Detailed Construction Method Statement
Trumpington Meadows, Cambridge

Phases 1-5

Dated: 19 September 2011

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2. Introduction

This detailed construction method statement has been prepared specifically for the construction of Trumpington Meadows, Cambridge – Phases 1-5. From time to time, this detailed construction method statement may need to be revised to reflect design and programme changes that may be implemented during the construction period. Any necessary amendments will therefore be provided as appropriate.

3. Site Establishment

This development comprises 353 mixed tenure residential flats and houses, 60 private residential flats and 174 houses (49% houses and 17% flats). 119 affordable residential flats and houses (22% flats and 11% houses). The construction period is anticipated to last 5 years with the first site works starting in September 2011.

The necessary access to the site will initially be via the main entrance arrangement which is currently being configured (refer to Site Layout and Traffic Management Plan) with one internal construction haul road giving access to all parts of the development. Within this road way a wheel washing facility will be located.

Please see detailed layout of the overall development site area.

We are particularly aware of the need to mitigate noise and vibration wherever and whenever practically possible for any properties (sensitive receptors) which neighbour this development. These comprise those properties who either face onto or who have gardens adjacent to the development site.

Our health and safety team will, where identified, undertake periodic noise 'monitoring' to ensure that the resolutions are being met and to further enhance our current construction working methods to ensure that good working practice is shared around the business.

If vibration at a sensitive receptor is possible, such as in this instance neighbouring commercial properties and it is suggested that it is likely to exceed 0.3mm s^{1}, the sensitive receptor and the Local Planning Authority (CCC) must be pre-notified, in writing, at least 5 full working days prior to work commencing, with the following information: **We would note that in this particular development we are not currently aware of any working practices that would result in the creation of vibration at this level.** However, we would note the following should an incident be reported:

- Location – the location on site in relation to the sensitive receptor;
- Duration of those site operations, including schedule of operations likely to cause any further vibration and their hours of work;
- Vibration characteristics – e.g. whether it is continuous, intermittent or impulsive;
- Effect on buildings – it is important to assure the community that vibration levels will not cause building damage;
- Details of site operator community liaison – so that the community feel assured that information is available and that complaints will be handled expeditiously.

Vibration levels which have the potential to cause building damage will not be tolerated.

We have configures our site compound area with any double stacked accommodation units to run parallel with the Eastern boundary of it. This will, to some degree we believe assist with the baffling of noise and will mean that most vehicles movements within the compound area will be hidden from view.

This arrangement will also mean that pedestrian movements in the compound should not be visible from the neighbouring land on the eastern side of the development site.

The road to the Eastern side of the site compound will only be used by large vehicles to facilitate deliveries and collections to and from site. This will mean that in the main the 'one way' compound access/egress arrangement will prevail for either deliveries or the movement of materials around the development site.

The site compound area (60m x 50m) will consist of site offices, canteens, WC facilities, drying room, safety/induction room and 6 storage containers these will be provided initially with temporary and when available mains services for both the supply of water and electricity along with a temporary drainage connection which will when feasible be connected to the main foul water drainage scheme. This is further detailed on the attached Site Layout: Accommodation Arrangement Drawing:

The perimeter to the compound will consist of a plywood hoarding to all elevations. This will further add to the physical segregation and visual separation of the compound when viewed from the nearby boundary area.

The bulk storage and recycling area will be positioned within this western region along with the necessary cement silos and site parking as indicated on drawing.

Any signage required for this development will be procured to be in line with our Corporate Identity Brochure, once we have agreement upon the Site Layout and Traffic Management Plans - we will arrange for the signage to be configured.

We have allowed for 1 no. satellite w/c to be used across the development due to the distances being worked away from the main compound area facilities.

4. Scope of works

The ground investigation necessary to investigate the whole development site has now been completed.

The setting up of the necessary site compound area and haul roads will start immediately the outstanding conditions have been agreed.

Commencement of construction packages is anticipated to be mid 2011, inclusive of the sub-station location.

