using a mobile concrete pump. After curing the shutters will be removed and temporary back propping will be put in place. This process will be repeated until the building or section of the building are at the correct height.

All table shutters and back propping will be designed by the shutter designer and installed in line with that design.

# **Envelope**

This work will be completed from the scaffold that will be erected after the concrete frame is complete. As the scaffolding is completed the construction of the inside skin of the external wall will start. The wall be built up off the concrete frame, light weight metal studwork framing is erected and window and door openings are trimmed forming the permanent openings. When the studwork is complete it is clad in a cement braced board. When complete the brick cladding can start. Brickwork will go up in 1.5m lifts until the correct height is reached.

The work areas will be serviced by the tower crane placing materials on to loading bays on the scaffold. Each lift will be controlled and supervised by banksmen who will be in radio contact with the crane driver.

# 2.6 Internal Finishes

The Fit out works will be traditional domestic fit out comprising of the following.

- Insulation
- Tacking and Dry lining
- Plumbing inc Heating services
- Electrical
- Carpentry
- Wall & Floor finishes

The work area will be fed via the courtyard elevations of the building and internal staircases to low level and forklift and tower crane to higher level.

The work will be sequenced from the upper floors working down though each core.

- First Fix Trades
- Tacking and Dry lining
- Second Fix Trades
- Decorations
- Finishes

# 2.7 Landscaping

## Hard & soft landscaping

The hard landscaping will start when the scaffolding has been dropped and cleared from site. Small 3 ton excavators will be used to complete any drainage and services and create the correct levels ready for the hard standings to be installed by the ground workers.

When the hard landscaping is close to completion the ply hoardings will be removed so that finishes can be completed to the surrounding public footpaths. Any fencing and railings will be installed to the approved drawings.

When works are being carried out close to the proximity of the public foot path then heras fencing will be used to provide separation between the work area and the general public.

When all paving and fencing has been completed and providing the works are in the correct season planting will be started.

# 2.8 MOBILE & TOWER CRANE ERECTION AND DISMANTLING

# The above should be read in conjunction with the SITE MANAGEMENT PLAN shown on Architect's Drawing 202-A-P-BLR-100-00

## Phase 1 (DHO SITE)

All lifts will be carried out by the erection of a Liebherr MK88 mobile crane or similar model. Before any lifting operations can commence on either the DHO or BLR sites, the site based logistics manager will co-ordinate the works with the crane hire and transport companies. They will agree on the specific route they are to take coming and leaving the site, and ensure both respective crane hire companies produce a specific method statement and risk assessment for approval and sign of by the Rydon safety manager and Network Rail. There will be a requirement for a Network Rail engineer to come to site to meet the respective crane hire company's operatives to discuss safety and risks associated with working along side the existing railway cutting.

There will be two number Luffer Jib tower cranes deployed on the site to aid the construction of the buildings (Please see attached Site Management Plan 2 of 3 showing locations in Appendix D). The erection of the tower cranes will be carried out using a mobile crane working within the site boundary.

Once the Tower Cranes are finished with they will be dismantled and taken from site. To take down tower crane 1, a mobile crane will need to be positioned on the road south of the Bacton High Rise Building, the mobile crane will be fitted with an extending luffer jib to allow it to reach over the newly constructed Block A to reach and lift sections of the tower crane down on to Wellesley Road (adjacent to the vicarage) for dismantling and loading on to lorries parked to the rear of the mobile crane. To accommodate this lifting operation the section of Wellesley Road and the road south of Bacton High Rise building, will need to be closed for the day, it is likely the road closure will take place over either a Saturday or Sunday all in agreeance and consultation with the LBC, residents and other stakeholders. Whilst the lifting operation is in process, there will be adequate traffic marshals on duty to ensure the safety of the residents and public alike. The route for the crane and lorries taking away the tower crane sections will be via Malden Road, Haverstock Road in to the holding position south of Bacton High Rise tower.

Tower crane 2, a mobile crane will need to be positioned in Vicar's Road South, (opposite No 20 Vicar's Road), the mobile crane will be fitted with an extending luffer jib to allow it to reach over the newly constructed Block B2 to reach and lift sections of the tower crane down on to Vicar's Road for dismantling and loading on to lorries parked in the temporary traffic order parking bay area on the north side of Vicar's Road. To accommodate this lifting operation this section of Vicar's Road will need to be closed for the day, it is likely the road

closure will take place over either a Saturday or Sunday all in agreeance and consultation with the LBC, residents and other stakeholders. Whilst the lifting operation is in process there will be adequate traffic marshals on duty to ensure the safety of the residents and public alike. The route for the crane and lorries taking away the tower crane sections will be via Malden Road, Haverstock Road, in to the holding position south of Bacton High Rise tower.

Access and egress for both the mobile crane and lorries to take away sections of the tower crane 1, will be via Grafton Road then reversing in to Vicar's Road.

# On no account will any vehicles be allowed to traverse the full length of Vicar's Road and Weddington Road.

## Phase 2 (BLR Site)

The erection of the two Luffer jib tower cranes will be carried out using an all terrain multi axle mobile crane positioned within the site boundary. Prior to the cranes coming to site and any lifting operations commencing the site based logistics manager will co-ordinate the works with the crane hire and transport companies, agree on the specific route they are to take coming and leaving the site, and ensure the respective crane hire companies produce a specific method statement and risk assessment for approval and sign of by the Rydon safety manager.

Articulated lorries with trailers will come to site and park in Wellesley Road (South of the site). The lorries will be programmed to come to site at timed intervals for unloading and erecting of the tower crane components. All vehicle deliveries will be over seen and organised by the on site logistics manager and once on site be managed by the resident traffic marshals. There will be adequate measures and signage in place to afford the safety of the BLR residents and general public alike.

For the taking down and dismantling of both tower cranes an all terrain multi axle mobile crane will be used. The mobile crane and articulated lorry and trailers will come to site using the main TFL routes, into Malden Road, and then Wellesley Road where the mobile crane will park and set up during which time we will apply to the LBC Highways for permits to have Wellesley Road temporarily closed to both BLR residents and the general public alike.

The crane will be fitted with a luffer jib to allow it to reach in to the site for the taking down of the tower cranes cabin/ jib and mast. As this is done each section will be laid down in Wellesley road (which will be closed) to allow for dismantling and then loading on to lorries. The removal of the tower crane will be co-ordinated by the site based logistics manager and site based traffic marshal's and over seen by a Rydon site manager.

On no account will any vehicle be allowed to go beyond the designated lifting area in Wellesley Road and down past the Church turning in to Vicar's Road.

# Phase 3 (BLR Site)

The erection of the Luffer jib tower crane will be carried out using an all terrain multi axle mobile crane positioned within the site boundary. Prior to the cranes coming to site and any lifting operations commencing the site based logistics manager will co-ordinate the works with the crane hire and transport companies, agree on the specific route they are to take coming and leaving the site, and ensure the respective crane hire companies produce a specific method statement and risk assessment for approval and sign of by the Rydon safety manager.

Articulated lorries with trailers will come to site and park in Haverstock Road (West of the site) during which time we will apply to the LBC Highways for permits to have Haverstock Road temporarily closed to both vehicle and pedestrian traffic. The lorries will be programmed to come to site at timed intervals for unloading and erecting of the tower crane components. All vehicle deliveries will be over seen and organised by the on site logistics manager and once on site be managed by the resident traffic marshal's. There will be adequate measures taken with signage in place to afford the safety of the BLR residents and general public alike during the road closure.

For the taking down and dismantling of the tower crane an all terrain multi axle mobile crane will be used. The mobile crane and articulated lorry and trailers will come to site using the main TFL routes, into Malden road, and then along Haverstock Road into the LBC private road South of Bacton High Rise tower where the mobile crane will stop and be set up. As with the erection of the tower crane the articulated lorries will park in Haverstock road with us applying to LBC Highways for permits allowing a temporary road closure to vehicles and pedestrian traffic.

