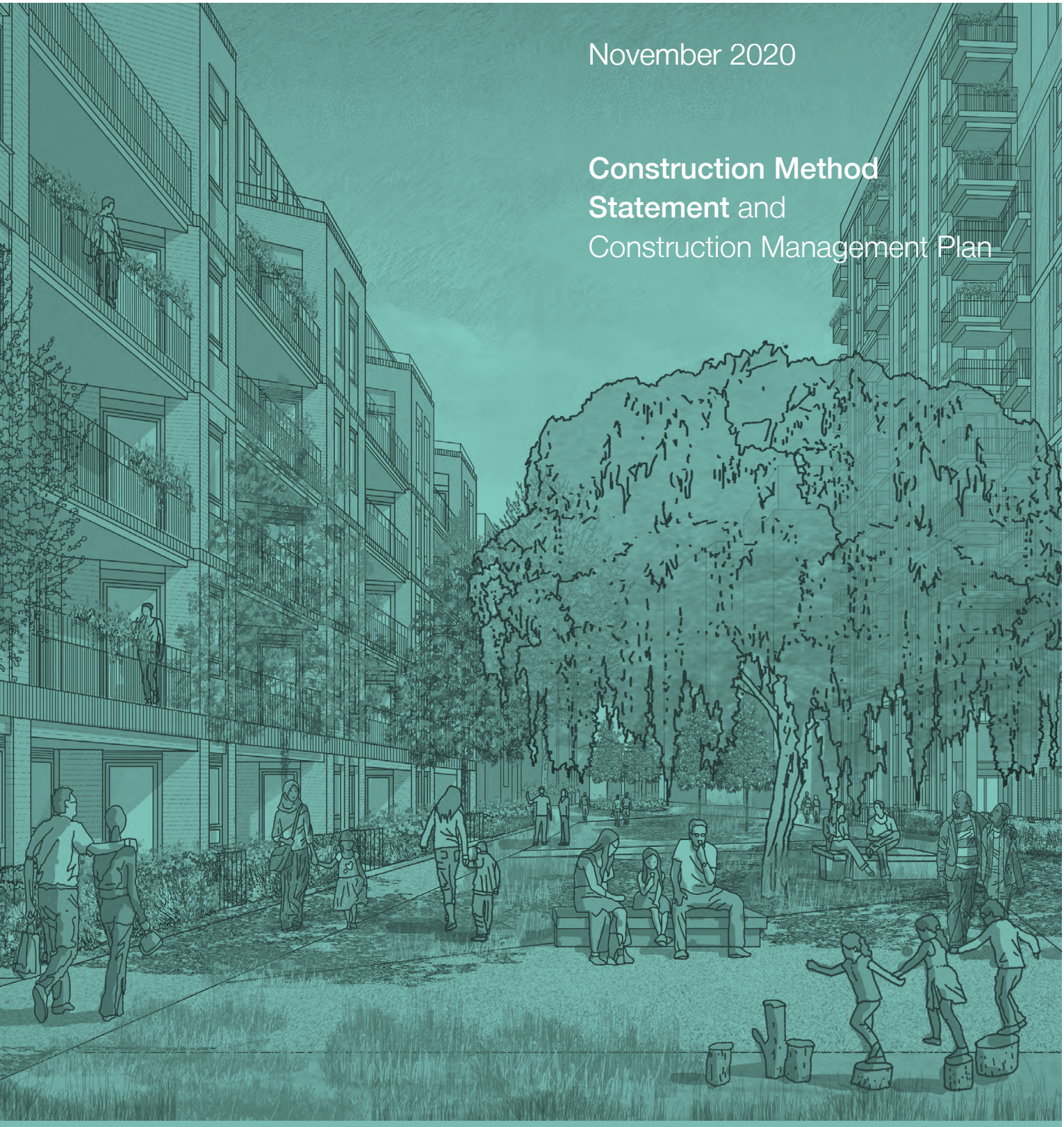
CAMBRIDGE ROAD ESTATE – PLANNING APPLICATION 20/02942/FUL

CONSTRUCTION METHOD STATEMENT AND CONSTRUCTION MANAGEMENT PLAN

NO AMENDMENT TO DOCUMENT SINCE SUBMISSION OF APPLICATION IN NOVEMBER 2020 – ORIGINAL SUBMISSION DOCUMENT

Patel Taylor

Cambridge Road Estate
Hybrid Planning Application



November 2020

Construction Method Statement and Construction Management Plan

CRE
CAMBRIDGE ROAD ESTATE

COUNTRYSIDE
Places People Love

THE ROYAL BOROUGH OF
KINGSTON
UPON THAMES

The Applicant

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c/o Countryside Properties
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The project site

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Project hub

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Application forms

Covering letter

Application Form and Notices

CIL Additional Information Form

Design proposals

Planning Statement

Design and Access Statement
- Vol.1 - The Masterplan
- Vol.2 - The Detailed Component

The Masterplan
- Parameter Plans
- Illustrative Plans
- Design Guidelines

Phase 1 Architecture and Landscape
- GA Plans, Sections and Elevations

Supporting information

Statement of Community Involvement

Rehousing Strategy

Financial Viability Appraisal

Draft Estate Management Strategy

Transport Assessment
Phase 1 Travel Plan
Car Parking Management Plan
Servicing and Delivery Management Plan

Construction Logistics Plan
Construction Method Statement and Construction Management Plan
Sustainable Design and Construction Statement (Including Circular Economy Statement)

Environmental Statement
- Non Technical Summary
- Vol.1 – Technical Reports
- Vol.2 – Technical Appendices
- Vol.3 - Townscape and Visual Impact Assessment

Energy Statement (Including Overheating Assessment and Whole Life Cycle Assessment)

Daylight and Sunlight
Internal Assessment of the Detailed Component
External Assessment of the Illustrative Masterplan

Extraction and Ventilation Strategy
Noise Impact Assessment

Arboricultural Report and Tree Conditions Survey
Arboricultural Impact Assessment & Method Statement
Preliminary Ecological and Bat Survey Report
Biodiversity Net Gain Assessment

Archaeology and Heritage Assessment
Ground Conditions Assessment

Utilities Report

Flood Risk Assessment
Phase 1 Drainage Statement

Fire Strategy Report

Accessibility Audit
Health Impact Assessment
Equalities Impact Assessment

COUNTRYSIDE
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CAMBRIDGE ROAD ESTATE

CONSTRUCTION MANAGEMENT PLAN

THE ROYAL BOROUGH OF
KINGSTON
UPON THAMES

09/11/2020

CAMBRIDGE ROAD ESTATE

1.0 CAMBRIDGE ROAD ESTATE REGENERATION

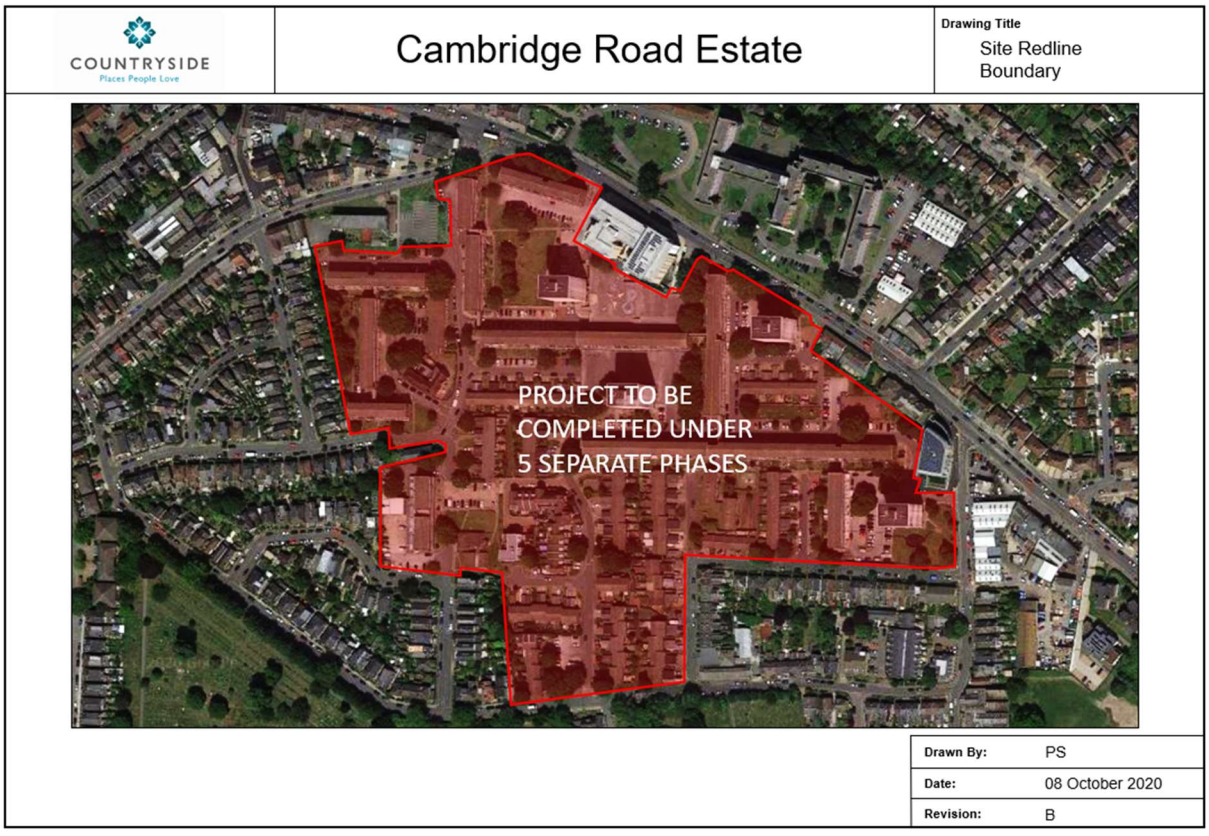
This report has been prepared by Countryside Properties PLC, Partnerships West London and Thames Valley (referred to as Countryside hereafter). Countryside is acting as Construction Manager, on behalf of Cambridge Road (RBK) LLP, to deliver 2170 new homes under the regeneration master plan of Cambridge Road Estate; located in The Royal Borough of Kingston upon Thames. This report focuses mainly on phase 1 with indicative references to future phases.

The regeneration of the estate is split into 5 separate phases; with the first phase delivering 452 units. Any existing tenants of buildings situated within the phase 1 boundaries will be decanted with the help of the Council's housing team on a plot-by-plot basis in line with the delivery programme. Phase 1 will provide sufficient units and tenure types for tenants located in existing buildings of phase 1 and phase 2 to be decanted into; and subsequent phases will follow the same principle.

Phase 1 will deliver the provision of 452 new dwellings consisting of 150 council homes, 30 intermediate tenure and 272 private sale homes. The phase also delivers a community centre, flexible retail/commercial/office space, and an energy centre. The new blocks in phase 1 range between six and thirteen storeys in height and will be constructed using reinforced concrete frame structures with a face brickwork cladding. Houses will be constructed using the traditional build method.

During construction, the welfare of the existing tenants who live in the surrounding area and the general public will be carefully considered. This document aims to set out the methods and management of this project during the construction phases.

Figures 1 and 2 shows the entire regeneration master plan red line boundary and also the location of phase 1.



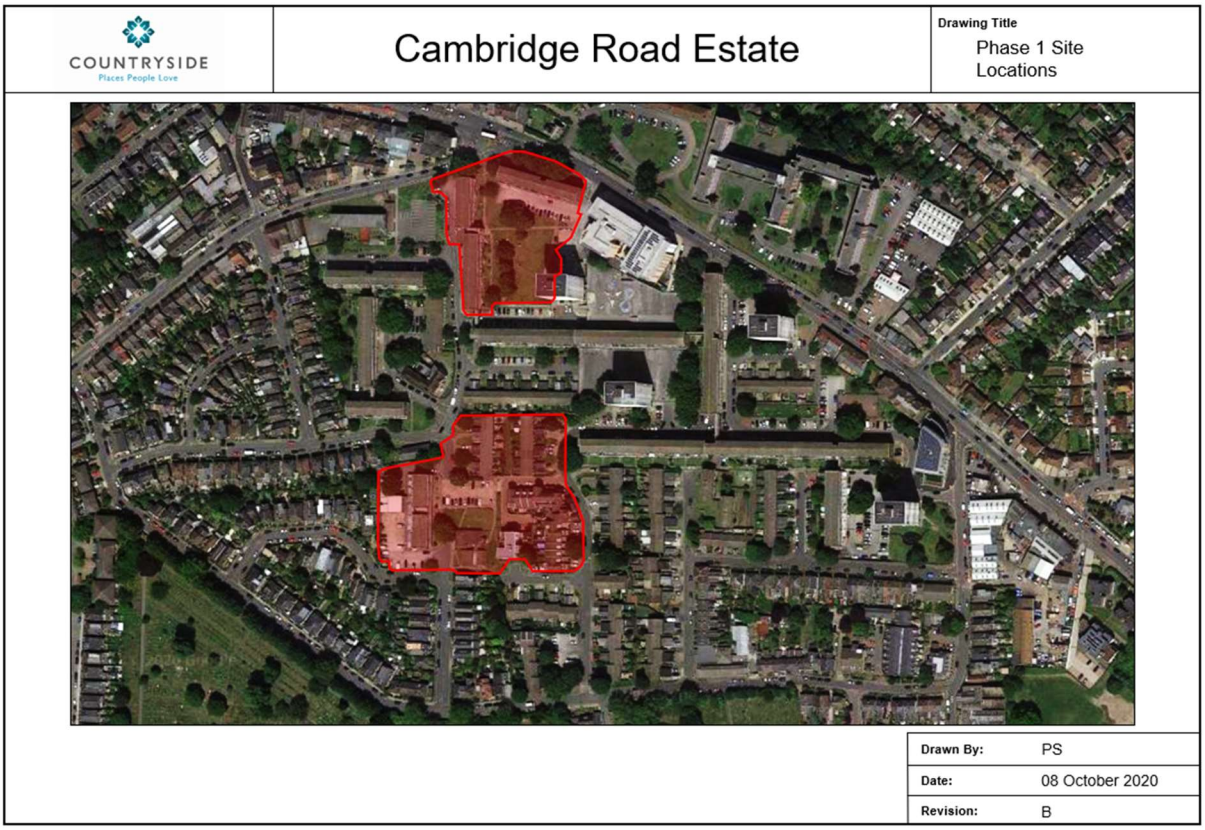


Figure 1 – Regeneration Master Plan Redline Boundary

Figure 2 – Phase 1 Locations

2.0 HEALTH AND SAFETY PLAN

The environmental, health and safety plan will be finalised and agreed with all relevant parties prior to any works commencing on site and will include all necessary measures required to minimise the effect of the construction works on the surrounding buildings, roads and the public.

These measures will include the following:
1. A dedicated traffic management system and method statement;
2. Adequate signage on and off site;
3. Specific parking restrictions;
4. Proposals for phasing of deliveries; and
5. Proposals for restricting dust and debris.