Commencement of construction package 2 is anticipated to commence upon substantial completion of construction package 1, ensuring only two adjoining construction phases are running concurrently in accordance with the planning approval subsequent phases to follow sequentially.

Construction package 1 will include all necessary infrastructure works, where appropriate, and is likely to be commenced in conjunction with construction package 2.

The estimated construction phases for Trumpington Meadows are as follows: These are, however subject to the 'actual' construction start date made on site.

Phases	No. of Units	Established Start on site date	Estimated completion date
Phase 1	117 units	September 2011	June 2013
Phase 2	68 units	October 2011	June 2012
Phase 3	56 units	June 2012	June 2013
Phase 4	23 units	January 2013	January 2014
Phase 5	89 units	May 2014	February 2015

353 units in total – commencing from September 2011 – October 2013

Prior to the building works commencing, the haul roads and any necessary mobile crane bases required for the first phases of works will be constructed. They will be constructed such as to provide a 'sealed' surface to help reduce the amount of dirt, dust and noise during the construction process.

5. Soil Management

A Soil Management Strategy is currently being implemented for the whole strategic development site in order to ensure that the soil resource is appropriately conserved and where suitable can be reused.

It is estimated that some of the total topsoil and earthworks excavation volume associated with the infrastructure and infrastructure drainage will be used as fill elsewhere on this strategic development site, i.e. Bundworks sites subject to suitability. Geotechnical and geo-environmental investigations indicate that the majority of soils are suitable for re-use.

All arising materials generated from the development will be stockpiled for re-use in future phases of the strategic development site. These spoil heaps will be positioned within the phase 5 area. Construction Code of Practice for the Sustainable use of Soils on Construction sites. The heaps used on this site will be approx. 2m in height and will have a level top.

No development shall take place until such time as fencing for the protection of retained trees and hedging, in accordance with the Tree Condition Survey and approved planning has been fully erected.

The fencing shall be retained intact for the full duration of the construction works package or until all equipment and surplus materials have been removed from that area of the development site.

Nothing shall be stored or placed in any fenced area in accordance with this condition and the ground levels within those areas shall not be altered, nor shall any excavations be made without the written consent of the local planning authority.

6. Security and Lighting

The site is normally managed during the hours of 07:30 – 18:00, at other times and days when the site is not working we will have a member of the security team in attendance if and when required.

The site boundaries will be secured by proprietary 2.4m high solid plywood and metal hoarding and as required a 2.4m high 'Heras' type fence. This will be monitored, adapted and maintained throughout the duration of the build. Consideration has and will throughout the development of the site be given to the segregation of construction works from existing neighbours; their boundaries and properties which are in close proximity to them.

All deliveries will go to the compound for off loading and distribution using forklifts via the gate house where all contractors and visitors will be inducted and a signing register will be in place.

Contractors will be encouraged to use the parking at the Trumpington Park and Ride adjacent to the site, there will however be an area on site where sub-contractors can drop off and pick up of tools and materials.

This management arrangement is controlled by our site team and will be assisted further by the use of a reduced site haul road speed limit of 6mph.

The HSE requires that we have installed adequate lighting –

"Adequate lighting should be provided to all areas and especially to those used in darkness hours, or where loading/unloading can be carried out in poor visibility or diminished lighting conditions. As a minimum, lighting should be provided for junctions, around plant and buildings, pedestrian routes and areas where loading/unloading is to be carried out. Guidance for road lighting can be found in BS 5489 'Road Lighting'."

The workplace (Health, Safety and Welfare) Regulations 1992 will be complied with in this respect.

We have reviewed with Cambridge City Council a number of supplementary guidance notes which assist in this particular area, those being Huntingdon District Council Supplementary Planning Guidance: External Artificial Lighting and Environmental Protection UK: Light Pollution. We will work within these guidelines wherever and whenever practically possible on the construction phases of this development site. We will therefore install sufficient 50 lux minimum lighting units to enable the safe movements of both vehicles and pedestrians across the site. The initial locations will be along the haul roads and around the site compound and the first working area. We will ensure that these illumination levels do not add light pollution to the neighbourhood throughout the duration of the construction works on site.