The crane will be fitted with a luffer jib to allow it to reach in to the site for the taking down of the tower crane cabin/ jib and mast. As this is done each section will be laid down in the private section of road (which will also be closed to vehicle and pedestrian traffic) to allow for dismantling and then loading on to lorries. The removal of the tower crane will be co-ordinated by the site based logistics manager and site based traffic marshal's and over seen by a Rydon site manager. There will be adequate measures taken with signage in place to afford the safety and security of the BLR residents and general public alike during the road closure.

On no account will any vehicle be allowed to go beyond the designated lifting area in Wellesley Road and down past the Church turning in to Vicar's Road.

## **SECTION 3**

# 3.0 Access

## 3.1 Access Routes

Access to and from the site across the wider network will vary depending on the phase of construction as set out below.

- Phase 1 (DHO Site) Mobile cranes and low loaders will reach the site via Haverstock Hill, Prince of Wales Road, Malden Road, Queen's Crescent, Grafton Road and the east part of Vicar's Road. All other vehicles will travel via Prince of Wales Road, the vehicle holding area on Grafton Road and park either on the Phase 1 site or to the allocated temporary traffic order parking area north site of Vicar's Road. Please see attached vehicle swept path drawings in Appendix D. On no account will any construction traffic be allowed to traverse the full length of Vicar's Road or use Weddington Road. Subject to the size and weight of load on the low loader (Piling Rig / Excavator aided by police escort) it's likely they will have to use Grafton Road in lieu of Queens Crescent.
- Material deliveries on Phase 1 (DHO Site) for the first 30 weeks or so will be via Grafton Road on to site at the Eastern end via the Network Rail access road. There will be vehicle parking to the suspended bays covered under the temporary traffic order in Vicars Road as and when necessary. As works progress, deliveries from site will come from Grafton Road into Vicar's Road, turning on to the site via the entrance just opposite Weddington Road (going West just past the 4 number London Plane trees). Please see vehicle swept paths for this area in Appendix D. On no account will any construction traffic be allowed to travel along the full length of Vicar's Road, (e.g. going West past 20 Vicar's Road) or indeed use Weddington Road. The roads will be policed every day by one of the on site traffic marshals to ensure no infringement of site traffic rules.
- Phase 2 (BLR Site) All vehicles will travel via Malden Road, Haverstock Road (Save Mobile cranes for taking down tower cranes)
- Phase 3 (BLR Site) All vehicles will travel via Malden Road, Haverstock Road.

These routes are shown on the attached traffic route drawings at Appendix C.

The vehicle holding area in Prince of Wales road will only be retained to facilitate vehicle deliveries for Phase 1 (DHO Site) only. Rydon will explore alternative vehicle holding areas in Gospel Oak i.e. Malden Road, for Phase 2 and 3 deliveries and proffer same to the London Borough of Camden Planning and Traffic Management departments in ample time for consultation and acceptance prior to works commencing on Phase 2 and 3.

All material deliveries for Phase 2 will now be made using Haverstock Road. On no account will any construction related traffic be permitted to use Wellesley and Vicar's Roads, except mobile cranes. Please see the Site Management Plan for Phase 2 and 3 in Appendix B.

All manoeuvring close to the site frontages will be controlled by traffic marshals. Off-site signage will be used to identify access routes and entry points to each site.

# 3.2 Vehicle Sizes & Tracking

The following is a list of many of the vehicles that will need to gain access to the site during the demolition and construction process.

- 4 wheel self unload flat back lorries
- 6 wheel self unload flat back lorries
- 8 wheel tipper trucks
- articulated lorry with low loader trailer
- 4 wheel tanker delivering diesel
- 4 wheel 3 tonne van
- 6 wheel all terrain mobile crane
- 8 wheel all terrain mobile crane
- 8 wheel ready mix concrete lorries

Swept paths of key junctions on the access routes set out above are as attached vehicle traffic plot drawings at Appendix D.

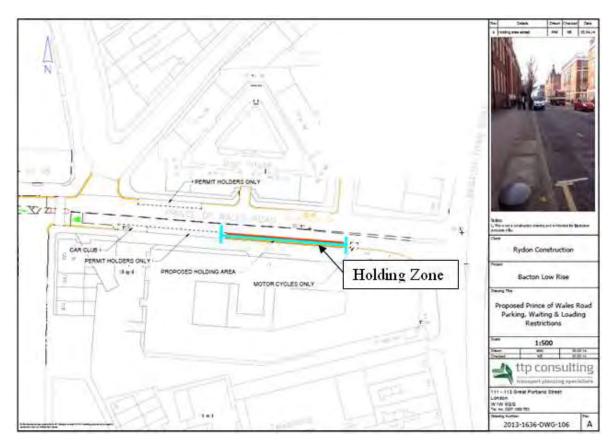
Within each redevelopment site as construction progresses there will be changes to the site access arrangements and how they relate to the roads bounding each site. Vehicles will be brought on site wherever possible, though as construction on each site advances there is less on-site available to turn vehicles and so there will be a stage on each site where large vehicles will not be able to enter and will have to wait on the site boundary.

## 3.3 Vehicle movements

Vehicles will generally access the sites between 08:00 and 18:00 Monday to Friday and Saturday 08:00 to 13:00, with no construction vehicle movements permitted on Sundays or during public holidays.

In order to minimise the interaction between school and construction traffic no vehicles will enter or leave the sites between 08:30 to 09:30 and 15:00 to 16:00 during school term times, save ready mix concrete deliveries between 08:00 and 17:30.

Market days on Thursday and Saturday and Friday prayer time at the Mosque will be avoided for the use of the Queen's Crescent route. Deliveries for phase 1 will be required to hold at a holding point located on Prince of Wales road, as per the diagram overleaf.

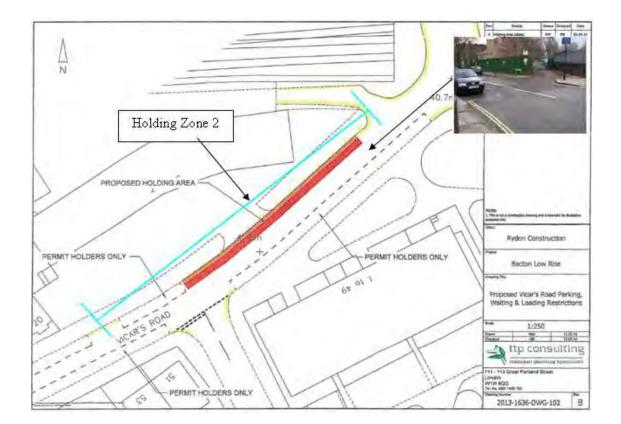


For the DHO site this holding area will be the first point of call for all delivery vehicles before entering the site. Scheduled vehicles will arrive at the holding area and be greeted by a Rydon traffic marshal (Traffic Marshal No1) who will assist in the parking of that vehicle. Traffic Marshal No1 will then liaise with Traffic Marshal No2 on site via two way radio, advising when vehicles can leave the holding area and travel up Grafton Road to site.

Only one delivery vehicle will be permitted to travel along Grafton Road at one time and therefore only once one vehicle has left site can another from the holding area be allowed to travel to site. This process avoids vehicles crossing and will minimise disruption. As a further means of managing Site Traffic another traffic marshal (Traffic Marshal No3) will be located outside Carlton School who will provide added safety around the school and vehicle traffic coming from Queens Crescent.

A secondary holding area will be located outside the site boundary on Vicar's Road, see below. Vehicles will predominantly be held here for access to site when the primary site entrance has to be closed due to Block C frame erection. This holding area will be managed and controlled by the site banksmen and Traffic Marshals in conjunction with the procedure with Holding Zone 1.

These holding areas will only be utilised for the construction at the DHO site.



All site deliveries will be scheduled so as to minimise the chance of having unannounced deliveries. Rydon will maintain a zero tolerance towards non compliance with its traffic management plan and any unscheduled deliveries.

In the event of any non-compliance such delivery will be turned away which will result in a non-conformance report being sent to that supplier / subcontractor.

Each delivery will comprise of two movements, arrival and departure. The movement table will be updated to provide more specific detail of anticipated delivery times once the date for works to start on site has been determined.