3.0 CONSTRUCTION METHODOLOGY

The details which follow below provide a summary of the proposed management procedures and working systems followed, as well as the general sequence of construction. This will ensure that the common project objectives of safety, quality and the timely completion of works, are achieved. These systems will be further developed by the site management team prior to the commencement of works, and as the works progress.

3.1 LOCAL ENVIRONMENT

The site is mostly surrounded by residential streets and homes with a small number of commercial units. It is of utmost importance that access and continuity of services for the surrounding residents and businesses is maintained. The effect of construction activities on the surrounding environment will be adequately managed to keep disruption to a minimum. This is discussed in more detail in the sections which follow.

3.2 SITE HOURS

Site working hours will be as dictated by the planning conditions. Construction plant will only be allowed to operate between the following hours (provided they comply with the hours permitted, as mentioned above):

- 8am to 6pm Monday to Friday;
- 8am to 1pm Saturday (only if required as per the construction programme); and
- No work will be permitted on Sundays and Bank Holidays.

Non-intrusive and quiet activities (such as internal fit out) may be carried out outside of these hours, on rare occasions and will require prior agreement with the council.

3.3 DELIVERY TIME AND LOCATION

Deliveries to site will be timed in accordance with the Planning Conditions and to avoid the start and finish times of local schools, if applicable. During term time, deliveries will take place outside the hours of 08.15 to 09.15 and 15.00 to 15.45. All subcontractor agreements and material supply orders will stipulate delivery times in accordance with this.

Delivery appointment scheduling will be the responsibility of the Site Manager, under the guidance of the Project Manager. Deliveries will be scheduled to utilise tower cranes, offloading from a designated vehicle unloading area within the boundary of each site. This is shown in Section 3.10 further on (Site Logistics). The location of tower cranes, entrance/exit gates, laydown areas and materials storage are also indicated.

3.4 SITE SECURITY

The overall area of the site will be made sufficiently secure to deter and prevent entrance by unauthorised persons and to prevent removal of materials or goods. This will be achieved generally by the installation of timber hoardings and heras fencing (where buildings are secure). Following vacant possession of site, plywood hoardings around the working areas will be installed and professionally painted. CCTV cameras will cover the perimeters of the site and monitored by security personnel. In addition, a security response unit will be available. The use of physical security patrols will be considered should this measure be deemed necessary.

The site will have a security gate house and all staff and visitors will be required to access site through this.

Site set up will be established prior to works commencing. Furthermore, commencement of works will only occur when the site is safe, fully secured and the pre-start conditions are satisfied.

3.5 POLLUTION CONTROL

At all times, Countryside will comply with all relevant Environmental, Health and Safety Legislation and will take a proactive approach to pollution. Noise, dust or airborne particles will be controlled using current best industry standards and practices, to minimise risk and disturbance. Noise and vibration will be minimised by using modern plant and equipment fitted with suitable silencers, the muffling of all breakers and using crushers, in-lieu of impact breakers wherever possible.

Where machines are provided with suppression covers, these will remain closed during operation. Where it is impossible to position a potentially noisy piece of machinery, hoardings and enclosures will be constructed to contain and minimise the potential nuisance. Specific examples of reducing noise pollution include:

- The use of Auger Piles (as opposed to Driven piles) to minimise noise and vibration.
- The use of a crushing machine (rather than cutting or grinding equipment), where possible, to reduce dust and noise levels.

All permanent access roads will be constructed to the underside of wearing course prior to the main construction works commencing. This provides a good surface for construction traffic and reduces the risk of dust and dirt being carried out of the site onto the public highway. The roads within the site and the adjacent roads will be swept on a regular basis, using a road sweeper. During groundworks and superstructure frame construction, the sweeper will be used on a fulltime basis.

Dust levels will be closely monitored on a regular basis. Countryside will agree a monitoring procedure with the environmental officer. During dry periods and during activities such as demolition, where dust is prevalent, these areas will be sprayed with water to reduce or eliminate dust.

Dust management mitigation measures will be undertaken as follows:

Site Management

- develop and implement a stakeholder communications plan that includes community engagement before work commences;
- develop a Dust Management Plan (DMP);
- display the name and contact details of person(s) accountable for air quality pollutant emissions and dust issues on the site boundary;
- display the head or regional office contact information on site;
- record and respond to all dust and air quality pollutant emissions complaints;
- make a complaint log available to the Local Authority when requested;
- carry out regular site inspections to monitor compliance with air quality and dust control procedures, record inspection results, and make an inspection log available to the Local Authority when required;
- increase the frequency of site inspections by those accountable for dust and air quality pollutant emissions issues when activities with a high potential to produce dust and emissions are being carried out and during prolonged dry or windy conditions;
- record any exceptional incidents that cause dust and air quality pollutant emissions either on or off the site, and ensure that the action taken to resolve the situation is recorded in the logbook;
- hold regular liaison meetings with high risk construction sites within 500 meters of the site boundary, to ensure plans are co-ordinated and dust and particulate matter emissions are minimised. Communication is key and it is important to understand the interactions of the off-site transport/deliveries which might be using the same strategic road network routes.

Due to the restricted nature of the site there is no space for full wheel cleaning machines; consequently, a standpipe and hose will be used, where wheels will be checked and cleared of dirt prior to entering the highway.

Vehicles leaving the site carrying loose loads, will be covered. Due to the congested nature there will be no stockpiles of loose materials. If there is a requirement for small mounds of loose materials during a dry period, these will be covered with sheeting as a measure to reduce dust.

Cutting and grinding will be performed by two operatives (one to use the machinery and the other to apply water to reduce the dust arising).

There will be no burning of waste on site. All waste material will be placed into designated skips and removed to a transfer station for recycling off site. During dry periods, all skips will be covered to prevent dust and waste material from wind. Similarly, all skips leaving site will be covered.

Preparing and Maintaining the Site

The following procedures are to be followed:

- planning site layout so that machinery and dust-causing activities are located away from receptors, as far as is possible;
- erecting solid screens or barriers around dusty activities or the site boundary which are at least as high as any stockpiles on site;
- fully enclosing operations where there is a high potential for dust production and the site is active for an extensive period;
- avoiding runoff of water or mud;
- keeping site fencing, barriers and scaffolding clean;
- carrying out dust soiling checks of buildings within 100 m of each site boundary and cleaning if necessary; and
- installing dust and air quality pollutant monitors across site and checking regularly if necessary/ if required. These locations will be agreed with the Local Authority. Baseline monitoring will commence at least three months before commencement of works.

Operating Vehicle/Machinery and Sustainable Travel

- ensure all on-road vehicles comply with the requirements of the London Low Emission Zone;
- ensure all Non-road Mobile Machinery (NRMM) comply with the standards set within the GLA's Control of Dust and Emissions During Construction and Demolition SPG. This outlines that, from 1st September 2015, all NRMM of net power 37 kW to 560 kW used on the site of a major development in Greater London must meet Stage IIIA of EU Directive 97/68/EC (Directive 97/68/EC of the European Parliament and of the Council, 1997) and its subsequent amendments as a minimum. NRMM used on any site within the Central Activity Zone or Canary Wharf will be required to meet Stage IIIB of the Directive as a minimum. From 1st September 2020 NRMM used on any site within Greater London will be required to meet Stage IIIB of the Directive as a minimum, while NRMM used on any site within the Central Activity Zone or Canary Wharf will be required to meet Stage IV of the Directive as a minimum.
- ensure all vehicles switch off engines when stationary – to ensure there are no idling vehicles;
- avoid the use of diesel or petrol-powered generators and use mains electricity or battery-powered equipment where possible;
- impose and signpost a maximum speed limit of 10 mph on surfaced haul routes and work areas (if long haul routes are required these speeds may be increased with suitable additional control measures provided, subject to the approval of /agreement with the Local Authority;
- produce a Construction Logistics Plan to manage the sustainable delivery of goods and materials; and

- implement a Travel Plan that supports and encourages sustainable staff travel (public transport, cycling, walking, and car-sharing).

Operations

- only use cutting, grinding, or sawing equipment fitted, or in conjunction with suitable dust suppression techniques such as water sprays or local extraction, e.g. suitable local exhaust ventilation systems;

- ensure an adequate water supply on the site for effective dust/particulate matter suppression/mitigation, using recycled water where possible and appropriate;
- use enclosed chutes, conveyors, and covered skips;

- minimise drop heights from conveyors, loading shovels, hoppers and other loading or handling equipment and use fine water sprays on such equipment wherever appropriate; and

- ensure equipment is readily available on site to clean any dry spillages. Spillages need to be cleared as soon as reasonably possible using wet cleaning methods.

Waste Management

- reuse and recycle waste to reduce dust from waste materials;
- no bonfires and burning of waste materials shall be undertaken on site; and
- ensure compliance with the Site Waste Management Plan (SWMP) - See Annexure 1.

Measures Specific to Demolition

- Soft strip inside buildings before demolition (retaining walls and windows in the rest of the building where possible, to provide a screen against dust);
- ensure water suppression is used during demolition operations;
- avoid explosive blasting, using appropriate manual or mechanical alternatives; and
- bag and remove any biological debris or damp down such material before demolition.

Measures Specific to Earthworks

- Re-vegetate earthworks and exposed areas/soil stockpiles to stabilise surfaces as soon as practicable;
- use Hessian, mulches or tackifiers where it is not possible to re-vegetate or cover with topsoil, as soon as practicable; and
- only remove the cover from small areas during work, not all at once.

Measures Specific to Construction

- Avoid scabbling (roughening of concrete surfaces), if possible;
- ensure sand and other aggregates are stored in bunded areas and are not allowed to dry out, unless this is required for a particular process, in which case ensure that appropriate additional control measures are in place; and
- ensure bulk cement and other fine powder materials are delivered in enclosed tankers and stored in silos with suitable emission control systems to prevent escape of material and overfilling during delivery.

Measures Specific to Materials removed from/ entering site

- Regularly use a water-assisted dust sweeper on the access and local roads, as necessary, to remove any material tracked out of the site;
- avoid dry sweeping of large areas; and
- ensure vehicles entering and leaving site are covered to prevent escape of materials during transport;

- implement a wheel washing system (with rumble grids to dislodge accumulated dust and mud, prior to vehicles leaving site);
- ensure there is an adequate area of hard surfaced road between the wheel wash facility and the site exit, wherever site size and layout permits;
- access gates should be located at least 10 m from receptors, where possible; and
- apply dust suppressants to locations where a large volume of vehicles enter and exit the construction site.

3.6 DISPLAY OF NOTICES AND WARNING SIGNS

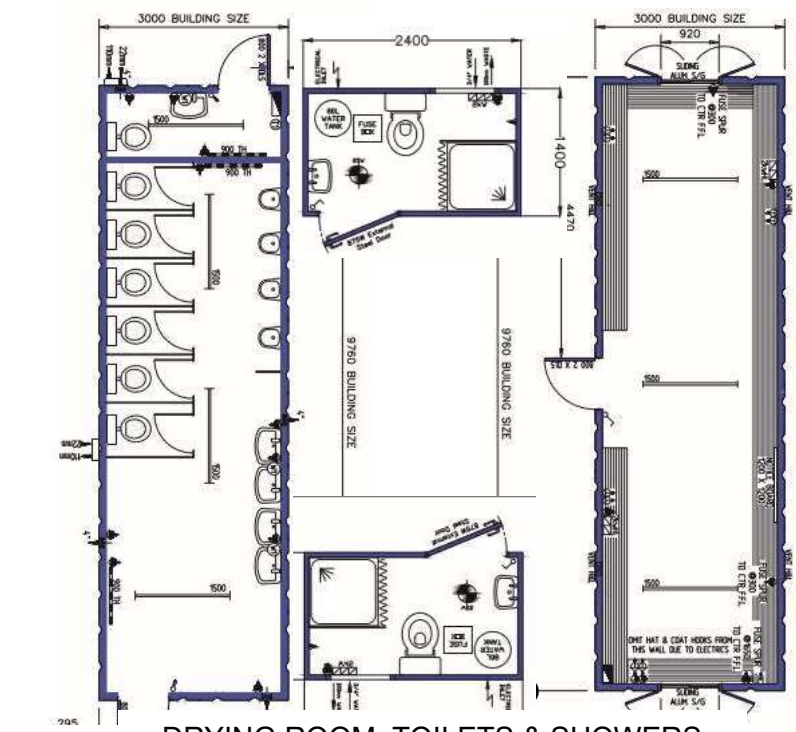
Adequate and sufficient signs will be posted to warn of danger. All signs will be kept clean and at a height where they are easy to read. All statutory requirements regarding posting of notices will be complied with at all times, including:

- The ‘Notification of Project’;
- The ‘Public Liability Insurance Certificate’; and
- Emergency and Contact Details with Telephone Numbers.

Project signs are generally situated adjacent to the site entrance. It may become necessary to have several signs as work progresses. Signage will be erected to guide material deliveries to the unloading zone and to ensure that the one-way system for deliveries is adhered to, where logistically possible.

3.7 SITE ACCOMMODATION

The site welfare facility will need to be established in a location which will not impede the construction activities whilst providing segregation between public and construction workers. Ideally, the welfare area should be established within the hoarded site areas. If this is not possible due to restricted space; care must be taken to ensure that facilities are easily accessible to site staff and are suitably located to avoid disruption to surrounding businesses and public areas. The site accommodation is temporary and will be removed or relocated before final hand-over of the project phase. Typical layouts of welfare facilities and the proposed location for the setup of the site accommodation for phase 1 can be seen in Figures 3, 4, 5 and 6.