Compound lighting and any necessary site task or general lighting will be configured such as to ensure that it is directed to light the area required without illuminating the surrounding area. This lighting will be further controlled by means of time clocks and sensors as required. We are very aware that the lights within the Compound area do not 'shine' towards the neighbouring properties which are located close to the Northern boundary of the development site.

7. Health and Safety

Reference Document: HSE Health and Safety Guidance – Health and Safety in Construction 2010.

The F10 has been issued by Capita Symonds Ltd.

Health and Safety will be given the highest priority on this development and will feature in all aspects of the project. The Construction Phase Plan will cover the entire development and will be reviewed and amended throughout the duration of the site.

All subcontractors will be site inducted and The Site Rules displayed prominently in the site compound and at other locations around the site.

Design elements will be integrated to ensure that the maximum amount of risk is removed prior to procurement and the safest method of construction will be used.

Segregation of pedestrians and site traffic will be monitored and adapted as work progresses along with the production of the Emergency Procedures which will be monitored and revised as necessary throughout the construction period.

A permit to work system will form a safe system of work for high risk activities, i.e. permit to lift, permit to dig and hot works permit.

During the construction phase a minimum of bi-weekly inspections will be conducted by the Barratt Eastern Counties Health and Safety Department. They will monitor and measure safety on site.

Occupational health risks arising from construction activities such as manual handling will be controlled in the contracts and subcontractors method statements and risk assessments.

Exposure to dust (especially containing respirable crystalline silica) can lead to the slow development of the irreversible lung disease Silicosis. Heavy and prolonged exposure under conditions that are sufficient to cause Silicosis can also lead to an increased risk of lung cancer. Dust exposure will therefore be controlled to mitigate this.

All Contractors carrying out activities such as mechanical cutting and grinding of stone, concrete kerb and slab cutting by ground workers, tile cutting at the ridge and verge by roofers, dry cutting will be allowed in the valley so long as roofers adopt a safe system of works, for all activities involving release of silica dust and persons carrying out sweeping activities, will be expected to be face fit tested and wear a suitable Face Fit P3 mask. Site transport that creates substantial amounts of dust must ensure the following hierarchy of prevention is implemented:

- Adequate ventilation provided, or
- Water Suppression System used, or
- Local Ventilation Systems (vacuum) systems used

Where the above hierarchy cannot be implemented, those exposed to the dust must wear Respiratory Protection Equipment (RPE) – to grade APF 40 (full face respirator with filter to p3 standard).

Contractors must ensure that dust created by their work activities does not affect the health of other workers, residents and members of the public.

On site haul routes are restricted to a maximum speed limit of 6 mph. Barratt Eastern Counties will impose a lower speed limit of 4 mph for all vehicles travelling over unmade ground to minimise the likelihood of dust raising. These speed limits apply to all vehicles at all times.

8. Wheel Washing and Road Sweeping

Reference Document: - Mayor of London – Best Practice Guidance, The Control of Dust and Emissions from Construction and Demolition

We have noted that it is a requirement of the 'County' that we have the necessary wheel washing installation in place and working prior to the commencement of construction works on site.

Barratt Eastern Counties will therefore be installing and using a bespoke facility to ensure that lorry traffic leaving the site does not take mud/debris out onto the roads surrounding the site. All waste aggregates, water and sludge type materials resulting from the necessary 'cleaning' process will be removed from site by a licensed waste carrier and taken to a licensed waste disposal facility.

In addition to the provision of a Wheel Washing Facility, Barratt Eastern Counties or our nominated contractors will also provide an approved Mechanical Road Sweeper with vacuum facilities, spray facilities and on board storage. This shall be used for the sweeping and cleaning of the roadway system and the public highway immediately adjacent to the site, on a regular basis or as deemed necessary to prevent nuisance or hazards to other highway users and/or Barratt Eastern Counties. Collected debris is to be disposed of at a licensed waste disposal facility.

We will undertake the 'damping down' of any unmade site roads by means of a towed dust suppression unit as and when required by the prevailing conditions on site.