The tables below set out the anticipated number, frequency and size of construction vehicles for each section of the works. The week in brackets is the start date of the activity within the construction programme for that phase of the works

On no account will any construction traffic be allowed to travel along Vicar's Road going west past 20 Vicar's Road, coming east along Vicar's Road from Wellesley Road, and the use of Weddington Road. There will be ample signage in place advising drivers of this site rule and this will be policed on a daily basis by one of the on site traffic marshals.

#### Phase 1 - DHO Site

#### Week 1 Site Strip and Reduce Dig.

• 7 x 4 axle / 8 wheel tipper trucks per day for 5 days coming to site taking away sub soil. (Week 1)

#### **Main Construction Works**

Establish Site offices and Welfare Accommodation.

- 12 x 4 axle / 8 wheel self unload flat back trucks and 1 x 2 axle / 4 wheel all terrain mobile crane. (Week 3)
- 4 x 2 axle / 4 wheel all terrain crane. (Weeks 3)

#### **Building Piling, Drainage and Ground Works.**

#### Weeks 1 to Week 13

- 3 x articulated lorries and trailers bringing to site piling rig and associated piling plant. (Week 2)
- 3 x articulated lorries and trailers bringing to site ground worker excavators / dumpers and associated plant. (Week 4)
- For 2 days x 6 x 4 axle / 8 wheel ready mix concrete lorries. (Week 3)
- For 2 days x 6 x 4 axle / 8 wheel tipper trucks removing pile spoil from site. (Week 4)
- For 1 day x 2 axle / 4 wheel flat back lorry delivering fencing and gates. (Week 1)
- For 2 weeks x 3 x 4 axle / 8 wheel flat back lorries delivering piling reinforcement (Week 2)
- For 1 day x 3 x 4 axle / 8 wheel self unload flat back lorries delivering drainage goods etc. (Week 5)
- For 5 days x 5 x 4 axle / 8 wheel tipper trucks removing piling spoil from site. (Week 5)
- For 3 weeks x 5 x 4 axle / 8 wheel ready mix concrete lorries (Week 3)
- For 3 days x 1 x 4 axle / 8 wheel all terrain mobile crane (Week 2)
- For 3 days x 2 x articulated lorries and trailers bringing tower cranes to site for erection. (Week 2)
- For 10 weeks x 1 x 3 axle / 6 wheel tanker delivering plant fuel. (Week 1)
- For 3 days x 1 x 4 axle / 8 wheel self unload flat back lorry bringing ground worker formwork to site. (Week 2)
- For 2 days x 2 x 3 axle / 6 wheel self unload flat back lorries delivering ground worker materials. (Week 2)
- For 4 weeks x 2 x 4 axle / 8 wheel flat back lorries delivering steel reinforcement. (Week 3)
- For 12 weeks x 9 x 4 axle / 8 wheel ready mix concrete lorries. (Week 5)
- For 12 weeks x 16 x 4 axle / 8 wheel tipper trucks removing pile and ground beam arisings. (Week 3)

- For 5 weeks x 2 x 4 axle / 8 wheel lorries delivering ground worker steel reinforcement. (Week 3)
- For 2 days x 2 x 3 axle / 6 wheel self unload lorries delivering ground worker materials. (Week 3)
- For 3 weeks x 3 x 4 axle / 8 wheel tipper trucks delivering building aggregates. (Week 4)
- For 12 weeks x 8 x 4 axle / 8 wheel ready mix concrete lorries. (Week 5)
- For 1 day x 2 x 2 axle / 4 wheel self unload flat back lorries delivering sundry building materials. (Week 4)
- For 1 day x 3 x articulated lorries and trailers taking from site piling rig and plant. (Week 6)
- For 1 day x 1 x 3 axle / 6 wheel self unload flat back lorry delivering district heating pipes. (Week 9)
- For 1 day x 3 articulated lorries taking ground worker plant and materials from site. (Week 18)
- For 12 weeks x 1 x 2 axle / 4 wheel road sweeper. (Week 2)

## Building CLT Frame, Envelope and Roofing Works. Week 14 to Week 50

- For 2 days x 1 x 4 axle / 8 wheel all terrain mobile crane to erect the CLT Frame.
- For 36 weeks x 1 articulated lorry (3 per week of CLT Construction per block: Block A= 8 weeks, Block B1= 16 weeks, Block C= 10 weeks and Block B2= 2 weeks)

#### Week 40 to Week 78 Building Internals and Finishes and External Works.

- For 20 weeks x 3 x 3 axle / 6 wheel flat back self unload lorries delivering metal studwork, plasterboard and plaster. (Week 41)
- For 20 weeks x 3 x 3 axle / 6 wheel flat back self unload lorries delivering joinery, sanitary ware, kitchen units, heating materials. (Week 52)
- For 20 weeks x 2 x 2 axle / 4 wheel lorries delivering decorating, wall tiles, flooring, ironmongery and electrical materials. (Week 52)
- For 36 weeks x 3 x 2 axle / 4 wheel skip lorries. (Week 38)
- For 24 weeks x 2 x 3 axle / 6 wheel self unload flat back lorries delivering ground worker and landscaper external works materials. (Week 52)
- For 18 weeks x 1 x 4 axle / 8 wheel large tipper trucks. (Week 52)
- For 2 days x 2 x 4 axle / 8 wheel all terrain mobile crane to take down 2 number tower cranes. (Week 64)
- For 2 days x 2 x 3 articulated lorries with trailers for taking away from site tower crane components. (Week 64)
- For 6 weeks x 2 x 2 axle / 4 wheel and 3 axle / 6 wheel lorries collecting plant and surplus materials from site. (Week 78)
- For 1 day x 2 axle / 4 wheel lorry collect site perimeter hoarding. (Week 78)

#### Phase 2 - BLR Site

#### Site Enabling Works

#### Week 1 to Week14

- For 2 days x 2 x 2 axle / 4 wheel flat back self unload lorry delivering site hoarding materials and gates. (Week 1)
- For 1 day x 2 x 3 axle / 6 wheel flat back self unload lorry delivering mobile office and accommodation units for demolition contractor. (Week 4)
- For 1 week x 5 x articulated lorry with low loader trailer delivering to site demolition plant and concrete crusher. (Week 4)
- For 10 weeks x 10 x 4 axle / 8 wheel tipper truck removing demolition arisings.
   (Week 6)
- For 10 weeks x 2 x 2 axle / 4 wheel tanker delivering diesel. (Week 4)
- For 10 Weeks x 2 axle / 4 wheel 3 tonne van servicing of demolition plant. (Week
   4)
- For 1 day x 2 x 3 axle / 6 wheel flat back self unload lorry collecting mobile office and accommodation units for demolition contractor. (Week 15)
- For 1 week x 5 x articulated lorry with low loader trailer collecting from site demolition plant and concrete crusher. (Week 15)
- For 10 weeks x 1 x 2 axle / 4 wheel road sweeper. (Week 5)

## Building Piling, Foundations and Drainage Works Week 15 to Week 39

- For 2 days x 2 x articulated lorries with low loader trailers bringing to site 2 number piling rigs. and associated plant. (Week 16)
- For 2 days x 3 x articulated lorries with low loader trailers bringing to site ground worker excavators, dumpers and associated plant. (Week 16)
- For 4 weeks x 3 x 4 axle / 8 wheel lorries delivering piling steel reinforcement cages. (Week 16)
- For 4 weeks x 60 x 4 axle / 8 wheel ready mix concrete lorries. (Week 17)
- For 4 weeks x 8 x 4 axle / 8 wheel tipper trucks removing piling spoil from site (Week 17)
- For 2 days x 2 x articulated lorries with low loader trailers collecting from site 2 number piling rigs and associated plant./ (Week 21).
- For 3 days x 1 x 4 axle / 8 wheel all terrain mobile crane for erecting two number tower cranes. (Week 19)
- For 3 days x 6 x articulated lorries with trailers delivering tower crane components. (Week 19)
- For 10 weeks x 3 x 4 axle / 8 wheel self unload flat back lorries delivering to site ground worker formwork and associated materials. (Week 17)
- For 12 weeks x 3 x 4 axle / 8 wheel self unload flat back lorries delivering to site basement and foundation steel reinforcement. (Week 18)
- For 10 weeks x 1 x 4 axle / 8 wheel self unload flat back lorry delivering sundry foundation materials. (Week 18)