DRYING ROOM, TOILETS & SHOWERS

CANTEEN

OFFICES AND MEETING ROOMS

Figure 3 – Typical Project office and Welfare facilities

CAMBRIDGE ROAD ESTATE

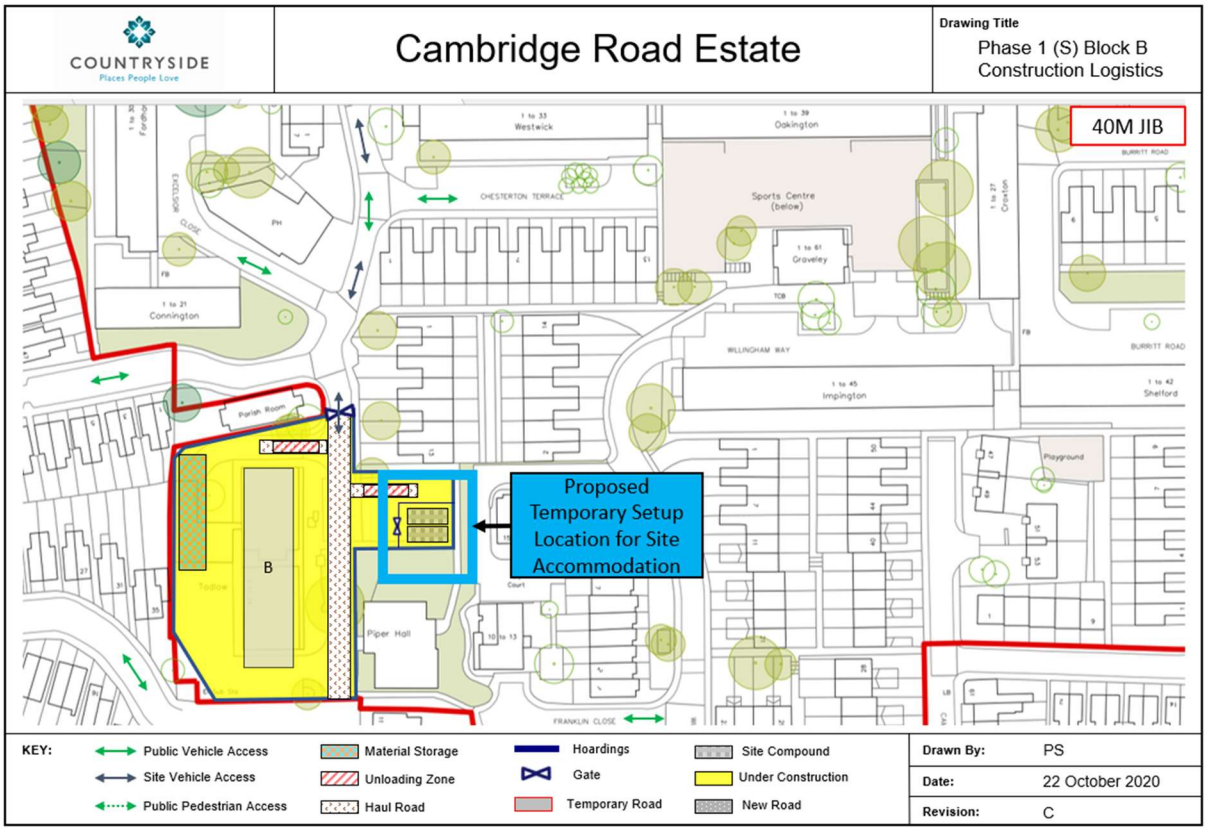


Figure 4 – Phase 1 (S) Block B Proposed Temporary Location for Site Accommodation

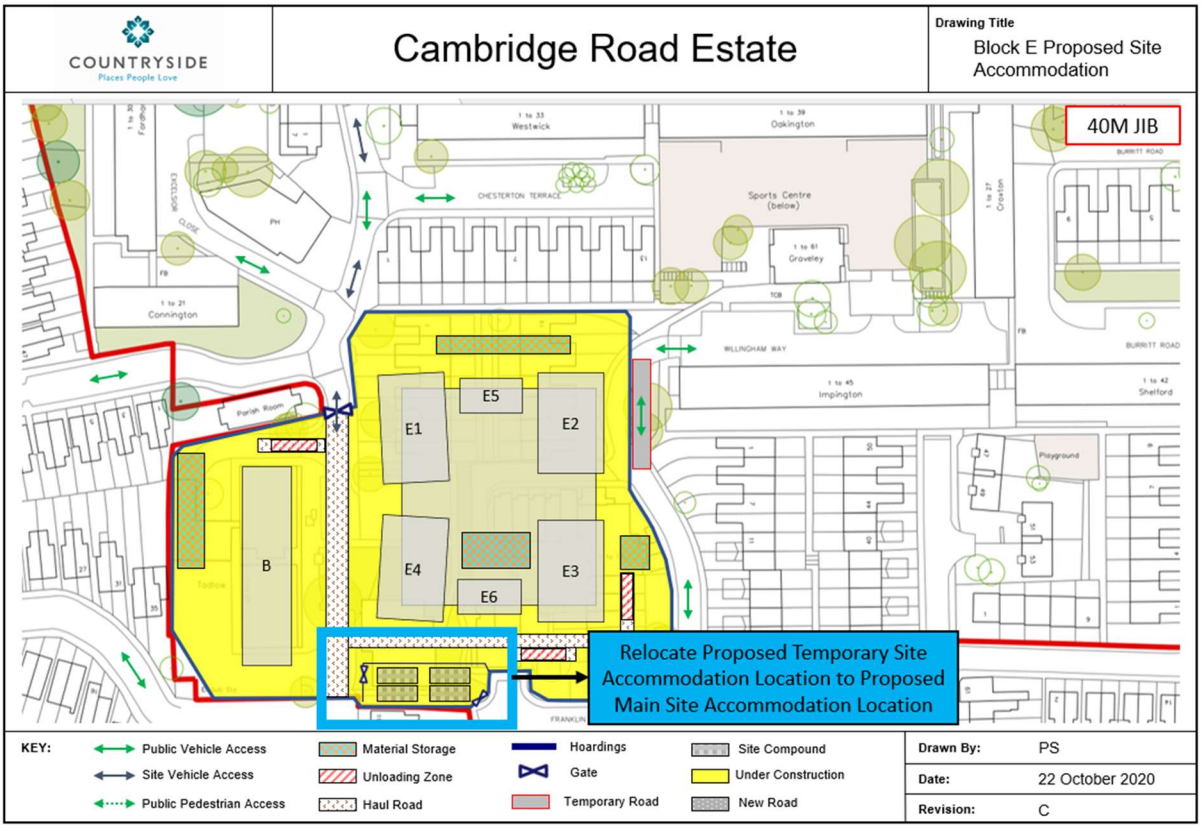


Figure 5 – Phase 1 (S) Block E Proposed Main Location for Site Accommodation

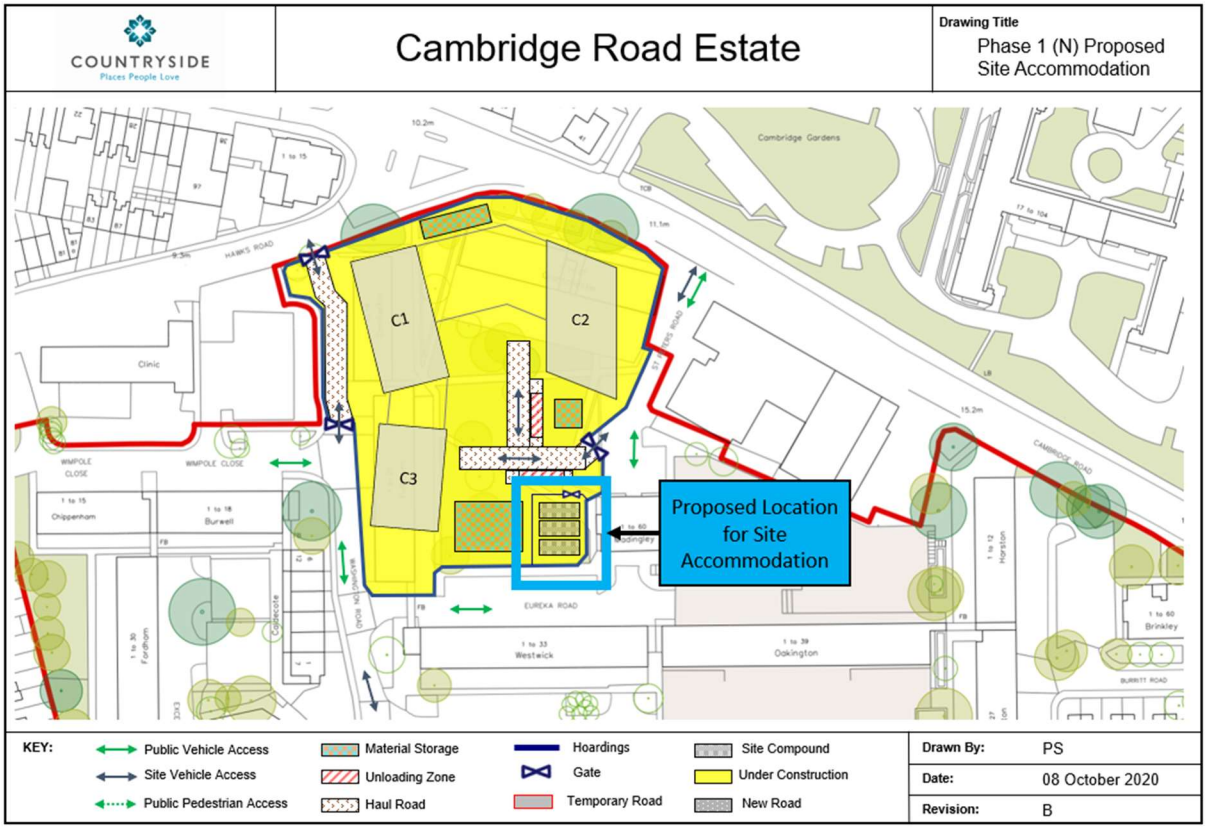


Figure 6 – Phase 1 (N) Block C Proposed Location for Site Accommodation

3.8 ACCESS TO SITE

Initial liaison with Kingston Highways/Council will be instigated to establish the exact requirements and recommendations for maintenance of both public roads and footpaths. Various factors need to be taken into consideration with regards to access, for instance, ensuring that access for existing tenants to their properties is maintained. All access routes will need to be agreed in detail with the Council prior to works commencing on site.

For Phase 1, all construction traffic will be directed from the north via Hawks Road. A detailed study and swept path analysis will need to be carried out to ensure vehicles are able to fulfil their turning circles with the proposed access routes.

Access to the northern site is proposed from St Peters Road via A2043 Cambridge Road, this will become a shared access route for construction vehicles and residents of Madingley. Construction traffic will exit back via St Peters Road on to the A2043 as illustrated on Figure 7.

Access to the southern site is proposed from A2043 Cambridge Road leading onto Hawks Road, then a temporary cross over will be required for accessing Washington road within the Phase 1 (N) hoarded area. Vehicles can follow this Washington road down to Phase 1 (S) and return back via the same route as illustrated on Figure 7.

No construction vehicles will be permitted to travel via Somerset Road, Bonner Hill Road or Piper Road.

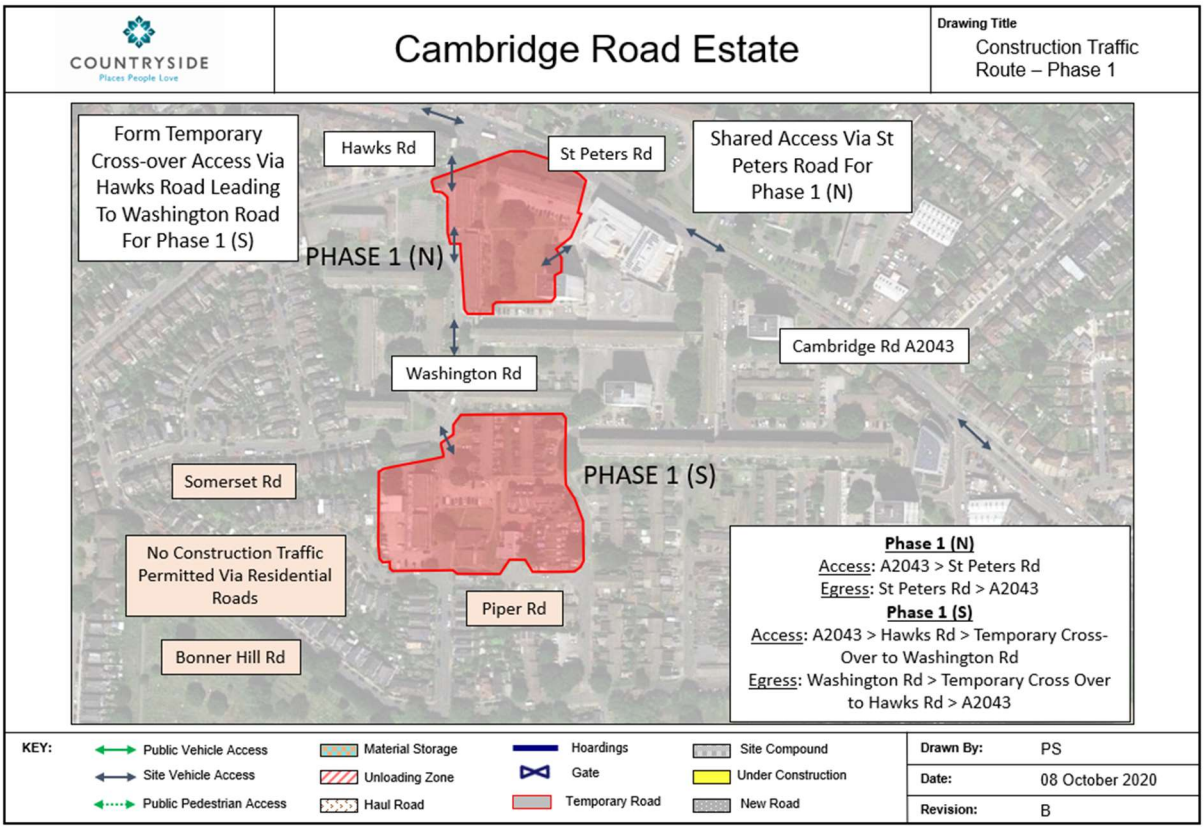


Figure 7 – Phase 1 Construction Traffic Access Route

3.9 THE CONSIDERATE CONTRACTORS SCHEME

All Countryside sites follow the Considerate Constructors Scheme, which is operated by the Construction Industry Board, as a voluntary scheme to improve the image of the construction industry. Countryside has previously won several awards in this regard.

The Considerate Contractors Code of Practice requires contractors to follow these principles:

Considerate
All work is to be carried out with positive consideration to the needs of traders and businesses, site personnel and visitors, and the general public. Special attention is to be given to the needs of those with sight, hearing and mobility difficulties.

Environment
Be aware of the environmental impact of your site and minimize as far as possible the effects of noise light and air pollution. Efforts should be made to select and use local resources wherever possible. Attention should be paid to waste management. Reuse and recycle materials where possible.

Cleanliness
The working site is to be kept clean and in good order at all times. Site facilities, offices, toilets and drying rooms should always be maintained to a good standard. Surplus materials and rubbish should not be allowed to accumulate on the site or spill over into the surroundings. Dirt and dust from construction operations should be kept to a minimum.

Good Neighbor
General Information regarding the Scheme should be provided for all neighbors affected by the work. Full and regular communication with neighbors, including adjacent residents,

traders and businesses, regarding programming and site activities should be maintained from pre-start to completion.

Respectful
Respectable and safe standards of dress should be maintained at all times. Lewd or derogatory behavior and language should not be tolerated under threat of severe disciplinary action. Pride in the management and appearance of the site and the surrounding environment is to be shown at all times. Operatives should be instructed in dealing with the general public.

Safe
Construction operations and site vehicle movements are to be carried out with care and consideration for the safety of site personnel, visitors and the general public. No building activity should be a security risk to others.

Responsible
Ensure that everyone associated with the site understands implements and complies with this code.