There is no current requirement for the use of settling tanks, oil interceptors or bunds during the construction phases of the development. They may however be required to be configured in the final development, should this be so, they will be addressed and detailed separately.

9. Detailed Site Waste Management Plan – (Referred to as SWMP)

This has also been covered in the previously submitted: Strategic Construction Environmental Management Plan.

The use of the governments 'wrap' template is being used and will assist us with the forecasting, monitoring and controlling of waste movements on and off from the development site.

An initial site specific waste management procedure/guidance for the pre-construction works has been drawn up and will be developed further to cover the construction phase prior to works commencing on Phase 1.

A planned and designated space in phase 4 has been made in the materials compound to accommodate the five main waste streams that we would anticipate being required on this site – Wood/Timber, Plaster/Plasterboard, Mixed Packaging, Metal and Inert/General Builders Waste.

Barratt Eastern Counties will provide skips for use by the labour only sub contractors. All other sub contractors will be providing their own waste disposal management; which will also be positioned in the storage area and will in turn be monitored.

Site waste management will be monitored and managed under the main development project management.

Barratt Eastern Counties enforces Zero tolerance on fly tipping and housekeeping will ensure the control of waste movement on and off site.

A waste minimisation policy will be enforced from the outset of project and will be monitored during the construction stages.

10. Construction

The hours of work will be:

- Monday – Friday 0730 – 1800 hrs
- Saturday 0800 – 1300 hrs

No work will be allowed on Sundays or Public Holidays. These may be varied in exceptional instances subject to approval with Cambridge City Council and subject also to any restrictions or requirements that they may impose.

Construction will commence with the show house and Marketing Suite on units 9 – 14 together with the adjoining units. This is further detailed on drawings: Site Layout and Traffic Management Plan Drawing One and Two.

The Marketing Suite will be positioned by plots 1 – 8 with the other plots to this terrace, 29 – 32 being used for parking, with any remaining areas being landscaped to the adjacent roadways; subject to planning approval.

11. Contractor Access, Egress and Materials Distribution

The primary vehicular access point is located at Addenbrooke's Road, on the southern boundary of the site. This primary route joins the secondary route which forms a continuous loop serving the entire development area. Additional tertiary routes meet this secondary route at various locations throughout the development.

No dwellings served from Hauxton Road shall be occupied until that access has been fully laid out and implemented in accordance with a detailed engineering scheme/plan that has been submitted to and approved in writing by the local planning authority. The scheme shall be carried out in accordance with the approved details.

The access strategy will be developed to ensure a clear, accessible and safe network of roads, streets, pathways and cycle ways through the site. It is designed to give pedestrians priority throughout the development to provide clear links to public transport to promote sustainable modes of travel.

All traffic management, access and egress to this site is specific to this development and is further detailed on the appendices marked as 1 and 2.

During the construction period, there will be 2 construction access and egress roads which will have passing bays in allocated areas in the initial main access haul road due to 5m width restriction, this area of the haul road will be tarmac for the first 20m. On leaving the site, all construction traffic must make a left turn only out of the site.

Any existing accesses to the site that are not retained within the approved development plan shall be permanently and effectively closed within 28 days of the commencement of the development on site. No gates shall be provided to the private residential vehicular accesses within the development, unless the details of such are submitted to and approved in writing by the local planning authority.

Visibility splays at road junctions and on the inside of bends shall be laid out and constructed to form part of the highway and not enclosed within the cartilages of adjoining properties.

Timing for deliveries and collections as laid down by local Authority are Mon – Fri 8.00am – 5.00pm, Saturday 8.00am – 1.00pm with no vehicular deliveries between 7.00am – 9.00am. No Working Sundays or Bank/Public Holidays.

Timings for deliveries and plant movement from site are set out by Barratt Eastern Counties and state it is a residential area with occupied houses, and local amenities.

Consideration therefore is to be given to pedestrians, residents, local traffic and children all of whom remain a priority at all times.

These instructions have been communicated to buying and surveying teams.

All deliveries will in the main go to the compound area for initial off loading and subsequent distribution by forklift.

Materials will be unloaded from vehicles to either the compound or bulk storage areas by either forklift or 'hiab' type Lorries.