- For 10 weeks x 2 x 4 axle / 8 wheel tipper trucks delivering aggregate / sand materials. (Week 18)
- For 18 weeks x 45 x 4 axle / 8 wheel ready mix concrete lorries. (Week 19)
- For 16 weeks x 40 x 4 axle / 8 wheel tipper trucks. (Week 19)
- For 10 weeks x 1 x 4 axle / 8 wheel self unload flat back lorry delivering drainage materials. (Week 21)
- For 16 weeks x 1 x 3 axle / 6 wheel tanker lorry delivering diesel. (Week 17)
- For 2 days x 3 x articulated lorries with low loader trailers collect from site ground worker excavators, dumpers and associated plant. (Week 40)
- For 2 days x 2 x 4 axle / 8 wheel self unload flat back lorries to collect ground worker surplus materials. (Week 40)
- For 23 weeks x 1 x 2 axle / 4 wheel road sweeper. (Week 17)

#### **Building Concrete Frame, Building Envelope and Roofing Works**

#### Week 29 to Week 123

- For 30 weeks x 4 x 4 axle / 8 wheel self unload flat back lorries delivering formwork materials. (Week 28).
- For 30 weeks x 1 x 4 axle / 8 wheel self unload flat back lorry delivering formwork scaffolding. (Week 28).
- For 50 weeks x 6 x 4 axle / 8 wheel flat back lorries delivering steel reinforcement. (Week 28)
- For 60 weeks x 60 x 4 axle / 8 wheel ready mixed concrete lorries. (Week 30)
- For 40 weeks x 3 x 3 axle / 6 concrete pump visits. (Week 31)
- For 30 weeks x 3 x 4 axle / 8 wheel flat back lorries delivering building access / working scaffolding. (Week 36)
- For 30 weeks x 3 x 4 axle / 8 wheel flat back lorries collecting from site building / access scaffolding. (Week 95)
- For 15 weeks x 8 x 4 axle / 8 wheel flat back lorries collecting from site formwork materials. (Week 84)
- For 15 weeks x 2 x 4 axle / 8 wheel flat back lorry collecting from site formwork scaffolding. (Week 84)
- For 80 weeks x 1 x 2 axle / 4 wheel road sweeper. (Week 41)
- For 45 weeks x 3 x 3 axle / 6 wheel self unload flat back lorry delivering cavity wall metal studding, insulation and sundry materials. (Week 43)
- For 40 weeks x 8 x 4 axle / 8 wheel self unload flat back lorries delivering facing bricks. (Week 49)
- For 30 weeks x 1 x 4 axle / 8 wheel self unload flat back lorry delivering building blocks. (Week 49).
- For 70 weeks x 2 x 4 axle / 8 wheel ready mix mortar lorries. (Week 49)
- For 35 weeks x 2 x 4 axle / 8 wheel self unload flat back lorries delivering concrete lintels / brick slips. (Week 49)
- For 35 weeks x 1 x 2 axle 4 wheel self unload flat back lorry delivering brick ties, dpc, dpm etc. (Week 49).

- For 35 weeks x 2 x 4 axle / 8 wheel flat back lorry delivering window frames.
   (Week 56)
- For 20 weeks x 2 x 4 axle / 8 wheel self unload lorry delivering roofing materials. (Week 62)
- For 20 weeks x 1 x 2 axle/ 8 wheel self unload flat back lorry delivering rain water goods. (Week 62).
- For 40 weeks x 1 x 3 axle self unload platform lorry delivering metal balconies, handrails, staircases. (Week 69)
- For 80 weeks x 3 x 4 axle / 8 wheel skip lorries. (Week 40)
- For 50 weeks x 1 x 2 axle 4 wheel self unload flat back lorry delivering sundry building materials. (Week 40)
- For 10 weeks x 2 x 3 axle / 6 wheel self unload lorries delivering lifts. (Week 75)
- For 15 weeks x 3 axle / 6 wheel self unload lorries delivering statutory undertakers plant, cable etc. (Week 38)

#### **Building Internals, Finishes and External Works**

#### Week 66 to Week 141

- For 55 weeks x 3 x 3 axle / 6 wheel self unload flat back lorries delivering metal studwork, plasterboard and plaster (Week 66)
- For 55 weeks x 3 x 3 axle /6 wheel flat back lorries delivering joinery, sanitary ware, kitchen units, heating materials. (Week70)
- For 55 weeks x 3 x 2 axle / 4 wheel lorries delivering decorating goods, wall tiles, flooring, ironmongery, fixtures and fittings and electrical materials / goods. (Week 70)
- For 40 weeks x 3 x 2 axle / 4 wheel skip lorries (Week 101)
- For 30 weeks x 1 x 3 axle / 6 wheel self unload flat back lorries delivering ground worker materials and plant (Week 76)
- For 40 weeks x 1 x 2 axle / 4 wheel flat back lorry delivering sundry building materials to site. (Week 101)
- For 40 weeks x 3 x 4 axle / 8 wheel large tipper trucks taking ground worker external works arisings of site. (Week 80)
- For 1 day x 1 articulated lorry with low loader trailer deliver ground worker excavator, dumper and associated plant. (Week 76)
- For 30 weeks x 1 x 3 axle / 6 wheel tanker delivering diesel. (Week 78)
- For 2 days x 2 x 3 axle / 6 wheel self unload lorries deliver external cycle sheds and play equipment. (Week 118)
- For 25 weeks x 3 x 4 axle / 8 wheel ready mix concrete for ground worker external works. (Week 110)
- For 2 days x 2 x 4 axle / 8 wheel all terrain mobile crane to take down 2 number tower cranes and take out storage containers. (Week 128)
- For 2 days x 3 x articulated lorry with trailers for collecting tower crane components and storage containers. (Week 128)
- For 1 day x 1 articulated lorry with low loader trailer to collect ground worker excavators, dumpers and associated plant. (Week 141)

- For 3 days x 1 x 4 axle / 8 wheel all terrain mobile crane to remove site office complex and all sundry storage containers. (Week 141).
- For 3 days x 7 articulated lorries and trailers to collect site office complex and sundry storage containers. (Week 141)
- For 3 week x 1 x 4 axle / 8 wheel self load flat back lorry collect surplus materials from site. (Week 138)
- For 2 days x 2 x 2 axle / 4 wheel self load flat back lorries to collect site boundary fencing and gates. (Week 140)
- For 30 weeks x 1 x 2 axle / 4 wheel road sweeper. (Week 104)

#### Phase 3 - BLR Site

## Site Enabling Works Week 1 to Week13

- For 2 days x 2 x 2 axle / 4 wheel self unload flat back lorries delivering site hoarding materials and gates. ( Week 1)
- For 1 day x 2 x 3 axle / 6 wheel self unload flat back lorries delivering mobile offices and storage containers for demolition contractor. ( Week 5)
- For 1 week x 4 x articulated lorry with low loader trailer delivering to site demolition plant and concrete crusher. (Week 6)
- For 6 weeks x 8 x 4 axle / 8 wheel tipper trucks removing demolition arisings.
   (Week 8)
- For 7 weeks x 1 x 2 axle / 4 wheel tanker delivering diesel. (Week 5)
- For 7 weeks x 1 x 2 axle / 4 wheel 3 tonne van servicing of demolition plant. (Week 7)
- For 1 day x 2 x 3 axle / 6 wheel self load flat back lorry collect mobile offices and containers. ( Week 13)
- For 1 week x 4 x articulated lorry with low loader trailer collecting demolition plant and concrete crusher. (Week 13)