Accountable
The Considerate Constructors Scheme poster is to be displayed where clearly visible to the general public. A site's contact details should be obvious to anyone affected by its activities

3.10 SITE LOGISTICS

Figures 8 to 12 indicate the site logistic requirements. They show the traffic routes for deliveries, the unloading point within the site boundary, routes followed by public during construction and the location of tower cranes. The segregation of pedestrian and site vehicles is of paramount importance for health and safety as well as site logistics reasons. The exit strategy is later covered in section 5.

All deliveries will be directed to site via the proposed access routes to avoid congestion. Maps showing the delivery route will be issued as part of all orders. All lorries will be within the confines of the site during loading and offloading. Once unloaded by the tower cranes (43m in height) the lorries will return along the agreed exit route. Signage will be erected to direct deliveries to the required route and all material orders sent out will include specific directions and routes to be taken. This information will be advised to all subcontractors.

All vehicles will comply with legal highway requirements to avoid damaging road surfaces, signage and kerbs. There are no major planned works outside of the site boundary, therefore no need for any tracked vehicles to travel on the surrounding roads.

All suppliers will be expected to comply with the Construction Logistics and Community Safety (CLOCS) requirements. This is a national standard which ensures that all stakeholders take responsibility for health and safety. These requirements are aimed at ensuring the safest construction vehicle journeys with regard to collisions, improved air quality and reduced emissions, less vehicle journeys (and disruption) and improving the reputation of the construction industry.

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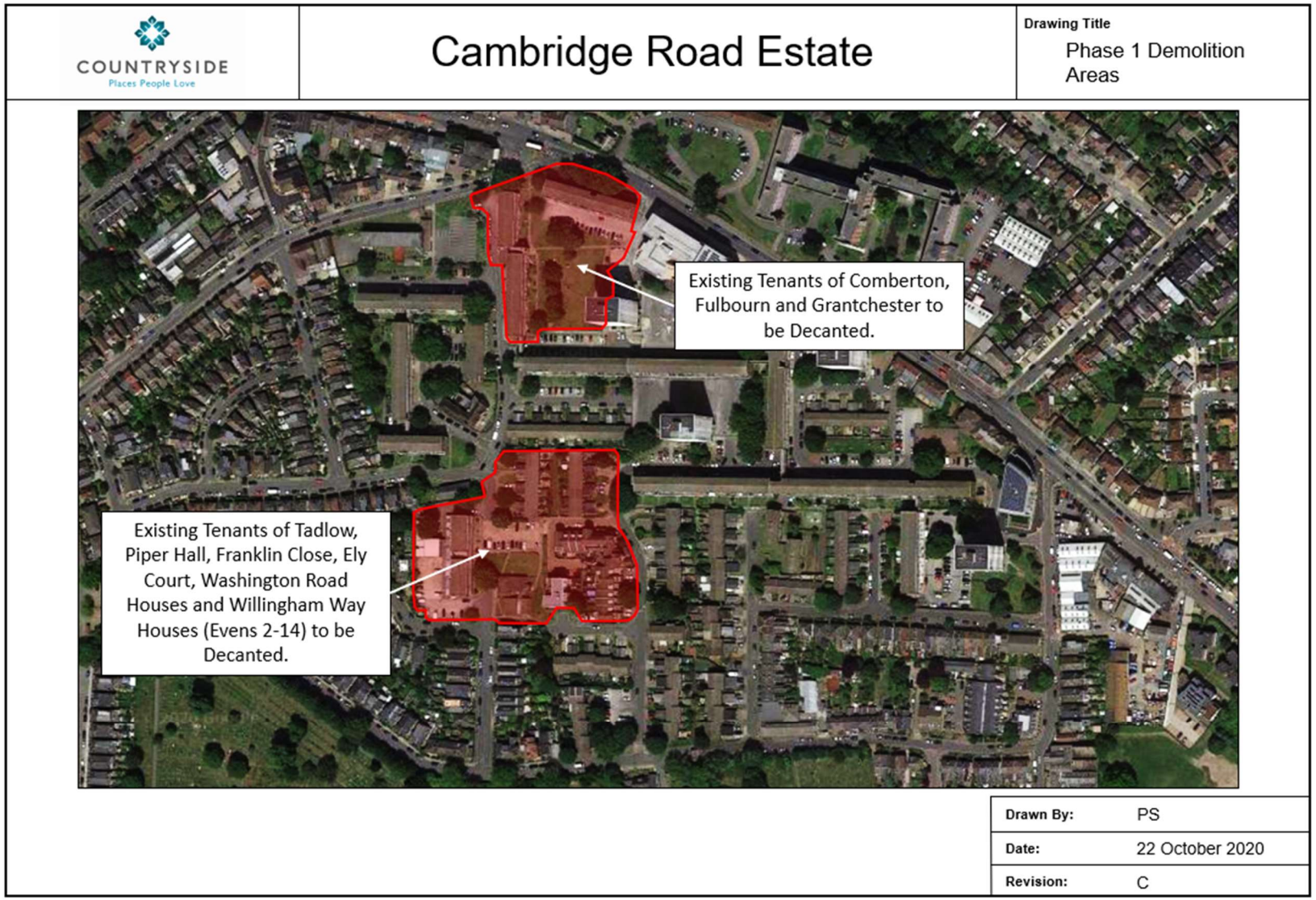