Higher value or weather sensitive materials that are normally stored in containers will be distributed horizontally by all terrain forklifts. They will also be used for the vertical transportation of materials; these will be landed on loaded platforms incorporated into the elevation scaffolds as set out in our Health and Safety procedures. At no time will

materials be allowed to be stored in any other areas outside those designated and fenced areas.

Appropriate bases for all use of mobile cranes/rotating forklifts will be required for the erection of timber roof members. These would also be used for the loading out of plasterboard, staircases and the like if required.

12. Considerate Constructors

We will be registering the site with the Considerate Constructors Scheme (CCS). Membership of the CCS requires principal contractors to adopt a Code of Practice, with seeks to:

- Minimise any disturbance or negative impact (in terms of noise, dirt and inconvenience) sometimes caused by construction sites to the immediate neighbourhood.
- Eradicate offensive behaviour and language from construction sites.
- Provides contact details of the key personnel for the project.
- Results in an improved understanding and respect from residents and others in the community and fewer complaints.

The CCS registration compliments Barratt Eastern Counties sustainability and environmental management practices and is an essential element in maintaining good neighbour relationships.

The CCS also requires each site to be independently audited during construction.

All sites and companies registered with the Scheme display a Scheme poster (where appropriate), giving the contact details of both the registered site or company and the Scheme.

All complaints received by the Scheme from any source, regarding a registered site or company, are recorded.

All complaints are put into one of the following categories:

Noise, Dirt and Dust. Parking, Safety, Inconsiderate Behaviour, Road Conditions and Vehicle Movements, Environmental Concerns, Pedestrian Access Obstruction, Property Damage, Site Lighting, Working Hours, Other.

The Scheme has designated staff, trained to deal with any type of complaint.

If the complaint does not relate to an issue covered by the Scheme's Code of Considerate Practice (for example, the Scheme cannot get involved with planning issues or in decisions relating to compensation), the complainant will be pointed in the appropriate direction.

When a complaint is received that is relevant to the Scheme's Codes of Considerate Practice, the Site Manager or company contact will be told what the complaint is about, and given the name and contact details of the complainant (with the complainant's permission). Advice might also be offered as to how they might deal with the complaint.

The Scheme will stay in contact with the complainant until the site or company has investigated and responded to the complaint and until the Scheme is satisfied that the site is adhering to the Site/Company Code of Practice, at which point the complaint will be taken off the 'active' list.

If the Site Manager or company does not deal with a complaint in a satisfactory manner, the complaint will be passed to the Scheme's Chief Executive, who will refer the matter to the construction company's head office contact (as listed on the registration form). In the event that the response is still unsatisfactory, and the contact is not a director, then the complaint will be taken to company director level.

The Scheme may attempt to mediate between the parties during this process. If, at any time, the Scheme's Chief Executive considers that a reasonable settlement has been reached, the complaint will be taken off the active list. Where necessary, an experienced Scheme Monitor may visit the complainant and the Site Manager or company contact to seek resolution.

If a registered site or company fails to deal with a problem in an effective manner or if the Scheme's Chief Executive believes them to be in breach of the Site/Company Code of Considerate Practice, the Chief Executive will provide a report of the incident(s) to the Chairman of the Scheme's Board for a decision.

Where the Chairman's decision is to remove the site or company from the Scheme, the company and the client will be informed by recorded delivery letter.

We will be 'letter dropping' all of the properties within the Bishops Road and Bishops Court area. This letter introduces Barratt and furthermore the team who will be working on the development it also outlines arrangements for future communications.

We would look to have an initial local liaison meeting and depending upon the feedback received would make this a regular occurrence in an effort to work with and provide a forum of the close neighbours to the development.

Meetings will be held with local residents initially at monthly intervals, reduced to three monthly by agreement, at the Glebe Farm site office or other location to be agreed.

This method statement was prepared by:-
Signatory of Barratt Eastern Counties

Name: Paul Musson Position: Contracts Manager

Signed....[redacted].....
For and on behalf of Barratt Eastern Counties