## Building, Piling, Foundations and Drainage Works Week 14 to Week 30

- For 2 days x 5 x 4 axle / 8 wheel flat back lorries bring to site site offices and welfare accommodation. (Week 14)
- For 2 days x 3 axle / 6 wheel all terrain mobile crane. (Week 14)
- 1 day x 2 articulated lorries with low loader trailers bringing to site piling rig and associated plant. (Week 16)
- For 2 weeks 3 x 4 axle / 8 wheel lorries delivering piling steel reinforcement. (Week 16)
- For 1 day x 2 articulated lorries with low loader trailers bringing to site ground worker excavators, dumpers and associated plant. (Week 17)
- For 3 weeks x 50 x 4 axle / 8 wheel ready mix concrete lorries for piling works. (Week 16)
- For 1 day 2 x articulated lorries with low loader trailers collect from site piling rig and associated plant. (Week 19)

- For 1 day x 1 x 4 axle / 8 wheel all terrain mobile crane for erecting tower crane.
   (Week 17)
- For 1 day 3 articulated lorries bring to site tower crane components. (Week 17)
- For 6 weeks x 3 x 4 axle / 8 wheel self unload flat back lorries delivering ground worker formwork and associated materials. (Week 17)
- For 6 weeks x 1 x 4 axle / 8 wheel self unload flat back lorry delivering sundry foundation materials. (Week 17)
- For 6 weeks x 3 x 4 axle / 8 wheel tipper trucks bringing to site aggregates etc for ground worker. (Week 20)
- For 11 weeks x 30 x 4 axle / 8 wheel ready mix concrete lorries. (Week 18)
- For 10 weeks x 30 x 4 axle / 8 wheel tipper trucks. (Week 18)
- For 6 weeks x 1 x 4 axle / 8 wheel self unload flat back lorry delivering draining materials. (Week 19)
- For 12 weeks x 1 x 3 axle / 6 wheel tanker lorry delivering diesel. (Week 17)
- For 1 day 2 x articulated lorries with low loader trailers collect from site ground worker excavators, dumpers and associated plant. (Week 31)
- For I day x 2 x 4 axle / 8 wheel self load flat back lorries collect ground worker surplus materials. (Week 31)
- For 14 weeks x 1 x 2 axle / 4 wheel road sweeper. (Week 16)

## Building, Concrete Frame, Envelope and Roofing Works Week 25 to Week 74

- For 18 Weeks x 4 x 4 axle / 8 wheel self unload flat back lorries delivering formwork materials. (Week 23)
- For 18 weeks x 1 x 4 axle / 8 wheel self unload flat back lorry delivering formwork scaffolding (Week 23)
- For 24 weeks x 6 x 4 axle / 8 wheel flat back lorries delivering steel reinforcement.
   (Week 24)
- For 18 weeks x 4 x 3 axle / 6 wheel concrete pump visits (Week 30).
- For 27 weeks x 50 x 4 axle / 8 wheel ready mix concrete lorries. (Week 26)
- For 24 weeks x 3 x 4 axle / 8 wheel flat back lorries delivering building access / working scaffold. (Week 32)
- For 9 weeks x 8 x 4 axle / 8 wheel flat back lorries collecting formwork materials.
   (Week 44)
- For 10 weeks x 4 x 4 axle / 8 wheel flat back lorries collecting building access / working scaffold. (Week 68)
- For 28 weeks x 1 x 2 axle / 4 wheel road sweeper. (Week 25)
- For 28 weeks x 1 x 2 axle / 4 wheel tanker delivering diesel. (Week 51).
- For 18 weeks x 3 x 3 axle / 6 wheel self unload flat back lorries delivering cavity wall metal studding, insulation and sundry materials. (Week 30)
- For 18 weeks x 8 x 4 axle / 8 wheel flat back lorries delivering facing bricks. (Week 43)
- For 30 weeks x 2 x 4 axle / 8 wheel ready mix mortar lorry. (Week 43).

- For 8 weeks x 1 x 4 axle / 8 wheel flat back lorry delivering blocks. (Week 43).
- For 22 weeks x 2 x 4 axle / 8 wheel flat back lorries delivering lintels, brick slip lintels etc. (Week 48).
- For 22 weeks x 1 x 2 axle / 4 wheel self unload flat back lorry delivering wall ties, dpc, dpm etc. (Week 30).
- For 26 weeks x 2 x 4 axle / 8 wheel self unload flat back lorries delivering window frames etc. (Week 48).
- For 12 weeks x 2 x 4 axle / 8 wheel self unload flat back lorries delivering roofing materials. (Week 56)
- For 12 weeks x 1 x 2 axle / 4 wheel lorry delivering rain water goods (Week 56)
- For 10 weeks x 1 x 3 axle / 8 wheel self unload lorry delivering metal handrails, balconies etc. (Week 56)
- For 45 weeks x 3 x 4 axle / 8 wheel skip lorries. (Week 30)
- For 45 weeks x 1 x 3 axle / 6 wheel self unload skip lorry delivering sundry building materials. (Week 56).
- For 4 weeks x 2 x 3 axle / 6 wheel lorries delivering lifts and components. (Week 66)
- For 10 weeks x 1 x 3 axle / 6 wheel self unload flat back lorry delivering statutory under takers cable and plant. (Week 43).

# Building Internals, Finishes and External Works Week 42 to Week 74

For 20 weeks x 3 x 3 axle / 6 wheel lorries delivering metal studwork, plasterboard, plaster and sundry materials. (Week 42)

For 20 weeks x 3 x 3 axle / 6 wheel self unload flat back lorries delivering sanitary ware, kitchen units, and heating materials. (Week 42)

For 20 weeks x 3 x 3 axle / 6 wheel lorries delivering flooring, wall tiles, ironmongery, paint ,electrical fittings / goods. (Week 47).

For 20 weeks x 3 x 3 axle / 6 wheel skip lorries. (Week 53).

For 20 weeks x 1 x 3 axle / 6 wheel self unload lorry delivering ground worker materials. (Week 53)

For 20 weeks 1 x 2 x 4 axle tipper truck removing from site ground worker arisings. (Week 51).

For 10 weeks 1 x 4 axle / 8 wheel self unload lorry delivering external paving materials. (Week 51).

For 1 day x 1 articulated lorry and low loader trailer delivery ground worker plant (Week 51).

For 2 days x 1 x 3 axle / 6 wheel self unload lorry delivering external works equipment / fixtures. (Week 60).

For 15 weeks x 2 x 4 axle / 8 wheel ready mix concrete lorry. (Week 51).

For 1 day x 1 4 axle all terrain mobile crane to take down tower crane. (Week 62).

For 1 day x 3 articulated lorries and trailers collecting tower crane components. (Week 62).

For 1 day x 1 articulated lorry and low loader trailer collecting ground worker plant. (Week 68).

For 1 day 1 x 4 axle / 8 wheel self load flat back lorry collecting ground worker materials etc. (Week 68).

For 2 days x 2 x 4 axle / 8 wheel self load lorry collecting surplus materials from site. (Week 70)

For 2 days x 2 x 3 axle / 6 wheel self unload lorries delivering trees and plants to site. (Week 68).

For 2 days x 5 x 4 axle / 8 wheel flat back lorries collecting from site, site offices and welfare accommodation. (Week 54)

For 2 days x 3 axle / 6 wheel all terrain mobile crane. (Week 54)

For 2 days  $\times$  2  $\times$  2 axle / 4 wheel self unload flat back lorries collecting from site hoarding materials and gates. (Week 74)

# 3.4 Over Sized Verticals for Tower Crane, Excavator & Piling Rig Delivery

All oversized loads will travel via Queens Crescent so as to avoid bridges, unless the load is too large or heavy and under police escort.

## 3.5 Phasing and Peak Movements

#### Phase 1

Mobile cranes and low loaders will utilise Queen's Crescent and the remainder of construction vehicles will use the Grafton Road route, with a total of 12 vehicles expected to need to use the Queen's Crescent route for this phase.

Over the 78 weeks a total of 3,269 vehicles are expected, giving an average of 42 per week, 8 per day or 1.0 per hour assuming 8 hours available for deliveries per day.

The peak period of activity is during weeks 15 and 16 when 79 vehicles per week, 16 per day or 2.0 per hour would be expected.