Figure 8 – Phase 1 Decant and Demolition Areas

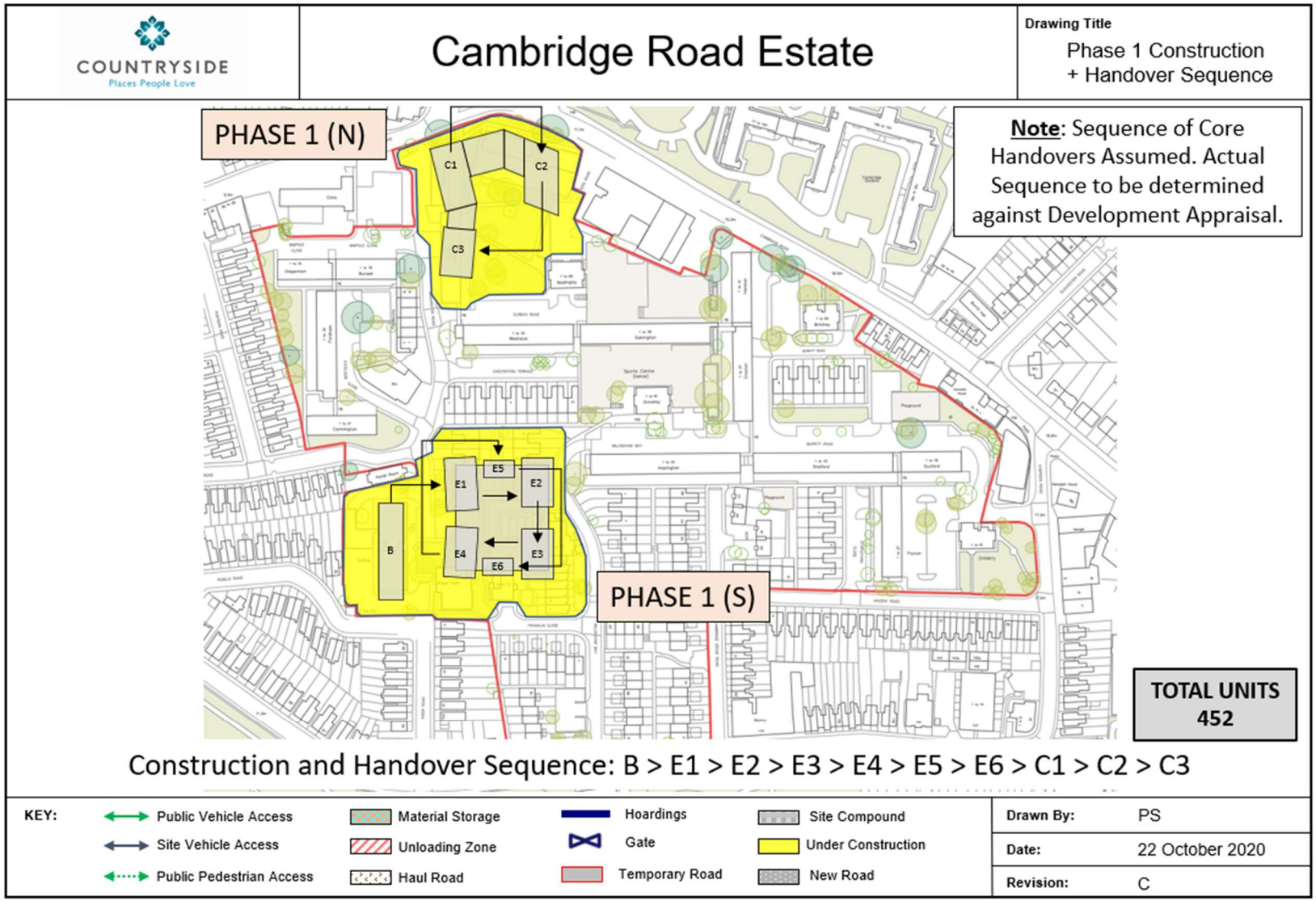


Figure 9 – Phase 1 Assumed Construction + Handover Sequence

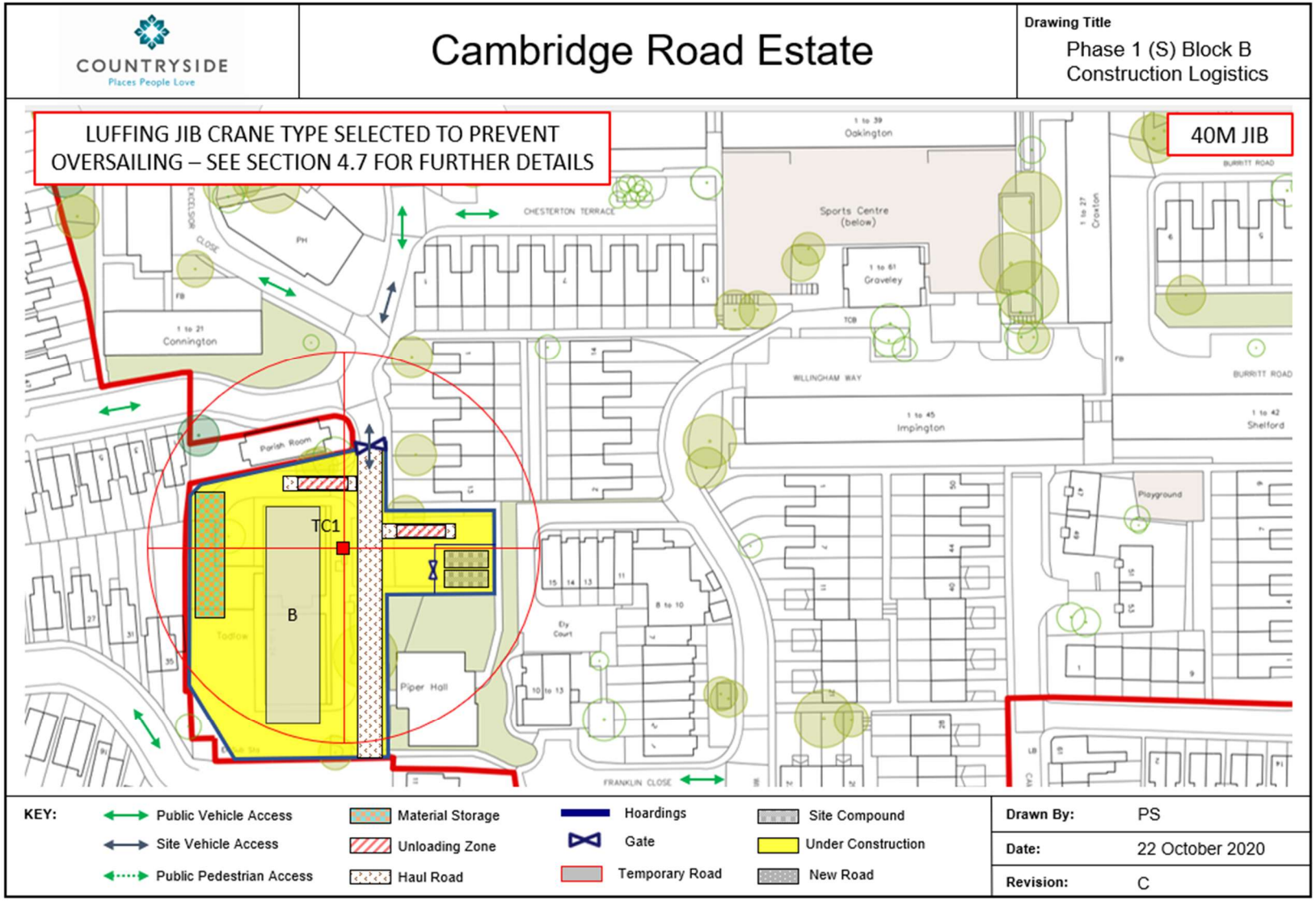


Figure 10 – Phase 1 (South) Block B Construction Logistics

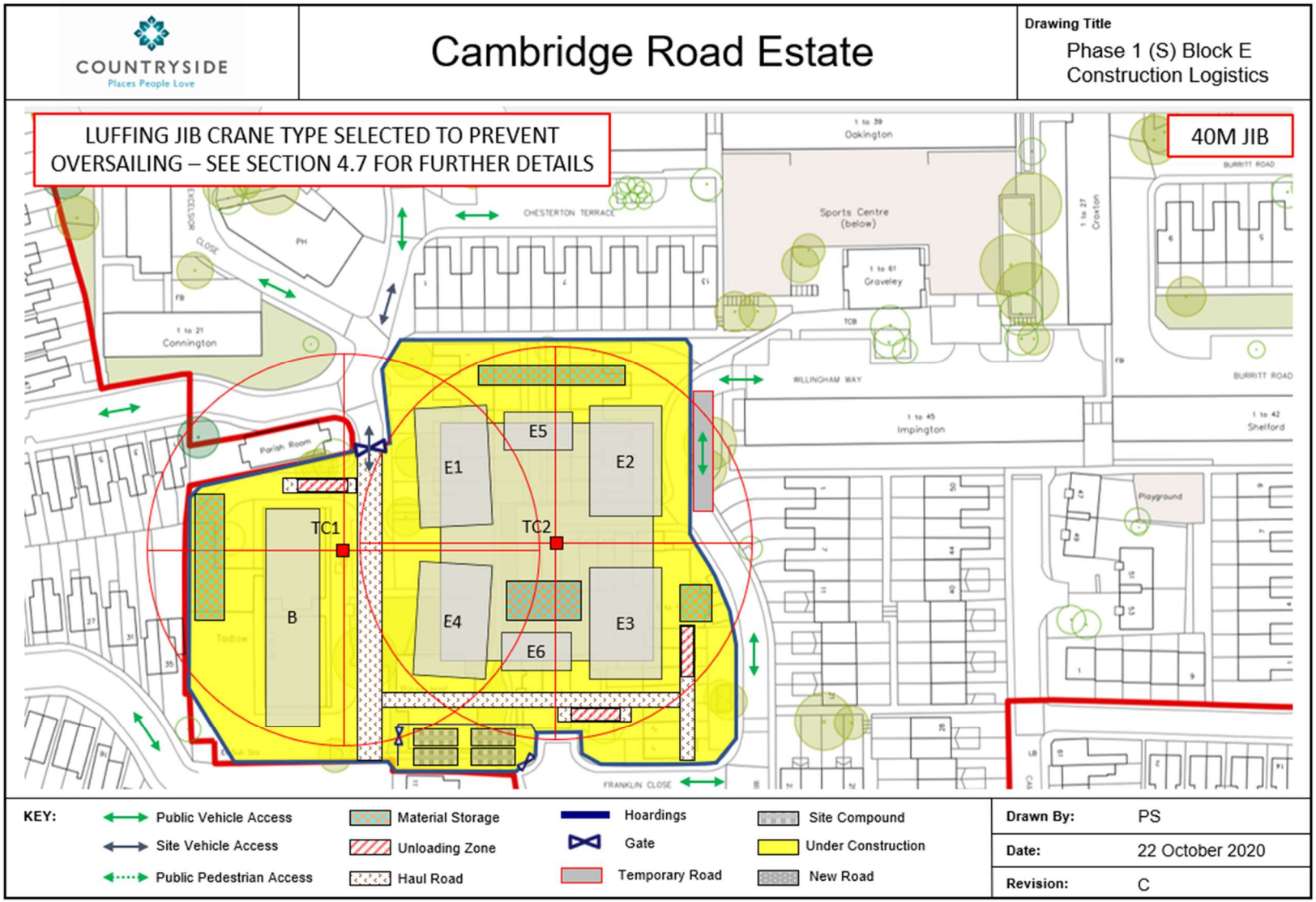


Figure 11 – Phase 1 (South) Block E Construction Logistics

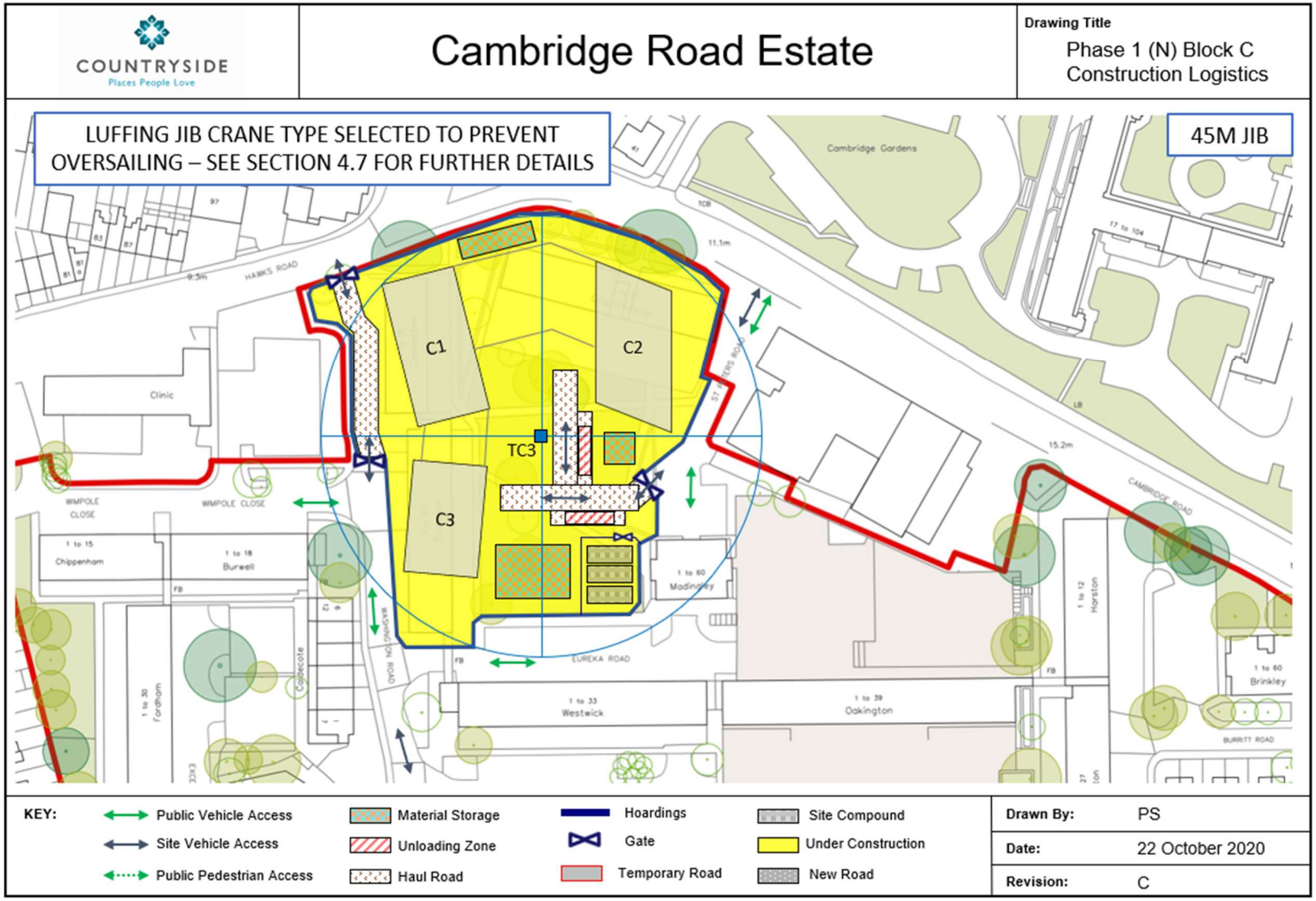


Figure 12 – Phase 1 (North) Block C Construction Logistics

3.11 ON-SITE PERSONNEL, TRANSPORT AND PARKING

The exact number of on-site personnel for phase 1 is yet to be determined, we have estimated that an average of 250 on-site personnel will be present; peaking at 350.

Countryside will liaise with Kingston Council on allocation of parking for staff where possible. The sharing of cars and use of public transport will be encouraged amongst construction staff to reduce congestion. There is no space for parking within the confines of the site, parking in the adjacent estate will also not be permitted.

3.12 VEHICLE MOVEMENTS

During the construction period the number and type of delivery vehicle will vary. Piling activities will require ready mix concrete lorries at one every two hours. During substructure construction, vehicles will comprise of 6 & 8 wheel tipper lorries, 6 & 8 wheel rigid delivery lorries at a rate of 3 or 4 per hour.

As the frames and facades of buildings are erected, 8 wheel rigid delivery lorries will be used to deliver steel reinforcement and bricks, of which there are likely to be a maximum of 3 per day. On days when there is a concrete pour there are likely to be 4 deliveries using 6 & 8 wheel ready mix concrete lorries per hour.

Once the frame and cladding are completed the main type of delivery will be rigid lorries and vans. There is likely to be around 2 deliveries per hour on an average day.

Deliveries will be scheduled to ensure that the capacity of the site to accommodate is not exceeded. Should a lorry arrive outside its scheduled time slot will be turned away from site. Only in exceptional circumstances will it be accommodated should a space be available, and it won't affect any imminent expected delivery.

Countryside notes the council's requirement to use TfL's Freight Operator Recognition Scheme, and having checked the FORS database, established that many of the subcontractors that we use are currently registered. Countryside will as part of any purchase order, make our suppliers and subcontractors aware of the requirement to be part of the FORS.

3.13 MATERIALS STORAGE

Specific method statements will be developed throughout the various stages of the project to control the delivery, storage and handling of materials. A high priority will be placed on the safe storage and movement of materials around site (see Figures 13 to 16 for examples of safe and neat storage undertaken on other Countryside sites).

Indicative material storage areas for phase 1 are shown on Figures 10,11 and 12.

Materials will be offloaded and where possible distributed to the place where they are needed for incorporation into the permanent works. Excavated materials will be loaded into waiting lorries for removal to an appropriate tip.

Figure 13 – Neat stacking of Steel Reinforcement

Figure 14 – Adequate signage and control of Fuel Storage

Figure 15 – Neat stacking of Formwork

Figure 16 – Storage of Lifting Straps

All materials will be stored in the appropriate area. Containers of liquid will be stored in a bunded area to prevent accidental spills. All materials will be stored in a safe manner and protected where required i.e. plaster board will be covered to prevent moisture damage and bricks will be safely stacked no higher than two pallets.

The Project Manager will make adequate provision to avoid accumulation of bulk materials, in order to prevent inconvenience or disruption., This further reduces the risk of fire and dust. Both Countryside and its sub-contractors will ensure the site will always be left in a clean and tidy manner. Materials will not be stored or left unattended outside of site boundaries.

On commencement of the works, a comprehensive method statement will be provided to control the delivery, storage and handling of materials.

3.14 SITE LIGHTING

Safety and Task Lighting

These lights will be positioned to provide a safe level of light but will be positioned in such a way to prevent the light becoming a nuisance. Light for working will only be required during the winter months when the daylight hours are reduced.

Security Lighting

These lights will be installed to site compound areas and will be positioned to prevent any nuisance. It will only be operational during the site working hours, where possible, to avoid disturbance to neighbouring properties at night.

Obstacle Lighting (Aviation Lights) – See Annexure 2

The Civil Aviation Authority regulations for Aerodromes (CAP 168, CAP 738 and CAP 1096), BS 7121, Part 1, as well as the UK Air Navigation Order, have been applied.

Clause 11.3.3 of BS 7121-5:2006 states:
"*The appointed person should consult the aerodrome/airfield manager for permission to work if a crane is to be used within 6 km of the aerodrome/airfield and its height exceeds 10 m or that of surrounding structures or trees, if higher. Restrictions could be placed on the overall*

height of the crane and there could be a requirement to fit warning (obstacle) lights to the top of the crane.

***NOTE:** The Air Navigation Order makes it an offence to act recklessly or negligently in a manner likely to endanger aircraft."*

In accordance with the UK, Air Navigation Order, in addition to any aerodrome-related requirement, any structure (temporary or otherwise and regardless of location) of a height of 300ft or more needs to be notified for aviation purposes. Regardless of location, aviation lighting is legally required for all tall structures (including cranes) of a height of 150m (492ft) or more. Further to this statutory requirement, it is recommended that that tower cranes with a height of between 91.4m (300 ft) and 150m (492ft) are also equipped with aviation warning lighting. The Civil Aviation Authority is known to be strongly supportive of such an initiative and will routinely make similar recommendations. The responsibility for notification to aerodromes and/or the CAA, together with the lighting of tower cranes, rests with the hirer of the crane (Principal or other contractor), however the supplier of the crane should assist the hirer by reminding him of his obligations.

In terms of the above regulations, Obstacle lighting is not required. However, Countryside normally requires its crane suppliers to install aviation lights on its tower cranes.

3.15 WASTE RECYCLING AND DISPOSAL

Countryside is registered under ISO14001: 2004 and have in place detailed environmental management systems upon which we are regularly audited. Annexure 1 shows a typical Site Waste Management Plan.

Detailed procedures for the handling and recycling of waste materials are in place and all sub-contractors are required to comply with these. Sub-contractors will deposit waste materials in skips located in specific areas around site. Individual skips will be provided for the main recyclable materials and waste will be segregated and placed into the appropriate skip. Appropriate signage will be used (see Figure 17).

Figure 17 – Example Site Signage for Recycling and Waste Disposal

Recyclable waste will be sent to the recycling centre while other waste materials will be taken to designated licensed tips.

Countryside is committed to yearly improvement in its environmental performance and waste control is one of its key performance indicators.

3.16 PEDESTRIAN SAFETY

The site hoardings will be erected on the back edge of the existing pavements, thus ensuring that pedestrians have a safe walking environment. Where there is inadequate lighting, the hoardings will be fitted with bulkhead lights to provide a safe environment for pedestrians.

The temporary closure of existing footpaths will be kept to a minimum. Where required, the diversion route will be adequately sign posted. Safe walkways will be established behind traffic barriers where required. Before the commencement of any works affecting the public right of way, agreements will be obtained from the local council and highways department. Appropriate licences will be obtained timeously.

3.17 DEVELOPMENT / RESIDENT LIAISON REPRESENTITIVE

Community development and resident liaison is overseen by a director. A resident liaison manager will be appointed where required.

The director is responsible for handling all complaints received in accordance with our BSI Quality Assurance Procedures. The director and representatives are responsible for the satisfactory resolution of all complaints. A complaints log is set up where all complaints directed at site will be monitored and addressed by the Resident Liaison Manager (RLM).

Construction projects often attract the interest of children. The Community Development team work closely with the local community, including schools, colleges and local police, to ensure our projects do not present a risk to children's health and safety. Through the 'Crucial Crew' initiative, a safety awareness message will be communicated. Talks cover areas presenting risk, including the building site, fire and electrical sub stations, 'stranger danger' and so forth. The Community Development team also work closely with Education Business Partnerships (EBP).

The site logistics plan and the programme will be explained to teachers and governors. Regular communication letters will keep local residents informed. These can be issued to schools for distribution to parents as part of a safety awareness campaign.

Regular newsletters provide information on road layout changes and temporary closures. These will be issued to local residents and cyclists. Local cycling clubs and their representatives are able to contact the Resident Liaison Officer for information, as well as raise concerns regarding works associated with the construction site.

People with special needs will be contacted by the Countryside's RLM, who will assist those in order to ensure their maximum safety.

Prior to the commencement of any site work, all sensitive properties surrounding the site shall be notified in writing of the nature and duration of the works to be undertaken, and the name and address of a responsible person to whom enquiries / complaints should be directed.

4.0 SEQUENCE OF WORK AND METHODS INCORPORATED

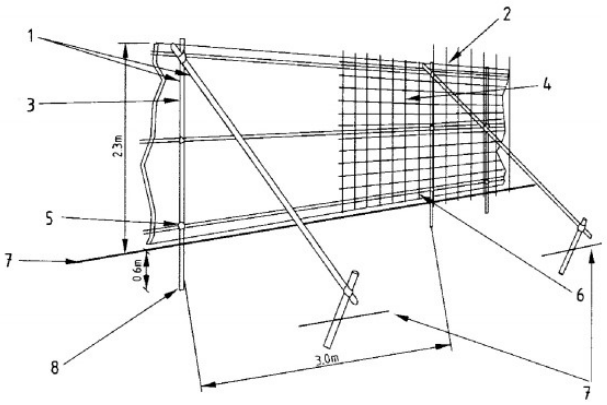
4.1 INTRODUCTION

As this serves as a guideline, based on current design and employers' requirements, this would be further developed as amended should it be necessary.