#### Phase 2

The route for all vehicles coming to and leaving Phase 2 (BLR Site) will be via Malden Road and Haverstock Road, only mobile cranes will use Wellesley Road.

Over the 141 weeks a total of 8,984 vehicles are expected, giving an average of 64 per week, 13 per day or 1.4 vehicles per hour assuming 8 hours available for deliveries per day.

The peak period of activity is during week 19 when 188 vehicles per week, 38 per day or 4.7 per hour would be expected.

#### Phase 3

The route for all vehicles coming to and leaving Phase 3 (BLR Site) will be via Malden Road and Haverstock Road, with the exception of mobile cranes which will use Wellesley Road.

Over the 74 weeks a total of 3,922 vehicles are expected, giving an average of 53 per week, 11 per day or 1.3 vehicles per hour assuming 8 hours available for deliveries per day.

The peak period of activity is during weeks 26 and 27, when 124 vehicles are expected per week, equivalent to 25 per day or 3.1 per hour.

## 3.6 Light Goods Vehicles (LGV)

No parking will be available on site for the workforce and no off-site parking facilities will be provided for. The parking controls on the roads surrounding the site should go to discourage any on-street parking.

There will be a residual volume of light deliveries by van for smaller elements and for day to day incidental requirements. The number of these is difficult to predict due to their variable and incidental nature. It would be anticipated that the average for these deliveries will be in the order of 2 movements per day.

## 3.7 Interface with Adjoining Sites

#### Phase 1 (DHO Site)

Apollo will be working on Bacton High Rise tower refurbishment with works being complete in August 2014, and Kier's working on the new old people's home with works being complete in June 2015.

Other than enabling works Phase 1 (DHO Site) will commence in January 2014 and run through until late June 2015. To remain independent of both contractors construction **vehicles** coming to and leaving the DHO site will be via Grafton Road and part Vicar's Road, with low loaders using Queens Crescent.

#### Phase 2 and 3 (BLR Sites)

When works commence on site in June 2015 Apollo would have completed the majority of their works on the BLR estate and Kiers would have be finishing their works to the old people's home. With this in mind, there will be no interface working with these or any other contractors when works commence on Phase 2 and 3.

#### **Integrated CMP**

The interface with adjoining sites is considered in detail in Section 2 of the JMP Integrated CMP.

## 3.8 Pedestrian and Cyclist Safety and Access

Each construction site will have a clearly identifiable access point for pedestrians, ensuring that staff and visitors entering the site do not conflict with access for construction vehicles.

Any vehicles turning into or out of the site will be controlled by traffic marshals and barriers will be used temporarily to ensure that pedestrian movement will not conflict with vehicles entering or exiting the site. Drivers will be given route plans and instructions in a similar format to that provided at Appendix E.

It will be ensured that all contractors and sub-contractors operating large vehicles over 3.5 tonnes will meet the following conditions: -

- 1. Operators will be a member of TfL's Fleet Operator Recognition Scheme (www.tfl.gov.uk/fors) or similar at the Bronze level
- 2. All drivers will have undertaken cycle awareness training such as the Safe Urban Driver module through FORS or similar.
- 3. All vehicles associated with the construction of the Development will:
  - have Side Guards fitted, unless it can be demonstrated to the reasonable satisfaction of the Employer, that the Lorry will not perform the function, for which it was built, if Side Guards are fitted.
  - have a close proximity warning system fitted comprising of a front mounted, rear facing CCTV camera (or Fresnel Lens where this provides reliable alternative), a Close Proximity Sensor, an in-cab warning device (visual or audible) and an external warning device to make the road user in close proximity aware of the driver's planned manoeuvre.
  - have a Class VI Mirror

 bear prominent signage on the rear of the vehicle to warn cyclists of the dangers of passing the vehicle on the inside

## 3.9 Pedestrian and Road User Safety

As discussed in Section 3 each construction site will have a clearly identifiable access point for pedestrians, ensuring that staff and visitors entering the site do not conflict with access for construction vehicles.

Any vehicles turning into or out of the site will be controlled by traffic marshals and barriers will be used temporarily to ensure that pedestrian movement will not conflict with vehicles entering or exiting the site and it will be ensured that all contractors and sub-contractors operating large vehicles have training and measures in place to address cyclist safety. Construction traffic will be monitored and controlled by Rydon staff. No lorries will cross on Grafton Road to minimise disruption whilst maintaining safe access for other road users.

#### **SECTION 4**

#### 4.0 Nuisance Control

A range of measures will be implemented to ensure that the potential impact of the works on local residents and neighbours will be minimised. These measures are listed in turn below.

#### 4.1 Dust Control

Using the Best Practice Guidance for the control of dust and emissions for demolition and construction, with Demolition to BLR Phase 2 and 3 only the project is deemed at being a "High Risk" site due to an intermittent or likely impact on sensitive receptors.

The site will be fully closed in on all sides using 2.4 metre high timber and ply hoarding. Vehicle and pedestrian access gates will be metal.

No bonfires will be allowed on site

All residents, neighbours and 3<sup>rd</sup> party stakeholders adjacent to the site will be notified by news letter and posters of works commencing date.

During the site strip and reduce dig measures will be in place to suppress any dust generating activities by using water sprinklers either from the TWA main supply or water bowser.

Real time monitors will be used on site. and at the boundary of the site during demolition.

Any dust generating activities on site during strong windy days will be minimised or stopped completely.

No storage of fuel will be located close to adjacent properties.

Arising from the demolition works will be crushed on site and stock piled for use on piling mats, haul roads and storage areas. Surplus material will be taken off site using large 4 axle 8 wheel tippers with all loads covered.

All plant including the crusher will have water spray plant fitted to suppress dust along with free standing plant to spray water as and when necessary.

Lorries delivering materials to site will have their loads covered with the same applying when they leave site empty.

During the spreading and laying of the crushed concrete the excavator will either have a boom fitted water spraying apparatus or a separate item of plant that will spray water and suppress dust working in tandem with the excavator.

During the piling and foundation works measures will be taken as appropriate using a mobile item of plant to spray water and suppress dust whilst these works are being undertaken.

All roads leading to and from the site will be kept clean on a regular basis using a mechanical sweeper thus preventing the build up of dust and air borne dust.

Flat back lorries (delivering bricks and precast units), once unloaded will be swept clean of any dust and debris before being allowed to leave site.

Large tipper trucks taking away excavation material will have their loads covered.

All skips when placed on site will be covered at all times and covered also when collected and taken from site.

Any stock piles of materials i.e. crushed concrete, aggregates etc will be kept covered using hessian or similar.

Fuel being used for machines on site will be positioned furthest away from any properties and be contained in its own bunded tank.

#### **Emission Controls**

All off road vehicles/plant deployed on site will be required to use ULSD fuel.

No vehicle or item of plant will be left running unnecessarily.

No machinery or plant will be located close to properties.

Contractors plant being used on site to be of good order with correct silences/exhausts fitted.

Site management/key operatives/subcontractors will be fully advised and trained on Best Practice for the control of dust and omissions.

A member of the site management team will be trained and appointed to carry out inspections and maintain site lot book of works involving generation of dust and emissions.

#### 4.2 Wheel Wash

A concrete hard standing will be constructed within the site in front of the site boundary gates to allow for vehicles to stop and wash their wheels before leaving site and entering on to public roads.

The hard standing will be constructed in concrete to falls to allow water run off into a drainage sump which will be emptied on a regular basis. Wheel washing will be carried out using industrial hand held water pressure washers.

#### 4.3 Noise Control

Construction works on site will only be carried out between 0800-1800 hours on week days and 0800-1300 hours on Saturdays and not on Sundays and Public Holidays.

The maximum permitted noise levels targets are:

Not greater than 72 dB  $L_{Aeq,\ 10\ hours}$  Monday to Friday Not greater than 72 dB  $L_{Aeq,\ 5\ hours}$  Saturday

As with the control of dust and omissions all residents that are close to the site boundaries will be informed of any noisy works being likely to be carried out on site by letter or personal visit by management.

Initial calculations (in accordance with BS 5228) show that the permitted noise levels should not be routinely exceeded with the proposed plant using boundary and local screening alone.

Further details of plant, methodology, mitigation and predicted noise levels will be provided within a Section 61 Application(s) to be submitted when the final methodology is known.

Where the potential for noise impact exists, "Best Practicable Means", as defined in Section 72 of the Control of Pollution Act 1974, will be used to reduce noise to achieve noise levels below the target noise levels and ensure compliance consistent with the recommendations of BS 5228.

Management will ensure whilst in the process of giving operatives their site inductions and afterwards in tool box talks on site, the importance in ensuring that best practice in respect of noise monitoring and reduction being addressed and followed whilst carrying out their works with the use of power tools.

A member of the site management team will be appointed to ensure that a programme of monitoring noise be in place to ensure that noise condition limits are not exceeded and that all necessary recommendations are met and maintained on site.

Every contractor employed on site and as part of their Method Statement and Risk Assessment will be required to identify how they propose to manage and control noise on site whilst carrying out their works. In using this route works that could have a big impact on noise can identify any risks early on so that they can either be eliminated or reduced at the planning/programming stage.

All works involving noise will be monitored at source and wherever possible measures taken to control the spread of noise.

Prominent warning notices on the requirement to wear ear defenders will be displayed at the entrance of the site gates and in the compound changing rooms and canteen.

All plant deployed on site when not working will be required to turn their engines off, all plant to be maintained in good condition paying particular attention to engine exhausts.

## 4.4 Site Security

The sites will be fully secured on all the boundaries using timber and ply hoarding 2.4m high with metal gates for vehicle and pedestrian use. The site sites will have adequate security lights around the perimeter fencing area of each site.

There will be a static security guard on site during out of work hours in the evenings and at weekends. There will be CCTV cameras strategically located at the site entrance gates.

#### 4.5 Consultation with Local Residents

Continuing engagement with the local community will be carried out, including, but not limited to the following:

- Facilitating community and school site visits
- Community workshops
- Community information share

To date Rydon has held regular bi-weekly traffic management meetings chaired by LBC and attended by the BLR residents committee, other site neighbours and other contractors.

A copy of the parking suspension letter is provided at Appendix F. Only one response was received, which raised a complaint with site operating hours.

Our business is both robust and insightful in terms of community consultation and engagement within the built environment. We have extensive experience of working with local authorities, regeneration agencies, design teams, local communities and stakeholders. Our community engagement plan is founded on strong collaborative working methods, good communications, urban and spatial intelligence and knowledge of planning structures.

We have approached the Bacton Low Rise redevelopment with a fresh look, tailoring our consultation and engagement process to suit both the needs of the project, and aspirations of all stakeholders including the GLA. We have experience of a variety of methods of engaging people in visioning, developing masterplans and new homes.

## What we propose

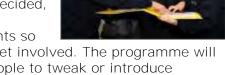
| Proposal                                          | Resource                                                                                                                                                                                                                                                                                                                                                                               |
|---------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Staff available throughout the scheme             | In addition to the project delivery team identified we will provide a dedicated Resident Liaison Officer for the duration of all works and throughout the defects/repairs period.  During workshop and community events we will provide sufficient staffing levels to ensure there is not more than 6 residents to every member of staff. That way everyone gets their opinions heard. |
| Community Events                                  | Community events are a great way ensuring everyone gets involved in the redevelopment of the estate, however they need to be targeted correctly. We will work with the Borough of Camden and local resident and stakeholder groups to make sure we are delivering the type of events they want. Whatever is needed and has a high level of local support, we will work with you.       |
| School visits                                     | We will make contact with all schools in the Bacton Low Rise area. If a school agrees to us visiting, we will be delighted to do so. This can be done annually at the start of target year groups and is also open to arrange school visit to the scheme.                                                                                                                              |
| Sharing information and encouraging participation | We will work hard to get the message out to as many people as possible. This will be achieved through workshops, one to one meetings, our call centre, web and online media outlets, local press and through stakeholder groups.                                                                                                                                                       |
| Minimising the impact of construction             | This is going to be a big project, so inevitability there will be an element of disruption for residents over the course of all phases. Hopefully by reading our construction methodology you will see we have put extensive thought into how we will mitigate the impact on                                                                                                           |

| residents as much as possible.        |
|---------------------------------------|
| During the design phase we will       |
| anticipate as a result of design      |
| meetings and consultations we can add |
| to this further.                      |

#### **Our Approach**

We will ensure that the following is in place whilst Working on the project.

- Clear channels of communication.
- A process for how contributions will be integrated into emerging options or proposals.
- Plain English documentation outlining the most important pieces of information that are of concern to residents, such as timescales, who it affects, what has been decided, and how decisions will be made.
- A programme of consultation and engagement events so people can plan how and when they would like to get involved. The programme will be purposely left with some space to allow local people to tweak or introduce events or exercises that they feel necessary to inform the designs.



#### **Our Methodology**

We intend to keep the consultation and engagement focussed upon key local residents/stakeholders and officers, staging a number of workshops to progress designs and ideas with them.

Our Community Involvement Manager; Nikki Donnelly will be committed to developing a comprehensive consultation strategy with LB Camden Development Team/Design Team.

Tessa will be assisted in the management of the design process consultation, with support from dedicated Resident Liaison Officer (RLO), Nikki Donnelly, and input from our Design Manager and Project Manager. Nikki can be contacted on 0800 292 2312 or 07770273697.

A stakeholder mapping will be carried out at the start of the project. This will be used to identify groups and individuals to invite to join a Community Liaison Group. Membership to this group will also be advertised through a Project Newsletter distributed to the immediate area surrounding the project and a Project notice board, ideally on a prominent part of the existing building on the Bacton Low Rise estate.

This will also be supported by a comprehensive e-media package including a project specific web page, Twitter feed, Facebook page and active links to stakeholder's websites and blogs.

Once established, the Community Liaison Group will meet at key stages through the development of the project, working to inform and influence the design, implementation and management proposals. The first meeting will begin with a Walk & Talk around the site to identify key issues, constraints and opportunities. Further meetings will assess the emerging options/designs, with a final meeting to view the draft proposals.

Project Newsletters and updates for the notice board will follow and report on the Liaison Group findings and project development.

We will focus on both on-site and off-site residents (neighbours), as well as local community groups and stakeholders.

#### **Stakeholder Mapping**

We will build upon the groups identified through a comprehensive stakeholder mapping exercise. From a brief desktop exercise, we have identified the list below. This is by far an extensive list which can only be created through joint working with multiple LB Camden departments and Bacton Low Rise Residents Group during the design stage of the procurement process.

- Bacton Low Rise Residents Association
- St Martins C of E Church
- Gospel Oak Neighbourhood Action Group
- LB Camden Development Forum
- Queens Crescent Community Association
- Adjacent Neighbours bordering the site.
- French School (L'ile aux Enfants) Management
- Sanctuary House Management.
- Gospel Oak Health Clinic Haverstock Road.
- Gospel Oak Nursery Centre Haverstock Road.
- Wellesley Road Elderly Person's Home
- Wendling Estate Residents Association
- Visits will also take place to a number of schools within the vicinity of the site namely, Fleet Primary School, St Dominic's Roman Catholic Primary School.

#### **School Visits**

During the length of the project, we will maintain regular contact with all 3<sup>rd</sup> party stakeholders, along with all the schools that are within the scheme's proximity. There are a number of great opportunities we will look to put into effect including:

- We will provide regular school safety talks with local schools, for all ages as young as three.
- We will provide regular engagement sessions with colleges regarding Construction safety - we encourage projects based around the site/construction of Bacton Low Rise, inviting them to visit site as part of their project with the support from onsite management staff.
- We will offer support to local schools and colleges in certain areas of expertise which they may be studying, i.e. environmental, business, Project Management etc.
- We will be supporting local safety campaigns and linking this with the local schools to raise awareness (i.e. Road Safety Week, attached doc email).
- We will facilitate Career Fairs at a minimum twice a year.
- We will consult with a representative core group from various schools regarding specific elements of the scheme, i.e. construction traffic (Getting their buy in).