4.2 TREE PROTECTION

Trees forming part of the final landscape layout will be protected to prevent damage during demolition and construction. Within the site boundary a protective fence will be erected around these trees to prevent traffic, both pedestrian and vehicular, from entering under the canopy of each tree.

Material storage areas will be located away from trees to prevent potential risks of accidental damage from potentially harmful materials and also loadings on the root ball of the tree. Full details of the Tree Protection Strategy will be developed as part of Countryside's Environmental Plan before the project starts on site and submitted to the Council. Figure 18 below shows an indicative typical detail of the tree protection fencing used on a site. The extent of the fencing will be detailed on an architect's drawing and issued prior to starting on site.



1. Standard scaffold poles
2. Uprights to be driven into the ground
3. Panels secured to uprights with wire ties and where necsessary standard scaffold clamps
4. Weldmesh wired to uprights and horizontals
5. Standard clamps
6. Wire twisted and secured on inside face of fencing to avoid easy dismantling
7. Ground level
8. Approx. 0.6m driven into the ground

Figure 18 - Typical tree protection detail

4.3 PRE-START INVESTIGATION AND DETERMINATION OF EXISTING SERVICES

Surveys will be carried out to verify the positions of existing services (shown on existing drawings obtained from the service providers) and to identify those not shown. Any services found will be plotted and issued as an 'As Built' record. Cable avoidance tools will be used as a matter of course as work proceeds. As services are exposed, the service providers will be consulted further if additional protection or diversion works are necessary. Where required, trial holes will be excavated to determine the depths of these.

Any additional surveys which are required, will be carried out prior to the commencement of construction works. Notification of commencement of these site investigations will be issued to all Statutory Authorities, as well as third parties, where applicable.

A survey of dilapidations of all existing neighbouring building, roads and landscaping, including trees and vegetation, will be carried out before any works commence. Tree and habitat surveys which could impact site works, will be consulted. The dilapidations survey will include a photographic record of the condition of neighbouring buildings, roads, landscaping etc. All necessary measures required to protect existing features will be put in place.

Further site investigations will also be carried out by Countryside following demolition and the granting of a building licence. These will include both topographical and geotechnical investigations, as well as environmental studies. All findings will be circulated to the necessary parties and these will be used to prepare the Environmental, Health, and Safety plan prior to works commencing on site.

Countryside operates a 'Permit to Dig' system of work for all excavations. This system of work ensures that appropriate checks are made in accordance with the latest regulations and the Health and Safety at Work Act.

4.4 PILING

The method of piling chosen will most likely be the Continuous Flight Auger (CFA) method, as this produces the least vibration and the minimum of disturbance to the surrounding environment (see Figure 19).

The Countryside Site Manager (CSM hereafter) shall ensure the Piling subcontractor meets all his obligations for all aspects of this operation and will have previously prepared or reviewed a specific Risk Assessment. All control measures will be in place and that the recommended PPE will be issued and used correctly. The CSM will ensure that the competency of all operators has been provided and checked by the subcontractors and that plant inspection/testing records are in place.

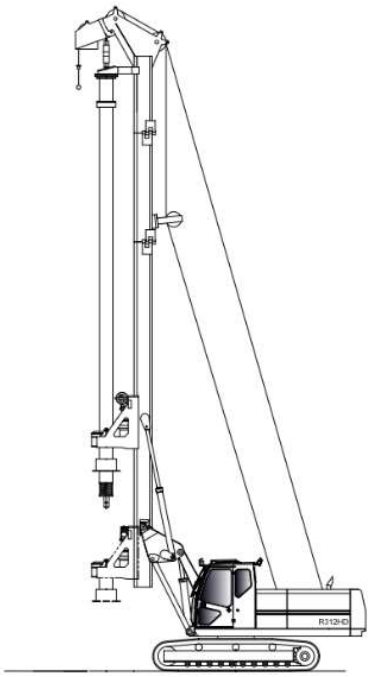


Figure 19 – Typical CFA Piling Rig

The appointed structural engineer will design a piling mat to support the piling rig. The mat will be installed by the Groundwork subcontractor and inspected by the CSM to ensure it has been properly constructed.

The specialist Sub-Contractor shall install the pile in accordance with the Engineer's details, to the correct toe level, which shall be verified by Countryside (or designated authority). The top level of the pile shall also be established in accordance with the Engineer's details and verified. The piling contractor shall produce for each pile a log containing all information relevant to that pile and shall submit this record for Countryside's information.

All pile arisings shall be removed from the location and stockpiled prior to being taken off site, if applicable.

4.5 FOUNDATIONS

Upon completion of the piling, the reinforced concrete pile caps and ground beams can commence. Foundations will be excavated and blinding placed as required. Earthworks support will be installed to minimise the risk of collapse of excavations and to provide safe working areas. Reinforcing cages, as necessary, will be pre-fabricated on site and placed in position. Shuttering will be fixed and checked prior to placing concrete. Concrete will be placed, where possible, directly from the concrete truck, and protected until the following day, when shuttering will be struck and removed. Provision will be made for any drainage and ducts that pass either through or under the foundations. On completion of the foundations, all grid lines and setting out will be marked on the bases to check that they have been cast in the correct positions.

Once the setting out has been completed the substructure brick work can commence. Once up to DPC level the installation of the surface water and foul drainage connections will commence, this will allow provision for disposal of ground and surface water during the course of the works. All underground drainage and ducts will be installed at the earliest possible stage and any protection required will be provided, including the re-routing of existing services, and the excavation of the new service trenches.

Job specific method statements will be requested prior to various aspects of the works being carried out.

4.6 PRECAST FLOORS & STAIRS

The pre-cast concrete subcontractor will produce fabrication drawings for approval by the consulting engineers prior to manufacture. It will be imperative that this process is carried out as efficiently as possible to minimise the lead-in period for the pre-cast floors, as this element of the work is critical to the overall programme. Full method statements for the delivery, storage and erection will be produced prior to commencement of the work. These statements will address all safety related matters and will be strictly adhered to during the execution of the work.

4.7 TOWER CRANES

To construct the new buildings, tower cranes will be erected. These will ensure full coverage of the site and the timely construction of the blocks of apartments by working in more than one area at the same time. The structural engineer will design a piled crane base for each crane which will be constructed as part of the ground works subcontract.

Luffing jib tower cranes (see figure 20) have been selected to ensure that cranes will not over-sail the boundaries of the site or newly handed over block. When out of operation their “parked” radius will fall within the site boundary. To prevent over sailing, cranes will be fitted with a SMIE (anti-collision) system that will limit the area that the cranes are able to operate to within the boundary of the site and thus prevent over sailing issues. Cranes will be operated by fully trained and certified operators, who will be responsible for the daily safety checks and the keeping of records. The cranes will be subject to maintenance at regular intervals, to ensure safe and uninterrupted service and all necessary inspections will be carried out by competent personnel.

All crane lifts will be managed by a qualified banks person, who will always be in radio contact with the crane driver.

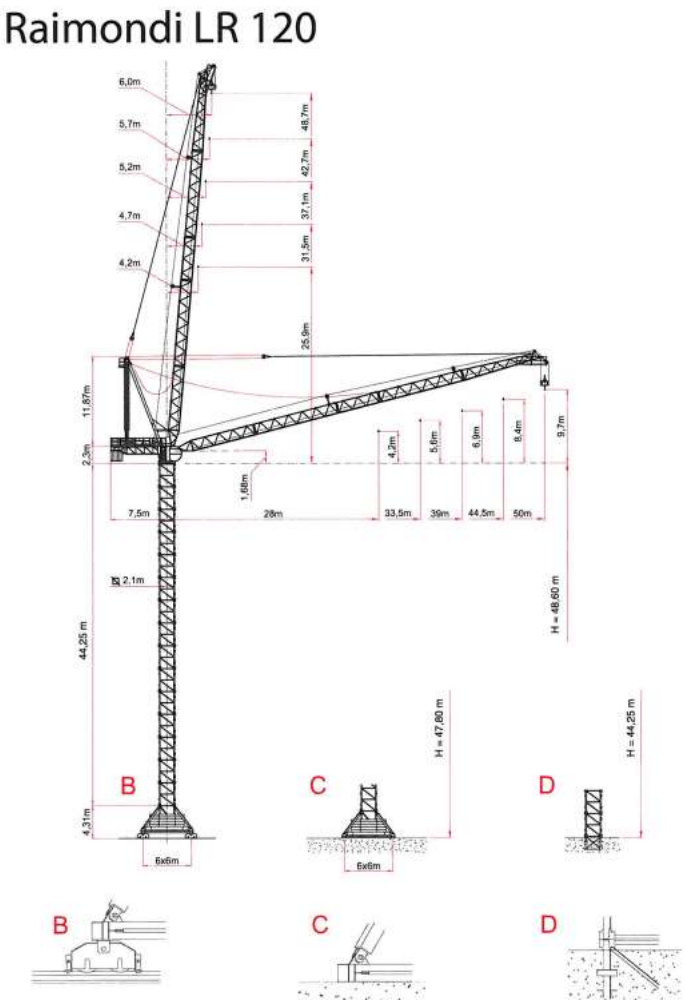


Figure 20 – Typical Luffing Jib Tower Crane

4.8 EXTERNAL WORKS

All foundations, drainage and ducts for incoming services will be installed prior to the erection of scaffold. Once the scaffold is removed there will be the landscaping, fencing and planting to carry out.

With the drainage works generally the intention is to excavate for the runs with mechanical excavator and lay pipes working from the fall out back on the line. Arrangements will be made in advance for the inspection and witnessing of tests by the local authority to ensure that works are carried out in accordance with their requirements and to suit the construction programme.

Beds and surrounds over pipes followed by backfilling to trenches will then take place. Manholes will be built, benched and completed on an ongoing basis.

It is envisaged that specific method statements for this section will be required and as such will be obtained and agreed prior to commencement.

4.9 CONCRETE FRAME

A specialist concrete frame contractor will be appointed for the erection of the reinforced concrete structure. The sequencing of works will be covered in sufficient detail in the Construction Programme.

The Project Manager shall be responsible for overseeing the subcontractor regarding all aspects of this operation and will have previously reviewed a specific Risk Assessment.

The Project Manager will ensure that:

- all control measures are in place;
- operatives follow a safe system of works in accordance with their Risk Assessment and Method Statements (RAMS);
- all statutory documents are in place and updated regularly; and
- works are undertaken in accordance with the Construction Programme and Logistics.

Once an area of ground floor slab is handed over to Countryside by the ground works contractor, the column & concrete wall reinforcement shall be erected as per the design. Suitable access platforms shall be utilised for work over two metres in height above slab.

Formwork shall be lifted into place using a tower crane and fixed into position. The formwork shall be either a proprietary system or a traditional timber and ply item manufactured on site; the choice and design shall be the responsibility of the concrete frame contractor. Concrete shall be sampled and tested in accordance with the relevant British Standard. Following an inspection, concrete shall be placed using a skip or a concrete pump. Operatives shall work from a suitable platform provided at high level on the column and gain access to this platform using a fixed ladder. Formwork shall be struck the next day at a time when the specialist Sub-Contractor is confident that sufficient hydration has taken place.

The slab/beam formwork/falsework may only be removed when the specialist Sub-Contractor has satisfied him/herself that the slab is of sufficient strength to do so following the testing of concrete cubes.

Once the formwork has been removed it may be necessary for the props to be put back into place until such a time that the cube tests indicate that the concrete has reached its full working strength.

4.10 BRICK AND BLOCKWORK

Bricks and blocks will be delivered to site and off loaded (where possible) directly adjacent to the areas in which they will be required. Where there is no access for wheeled vehicles to the area of works, materials will be distributed by the tower crane using the appropriate lifting equipment (see figure 21).

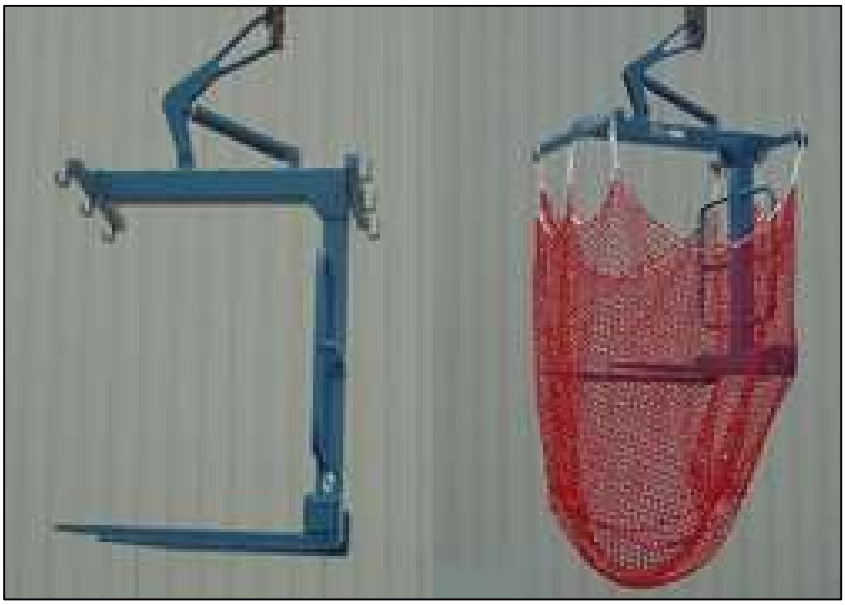


Figure 21 – Brick forks, for use with tower cranes

The materials will be inspected upon delivery for their quality and ensure there is no damage present; any sub-standard materials will be rejected. The materials will be stored on their pallets and protected from the elements by shrink wrapping. The materials will again be inspected for quality and damage before being incorporated into the structure. Care will be taken to establish the correct setting out the regular checks will be made for line, level and quality as work proceeds.

Risk assessments for manual handling will need to be carried out to alleviate any risk of personal injury. Relevant precautions will be incorporated into method statements.

4.11 EXTERNAL WINDOWS/CURTAIN WALLING/ CLADDING

These works will be carried out by specialist subcontractors. Care will be taken upon delivery to ensure that materials are carefully unloaded, stacked and protected ready for use. Prior to acceptance of any components on site, all will be inspected for quality of product and any damage that may have occurred during transportation to site.

All components will be carefully and fully protected during the construction process so as to avoid any resultant damage. Access for the works will be from the main elevation scaffold due to the site constraints.

Materials will be moved into position using the tower cranes. The appropriate lifting frame will be used when lifting to prevent damage to the units and to ensure safe procedures are followed (and example of such can be seen in figure 22).

Figure 22 – Glass lifting frame / vacuum frame

4.12 INTERNAL FINISHES

A Finishes Programme will be produced in conjunction with all trades which will then be closely monitored throughout the duration of the project. As soon as the building work is sufficiently advanced the first fix installation will proceed. The partitioning/dry lining will be set out in accordance with the agreed architect's details.

During the plumbing first fix period all mains services, such as hot and cold-water pipe work and heating, will be installed. Testing will be carried out to an approved standard in stages to suit the progress of the works.