Subject to granted permission by the Head Teacher/School Manager, we will visit schools on a regular basis to tell them what we are doing on the site, advise them on all H&S matters relating to construction sites, along with the dangers of entering on to building sites. We will also hold competitions, with prizes, based on what is happening to and around the progress of the new development in their area.

We will host a series of 'Meet the Contractor' event, where we highlight key health and safety matters; discuss requirements for newsletters and bulletins including upto-date progress; impart key information about the project and provide contact details for the construction team; give notifications of any temporary road closures or diversions within the area; discuss requirements for School Safety Talks with the Considerate Constructor's Ivor Goodsite, highlighting the dangers of building sites and how to stay safe; liaise regarding any learning opportunities that we could facilitate during the construction period.

#### **Disruption**

Our approach to maintaining good relations with residents and neighbours of the scheme is part of the culture within Rydon. We take a proactive stance on informing people affected by the project through signage, multi media platforms and face to face communication through planning, pre construction and the build process itself.

The need is to promote open and honest dialogue with residents and stakeholders about construction impacts, whist clearly outlining how noise and dust mitigation will be handled, along with the benefits to local economy, training and employment opportunities.

Once we are active on site, we will make sure working time and noise restrictions are strictly adhered to. We will always ensure our staff and suppliers keep all access roads clear and never use other peoples parking areas. We will also keep the transference of noise and dust to an absolute minimum. We have a number of best practice policies in place, which have been referred to throughout this document.

We will ensure everyone on our site adheres to these restrictions and that every person who comes into contact with any of our representatives is treated with respect and good manners.

Whenever possible, we will create a fully enclosed site, however we are still aware of the need to minimise the impact on residents and the local neighbourhood.

To control this we will; Attach debris netting to all scaffold elevations; Keep windows to existing blocks closed wherever possible to minimise noise from works; Use industry leading low decibel hand tools and heavy equipment; Only conduct machine or tool operations between the hours of 8.30 – 5.30; Only work on weekdays; Operate wheel washing facilities at the entrance/exit to minimise dirt transference; Only schedule deliveries between 8.30 -5.30 avoiding school runs where possible; If required, create elevated debris hoarding to perimeter brick walls, to reduce dust transference to neighbouring properties.

### 4.6 Travel Plan

Worker's vehicles will not be allowed on to the site except where required for deliveries of goods and tools.

The surrounding Controlled Parking Zone which has controls in place 08:30 to 18:30 Monday to Friday will limit the potential for parking to take place on the roads surrounding the site. Parking on the adjacent estate roads will also be monitored and contractors will be informed that they should not park on these roads.

To minimise the potential impact of construction workers travelling to the area, a Travel Plan will be implemented to promote and encourage the use of sustainable mode of travel to and from the site and minimise the use of private cars.

The Travel Plan will take the form of a leaflet that will include details of local public transport services and promote walking and cycling. It will be ensured that secure areas to park cycles are available within each site for the duration of the works.

The sites have a Public Transport Accessibility Level of 2/3, indicating a reasonable level of accessibility.

The C11 Archway to Brent Cross, 24 Hampstead Heath to Pimlico and 46 Lancaster Gate to St Bartolomew's Hospital bus services are available within the PTAL 640m walk distance cut off. These bus services offer interchange with a number of underground and rail stations.

The Gospel Oak railway station is also within reasonable walking distance of the site. The station is on the North London Line (NLL) and is also the western passenger terminus of the Gospel Oak to Barking Line.

Given the above rail and bus services, public transport is a viable mode of transport to the sites for construction staff and any visitors to the site.

#### **SECTION 5**

## **5.0 Proposed Mitigation Measures**

#### **General**

Proposed highway mitigation measures are detailed in this section.

#### **Alternative Construction Methods**

Where feasible instead of using a standard reinforced concrete frame elements of the scheme are being built using a cross-laminated timber (CLT) construction method, in order to reduce lorry movements.

This has removed approximately 820 lorry movements to the site from the construction programme.

#### Signage Strategy

Once this document is agreed with the London Borough of Camden a clear signage strategy will be developed and implemented to direct all construction traffic along the correct routes avoiding any confusion on which routes should be taken.

#### **London Borough of Camden Highways Agreements.**

Any proposed parking suspensions, temporary road closures, scaffold and hoarding licences and highway works will require discussions and agreement with the London Borough of Camden and local stakeholders.

# The following Parking Bay Suspensions are expected to apply to the following Phases

#### Phase 1 (DHO Site)

- 40m of parking bays along Prince of Wales Road to allow holding area for delivery vehicles.
- Suspension of 40m of car parking spaces in Vicar's Road either side and opposite Grafton Road to allow turning areas for construction vehicles to and from site.

#### Phase 2 (BLR Site)

• Suspension of 6 car parking spaces in Haverstock Road.

#### Phase 3 (BLR Site)

- Suspension of 6 number car parking spaces in Haverstock Road.
- Allocated area in private road opposite Bacton High Rise Block for the unloading of vehicles.

Prior to works commencing on Phase 2 and 3 Rydon will see and propose alternative vehicle holding areas within Gospel Oak (e.g. Malden Road) for discussion and approval with LBC Planning and Traffic Management Department.

## **5.1 Considerate Contractors Scheme (CCS)**

We recognise the importance of achieving the highest level of workmanship throughout the process, and our inspection and test plans utilised at all key stages, will ensure these levels are maintained throughout. We will register the project with the CCS and set ourselves a minimum target of 35 (based on the new scoring system introduced in 2012).

All works will be carried out in line with the Rydon Quality Assurance procedures, which are ISO 9001 accredited and in line with the Code for Considerate Constructors.

Rydon is a member of the Considerate Constructors Scheme, which is voluntary and adopted by many construction companies throughout the UK. The scheme is an independent organisation whose aim is to improve the image of construction.

Sites are encouraged to present an image of competent management, efficiency, awareness of local environmental issues and above all be neighbourly and this way every site would become a positive advertisement for the industry.

Sites are visited by monitors to check that sites comply with the Code of Practice, highlight areas where improvements can be made, provide suggestions on how to improve and praise sites when they achieve standards beyond industry requirements.

There are Considerate Constructors notices on both entrances to site and all staff are encouraged to take the time to read the "Code of Considerate Practice".

Anyone requiring further information on the scheme should ask at the Site Office.

## 5.2 DHO/BLR Emergency Access Strategy

On Phase 1, 2 and 3 sites there will be dedicated fire assembly and first aid areas for Operatives / management in the event of an accident or fire.

#### Phase 1

Site emergency vehicles coming to site will do so from Grafton Road or Vicar's Road and enter the site through the vehicle access gates located in Grafton Road or Vicar's Road.

#### Phase 2 and Phase 3

On each site there will be a pair of vehicle gates along with a designated area for emergency vehicles to enter and park on site.

Their route to the site will either be from Grafton road along Vicar's Road in to the site, or coming from Malden Road, in to Wellesley Road in to the site; their exit from site will be by using the same routes.

Prior to works commencing on site meetings will take place with all three main emergency authorise to inform them of the project and in doing so agree on the routes they will take in the event of an emergency on site.

Displayed in the site offices and canteen with be a map and directions of the nearest hospital along with all relevant phone numbers.

#### **SECTION 6**

## 6.0 Summary

This Construction Management Plan (CMP) relates to the proposed redevelopment of the DHO and BLR sites in Gospel Oak. The purpose of the CMP is to ensure that the impact of the demolition and construction works to all three phases on the local residents, neighbours and 3<sup>rd</sup> party stakeholders and the immediate highway network is kept to the absolute minimum.

The plan seeks to address all those concerns expressed by vested interested parties within the BLR estate and the neighbouring areas.

The agreed contents of the Construction Management Plan must be complied with unless otherwise agreed with the Council. The project manager shall work with the Council to review this Construction Management Plan if problems arise in relation to the construction of Development. Any future revised plan must be approved by the Council and applied thereafter.