The electrical first fix works will be co-ordinated with the plumbing and will consist of all necessary conduits and trunking to facilitate the wiring of the electrical installations. As soon as containment is sufficiently advanced wiring will commence.

All carpentry first fix items, i.e. door linings, frames, window boards, grounds etc, will be fitted prior to the commencement of plastering and finishing. All finished items will be protected from damage during the construction process.

Plastering and dry lining works will progress in line with the progression of the M&E first fix items. Particular attention will be given to the following:

- Confirming that all penetrations through walls have been completed, made good and fire stopped if required;
- Ensuring that all reasonable shrinkage has taken place within the block work and there are no saturated areas;
- That all pre-finished elements are fully protected;
- That the buildings are sufficiently watertight and protected from the elements, ensuring that the temperatures are in the correct range for plastering works to proceed;
- That a good level of temporary lighting is provided; and
- All areas of work are to be kept clean and tidy; this will be monitored on a day to day basis by the Site Management team.

All redundant off-cuts of board/studwork will be cleared from the workface on a regular basis to an agreed location for removal from site for recycling.

On satisfactory completion of the dry lining and plastering, second fix activities will commence, such as the installation of grilles/diffusers, fixing of sanitary ware and connection of electrical light fittings and accessories along with the installation of final items of specialist equipment in line with allied building finishes.

Throughout the services installation routine inspections will be carried out to ensure that the services are being installed to the required standards, within the requirements of the specification. Sectional testing will be carried out as work progresses.

As each area is released and accepted the carpentry second fix works will commence and follow the programmed sequence. It is our intention to sample fix finals items, i.e. hooks, toilet roll holders etc. removed to a safe place and final fit after decoration is completed. The decorations will naturally follow the carpentry second fix and will be sequenced in this way. Prior to decorations commencing all rooms and areas will be thoroughly inspected for any defects, once areas are cleaned and only then will the decorations commence.

Protection of all joinery items will be maintained until Practical Completion. Following the completion of the final fix, each unit will be inspected by Countryside and any defects found will be made good. The unit will then be offered to the client for inspection, and an agreed snagging list will be prepared and the works made good. Once the final snagging is completed the units will be handed over to the client and locked up until each core is ready to be occupied.

4.13 COMMISSIONING

The electrical installations will be tested in accordance with the latest edition of the IEE Regulations, whilst any air conditioning and water services will be commissioned in accordance with the CIBSE Commissioning Codes. Specialist equipment will be commissioned by the respective specialist contractors as the progress of the works permits.

The engineering services O&M manuals will be incorporated into Countryside's H&S manual for issue prior to practical completion.

Each commissioning activity will be carried out in the presence of Countryside's nominated staff member and the Client's Representative.

4.14 EXTERNAL WORKS (2ND VISIT)

Upon completion of areas of drainage and services installation, hard landscape as well as Section 278 works will progress to the perimeter of the buildings and the new car park areas.

At a stage when these works are nearing completion, soft landscaping and planting will be carried out.

5.0 EXIT STRATEGY

The blocks are proposed to be handed over in the sequence B-E-C although each core will be handed over separately. The handover sequence for the cores are also assumed at this stage. It will be crucial that all S278 and S38 works are completed throughout final stages of external works. Emphasis is given to providing a good "customer journey" as the project is handed over in sub-phases / blocks. Public and site safety, access, convenience, presentation, and visibility of the surrounding construction site are key elements considered. Safe pedestrian movement around the perimeter of the site is of paramount importance. Figures 23 to 25 illustrate the block handovers of phase 1.

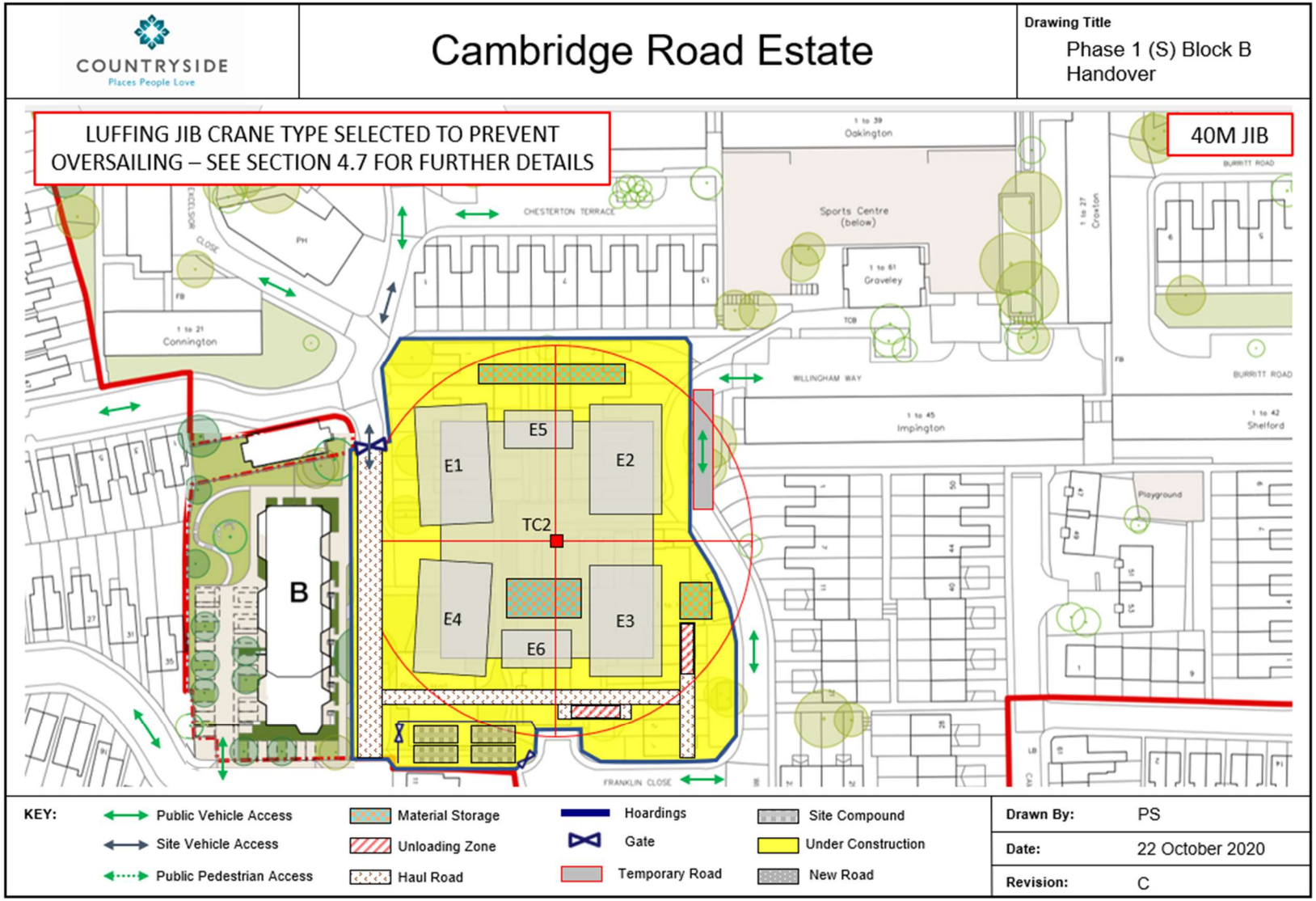


Figure 23 – Phase 1 (S) Block B Handover

CAMBRIDGE ROAD ESTATE

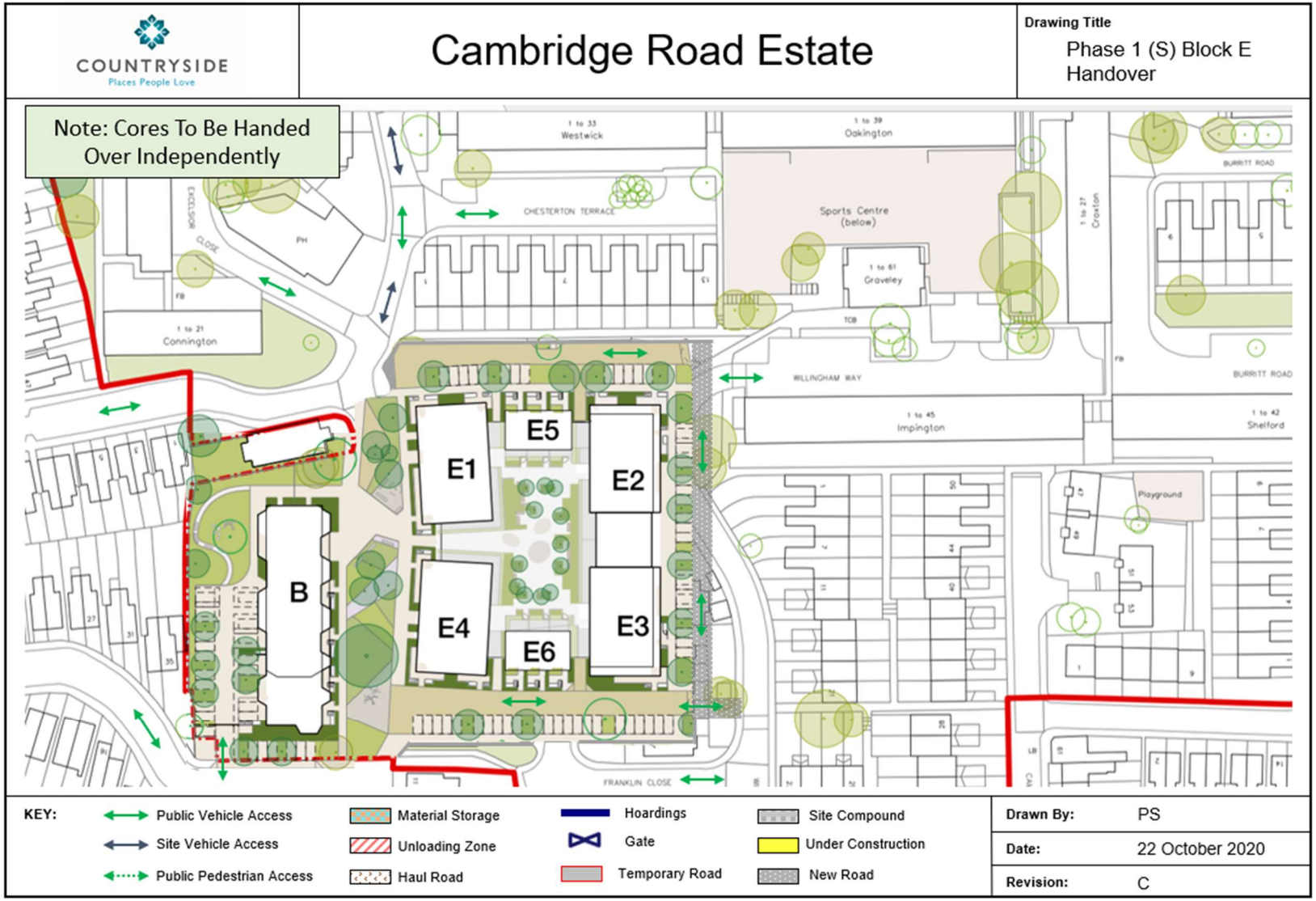


Figure 24 – Phase 1 (S) Block E Handover

CAMBRIDGE ROAD ESTATE

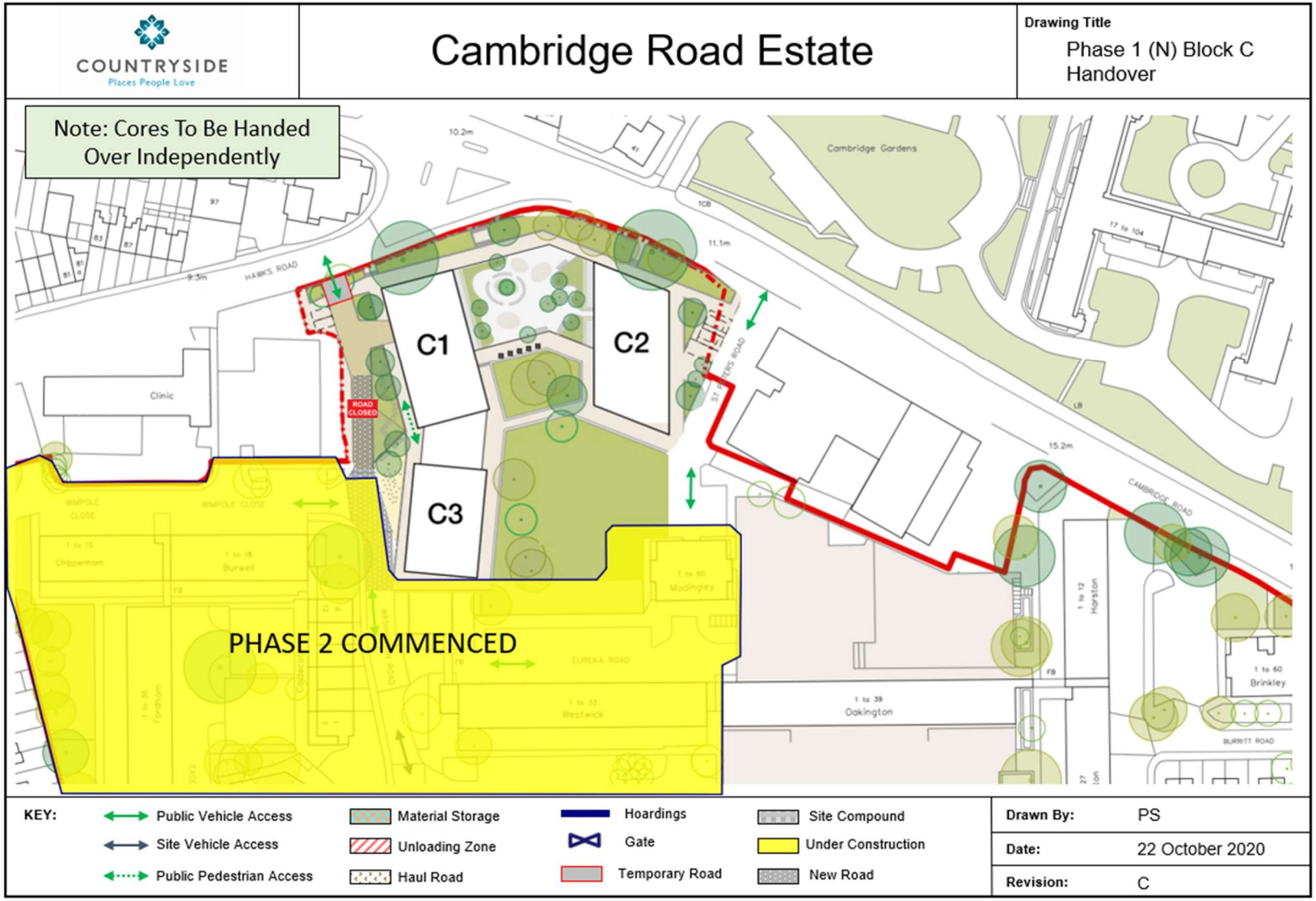


Figure 25 – Phase 1 (N) Block C Handover

6.0 SUMMATION

This document was set out to demonstrate our commitment to a well-planned and safely executed project. We have shown that the works have been carefully sequenced for both the construction and occupation phases of the project and we have taken into consideration The Royal Borough of Kingston upon Thames Council's requirements during the preparation of the programme.

The Construction Management Plan (Section 3) has sought to explain the sequencing of the works and the methods that will be employed to deliver a successful project in the shortest possible time period in order to deliver the regeneration and new homes in a timely manner.

The trade method statements (Section 4) are of a general nature and indicative of a project of this nature. Therefore prior to the commencement of each stage of the construction works, job specific method statements will be produced and agreed with the Countryside Site Management team and the Planning Supervisor for inclusion in the Safety Plan.

The Exit Strategy (Section 5) allows the early occupation of the first units completed; please note these are early proposals and are subject to change as the scheme progresses and/or if the sales strategy changes.

ANNEXURE 1: TYPICAL SITE WASTE MANAGEMENT PLAN

CAMBRIDGE ROAD ESTATE

Form No. 214

COUNTRYSIDE PROPERTIES (IN PARTNERSHIP) LIMITED

SITE WASTE MANAGEMENT PLAN

DATE:

Client:	
Project Title:	
Project Site Address:	
Est. Project Value:	
Description of Project:	

Job No. : H00

Scope of Construction (tick)

Demolition		Masonry	
Timber Frame Construction		Modern Methods of Construction	
R/Concrete Frame		Other	

Building Footprint (m²) ____ No. of Floors ____

Project Waste Strategy Review

Carry out a strategic review of the project to assess design and materials proposed for the scheme. Review which Option of Waste Management is applicable based upon ***site size, site constraints, financial aspects and programme***.

Option A – Full removal of site waste to Waste Transfer Station for re-use, recycling, landfill disposal.

Option B – Full or partial site waste segregation with removal to Waste Transfer Station for further re-use, recycling, landfill disposal.

Option C – Full on site waste segregation by Waste Subcontractor.

Note : IN all Options Plastering/Dry Lining subcontractor to provide their own skips and be responsible for the waste stream. Main contractor to nominate the skip supplier.

CAMBRIDGE ROAD ESTATE

Site Waste Management Plan Administration

	Item	Position	Name
1.	Generator of SWMP	Construction Manager	
2.	Preparation of Material Quantities in Project	Estimator	
3.	Estimation of Waste Generation	Estimator & Buyer	
4.	Management & Monitoring of Waste Generation on Site	Project/Site Manager or Delegated Person	
5.	Review & Analysis of Waste Data	Buyer	
6.	Contract Review	Design & Build Manager	

Review Process of SWMP

1. **Tender Stage** – Preliminaries assessment by Construction Manager.
2. **Pre-Construction Stage** – Design Team Meetings by Design & Build Manager.
3. **Construction Stage** – Construction Team Meetings by Construction Manager.
4. **Contract Completion** – Contract Review by Design & Build Manager.

Review and Update of Plan During The Construction Period

Review

During the Construction Stage the SWMP is to be reviewed monthly at the Construction Team Meeting.

Recording Period of Site Waste Being Produced

Record the types of waste and waste produced for each 3 monthly period from Construction commencement to Practical Completion.

SITE WASTE MANAGEMENT PROPOSAL BEFORE WORKS START ON SITE **DATE :**

Waste Type Produced For Project (C) = Code for Sustainability Item		Volume of Material to be used or Generated during Construction (M^3)	Estimated Volume of Waste Type that will be Produced (M^3)	Management Proposal for Site Waste		
				Re-use (M^3)	Re-cycling (M^3)	Disposal to Landfill (M^3)
Soil	Excavated Material					
Masonry (C)						
Concrete (C)	Inc. concrete blocks					
Plasterboard (C)						
Timber (C)	Joists, flooring, kitchens					
Cardboard/Packaging	Pallets, paint pots, paper/card waste etc.					
Composites (C)	(Insulation types)					
Glass (C)						
Plastic (C)	UPVC Goods, Windows					
Metals (C)	Steel, aluminium, etc.					
Stone (C)						
Canteen Waste						

Declaration

The Principal Contractor takes responsibility to ensure all waste from the site is dealt with in accordance with the waste duty of care in Section 34 of the Environmental Protection Act 1990 and the Environmental Protection (Duty of Care) Regulations 1991.

All materials will be handled efficiently and waste managed appropriately.

Register of Waste Carrier Licences and Permits

With respect to the waste management companies that will be removing waste from the project, the following table will be completed prior to the removal of any waste offsite. The table outlines the waste management licences, waste carrier licences and exempt site licences that have been checked and verified for use on the project.

Waste Description	EWC	Origin (Who produced the waste?)	Waste Carrier			Disposal Site	
			Name	Licence Number	Expiry Date	Name	Licence Number Exemption Ref.

European Waste Catalogue (EWC) Codes

The table below shows typical examples of the 3 types of waste that may be generated on a typical project, with their associated EWC codes.

A INERT/CLEAN		B NON-HAZARDOUS		C HAZARDOUS	
EWC	Description	EWC	Description	EWC	Description
10.11.03	Waste glass based fibrous materials	17.04.07	Mixed materials	17.06.05	Construction materials containing asbestos
15.01.07	Glass packaging	17.02.01	Wood	13.05.06	Oil from oil water separator
17.01.01	Concrete	17.09.04	Mixed construction materials	13.05.07	Oily water from oil water separator
17.01.02	Bricks	17.08.02	Gypsum based construction materials	13.07.01	Fuel oil and diesel in drip trays
17.01.03	Tiles/Ceramics	17.02.03	Plastics (e.g. pipes or boards)	08.01.21	Waste paint
17.01.07	Mixtures of concrete, bricks, tiles and ceramics	15.01.01	Cardboard	08.04.09	Waste adhesives or sealants with organic solvents
17.02.02	Glass	15.01.01	Plastic packaging	17.05.03	Contaminated soil
17.05.04	Soil and stones	17.06.04	Insulation		

ON SITE WASTE MONITOR SHEET

FOR 3 MONTH PERIOD [X TO Y]

Waste type produced for Project (C) = Code for Sustainability Item	Waste re-used on Site (M^3)	Waste re-used Offsite (M^3)	Waste recycled for use on Site (M^3)	Waste recycled for use Offsite (M^3)	Waste sent to recycling Facility (M^3)	Waste sent to Waste Management Licence Exempt Site (M^3)	Waste sent to Landfill Site for Disposal (M^3)
Soil							
Masonry (C)							
Concrete							
Plasterboard							
Timber							
Cardboard/Packaging							
Composites							
Glass							
Plastering							
Metals							
Stone							
Canteen Waste							

Contract Review

Within 1 month of Practical Completion of the works action the following items : -

Item 1 — Confirmation the SWMP has been monitored during the progress of the works.

Action : No. of Construction Team Meetings held ……..
Between Dates : x-y

Item 2 — Lessons learnt from Pre-Commencement SWMP to Finalised SWMP at Practical Completion

Action:
1.
2.
3.
4.

Item 3 — Comparison of Estimated quotes of each waste type against Actual quotes of each waste type.

Waste	Estimated Quantity (M^3)	Actual Quantity (M^3)	Difference (M^3)
Soil			
Masonry			
Concrete			
Plasterboard			
Timber			
Cardboard/Packaging			
Composites			
Glass			
Plastering			
Metals			
Stone			
Canteen Waste			

Item 4 — Review results of Waste Comparison Table and establish any lessons learnt and action Plan or recommendations for future Projects.

Action : List of Recommendations for Future

1.
2.
3.

Item 5 — Financial

Estimate of the cost savings that have been achieved by completing and implementing a SWMP.

Action: Estimated Financial Effect =

NOTE

1. SWMP to be kept on Site and copy at Head Office.

2. SWMP to be conveyed at all works on site and be part of the site induction process and a process of the Tool Box talks. The SWMP to be available for ALL workers to read and review.

3. SWMP to be retained for 2 years after Practical Completion of the works.

ANNEXURE 2: AVIATION LIGHTING

Safeguarding of Aerodromes
Advice Note 4
Cranes and Other Construction Issues

1. Introduction

Aerodrome safeguarding ensures the safety of aircraft and their occupants when in the vicinity of an aerodrome by controlling potentially hazardous development and activity around it. For an overview of the safeguarding process see Advice Note 1 'Aerodrome Safeguarding – An Overview'.

Safeguarding concerns, in respect of a proposed development, may not end with the grant of planning permission. This Advice Note 4 considers the methods to be employed during construction, especially the use of cranes or other tall construction equipment, as these tend to be taller than the building under construction and may create a risk to flight safety. In appropriate cases, these operations may be the subject of conditions on any planning permission that may be granted.

Note: The Civil Aviation Authority provides supplementary guidance within CAP1096 'Guidance to crane operators on aviation lighting and notification', available at www.caa.co.uk

2. Cranes (and other Tall Construction Equipment)

Should a crane be required on, or in the vicinity of, an aerodrome the attention of the crane operator should be brought to:

"British Standard Institute Code of Practice for the safe use of Cranes, BS 7121: Part 1.
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In particular paragraph 12.3.3 'Crane control in the vicinity of aerodromes/airfields', which states:

"The appointed person should consult the aerodrome/airfield manager for permission to work if a crane is to be used within 6km of the aerodrome/airfield and its height exceeds 10m or that of the surrounding structures or trees.

NOTE The Air Navigation Order makes it an offence to act recklessly or negligently in a manner likely to endanger aircraft."

The developer should contact the aerodrome at minimum 6-8 weeks before the crane (or other tall construction equipment) is anticipated to be on site. This should allow adequate time to assess the scheme and undertake appropriate consultation.

Most aerodromes have a procedure for issuing an **Authorisation Permit** for the operation of cranes and other tall construction equipment on, or in the vicinity of the aerodrome. Once construction details have been finalised, a formal application for the Permit must be made a **minimum one month before** the crane or other tall construction equipment arrives on site. This should allow the aerodrome operator adequate time to assess any impacts the equipment may have on airport operations and to undertake appropriate consultation.

To apply for a permit the following details will be required:

- The **exact location** of the centre of the crane, as an OS Grid reference (to at least 6
- figures for each of eastings and northings), or marked on a map showing the OS Grid;
- The **maximum operating height** in metres Above Ordnance Datum (AOD), or the height
- of crane Above Ground Level (AGL) plus ground level in AOD (see Note below);
- The **type** of crane/equipment (e.g. Tower Crane, Mobile Crane, etc.);
- The **radius** of the jib/boom of a fixed crane/the **area of operation** of a mobile crane;
- The intended **dates** and **times** of operation;
- **Applicant's** name and contact details.

Note: Heights "Above Ordnance Datum (AOD)" are those shown on Ordnance Survey maps as "Above Mean Sea Level" (AMSL)

Once these details have been considered it will be determined as to whether the operation can proceed and whether restrictions will apply. The main areas of safety concern are the crane or tall structure acting as an obstacle to air navigation aircraft and they may also interfere with navigation/communication equipment and instrument flight procedures.

If the permit is agreed it will set out any appropriate restrictions. A copy of the authorisation permit must remain with the crane for the duration of its operation and must be produced if requested by an aerodrome official or a police officer.

3. Obstacles

Having been assessed, if the crane (or other tall construction equipment) is considered to be an obstacle to aircraft any of the following may be imposed to ensure the safety of aircraft:

- The fitting of obstacle lights;
- Restrictions on crane operating times;
- Crane operations dependant on the runway(s) in use;
- Restrictions on crane operating height;
- Restrictions during poor visibility (whether caused by fog or low cloud)
- A Notice to Airmen (NOTAM)

Where the design of the crane allows, it should be lowered when not in use, or when requested by an aerodrome official, such as during periods of low visibility. Where it cannot be lowered, it may be necessary for the jib to be parked in a particular direction when not in use. In some circumstances, the aerodrome may require the type of crane to be used as capable of being lowered.

When it has been determined that aviation warning lighting is required, the characteristics for the light(s) would be specified by the aerodrome operator. Normally, they would be steady red lights of either low intensity (200 candela) or medium intensity (2000 candela), depending on the height of the crane. Lighting should be visible from all directions and located on the highest point of the crane/equipment.

For a tower crane, lighting should be provided on top of the tower and at the end of the jib and should be illuminated at all times. Unserviceable lamps should be replaced as soon as possible after failure and in any event within 24 hours, during this time the aerodrome should be contacted so that a notice (to pilots and air traffic control) can be issued.

4. Interference with Navigation/Communication Equipment and Instrument Flight Procedures (IFPs)

Upon assessment, where the crane (or other tall construction equipment) is considered likely to interfere with navigation/communication equipment and/or IFPs the following may be required.

- Restrictions on crane operating times;
- Crane operations dependant on the runway(s) in use;
- Restrictions on crane operating height.

5. Construction Management Strategy

For a project close to an aerodrome or under approaches to its runways, it may be necessary for a **Construction Management Strategy** to be produced by the developer and agreed with the aerodrome to ensure that construction does not prejudice the safe operation of the aerodrome. A Construction Management Plan might be required via a condition on any planning permission that may be granted.

In particular, but not exclusively, the Construction Management Strategy should address the following issues:

- Use of cranes or other tall construction equipment
- Control of activities likely to produce dust or smoke clouds;
- The design of temporary lighting to avoid distracting pilots (see Advice Note 2 'Lighting
- Near Aerodromes);
- Storage of materials, particularly compliance with height limits;
- Control and disposal of waste, to prevent attraction of birds (see Advice Note 3 Wildlife
- Hazards Around Aerodromes);
- Site management, to prevent attraction of birds through standing water and earthworks

(see Advice Note 3 Wildlife Hazards around Aerodromes).
More information with regard to construction management can be found in Advice Note 1, section 4.5.

The Design Team

ACD Environmental
Arboricultural consultant

Architecture in Perspective
Visualisation artist

AWA Consulting
MEP engineer

Base Models
Physical modelmaker

Barton Willmore
Planning consultant
Environmental Impact Assessment
Townscape Impact Assessment

Countryside Properties
Developer

CTP Consulting
Structural & Civil engineer

David Bonnett Associates
Access and Inclusive Design consultant

Ensafe
Air Quality consultants

GIA
Daylight / Sunlight / RoL consultant

Greengage Environmental
Ecology and biodiversity consultant

Hodkinson Consulting
Sustainability / Energy consultant

H+H Fire
Fire consultant

Markides
Transport consultant

Patel Taylor
Architect / Landscape Architect

Pipers
Physical modelmaker

Realm
Visualisation and verified views

Royal Borough of Kingston Upon Thames
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Soundings
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SRE
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