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APPLICATION No: Conditions 4 & 5 of Planning

Permission R3.0081/12

TRAFFIC MANAGEMENT & PEDESTRIAN SEGREGATION PROCEDURES

STANTON HARCOURT CP SCHOOL

RMD-SHS/01

- Introduction
 - Traffic Management & Pedestrian Segregation Plan
- Fencing, Hoardings & Security
- Location of temporary accommodation units (TAU's)
- · Pedestrian Access around, to and from site
- Mobile Plant
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- Parking
- Mobile Plant on Public Roads (Not Applicable)
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- Mortar Supply (Not Applicable)
- Appendix 1 Initial Traffic Management & pedestrian Segregation Plan Checklist

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Plan attached in hard copy handed to architect!!

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16.1 Introduction

- 16.1.1 On average, each year, about 7 workers die as a result of accidents involving vehicles or mobile plant on construction sites. A further 93 are seriously injured.
- 16.1.2 Construction site vehicle incidents on RMD sites must be prevented by the effective management of transport operations throughout the construction process.
- 16.1.3 Under Construction (Design & Management) Regulations 2007, the following extracts are relevant:-

Regulation 36 Traffic routes

- (1) Every construction site shall be organised in such a way that, so far as is reasonably practicable, pedestrians and vehicles can move safely and without risks to health.
- (2) Traffic routes shall be suitable for the persons or vehicles using them, sufficient in number, in suitable positions and of sufficient size.
- (3) A traffic route shall not satisfy sub-paragraph (2) unless suitable and sufficient steps are taken to ensure that—
 - (a) pedestrians or vehicles may use it without causing danger to the health or safety of persons near it;
 - (b) any door or gate for pedestrians which leads onto a traffic route is sufficiently separated from that traffic route to enable pedestrians to see any approaching vehicle or plant from a place of safety;
 - (c) there is sufficient separation between vehicles and pedestrians to ensure safety or, where this is not reasonably practicable
 - (i) there are provided other means for the protection of pedestrians, and
 - (ii) there are effective arrangements for warning any person liable to be crushed or trapped by any vehicle of its approach;
 - (d) any loading bay has at least one exit point for the exclusive use of pedestrians; and
 - (e) where it is unsafe for pedestrians to use a gate intended primarily for vehicles, one or more doors for pedestrians is provided in the immediate vicinity of the gate, is clearly marked and is kept free from obstruction.
- (4) Every traffic route shall be—
 - (a) indicated by suitable signs where necessary for reasons of health or safety;
 - (b) regularly checked; and
 - (c) properly maintained.
- (5) No vehicle shall be driven on a traffic route unless, so far as is reasonably practicable, that traffic route is free from obstruction and permits sufficient clearance.

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Regulation 37 Vehicles

- (1) Suitable and sufficient steps shall be taken to prevent or control the unintended movement of any vehicle.
- (2) Suitable and sufficient steps shall be taken to ensure that, where any person may be endangered by the movement of any vehicle, the person having effective control of the vehicle shall give warning to any person who is liable to be at risk from the movement of the vehicle.
- (3) Any vehicle being used for the purposes of construction work shall when being driven, operated or towed—
 - (a) be driven, operated or towed in such a manner as is safe in the circumstances; and
 - (b) be loaded in such a way that it can be driven, operated or towed safely.
- (4) No person shall ride or be required or permitted to ride on any vehicle being used for the purposes of construction work otherwise than in a safe place thereon provided for that purpose.
- (5) No person shall remain or be required or permitted to remain on any vehicle during the loading or unloading of any loose material unless a safe place of work is provided and maintained for such person.
- (6) Suitable and sufficient measures shall be taken so as to prevent any vehicle from falling into any excavation or pit, or into water, or overrunning the edge of any embankment or earthwork.
- 16.1.4 Careful analysis of recent incidents involving traffic management has identified key factors which must be addressed at the estimating and planning stage of the site prior to start.
- 16.1.5 Where unacceptable risks are identified at estimating stage, these must be raised with the client, designers and CDM Coordinator.
- 16.1.6 It is essential that, prior to start on site, an approved and practical Traffic Management & Pedestrian Segregation Plan (TMPSP) is prepared either by the Contracts Manager or the Project Manager. This plan must be approved by the Regional Director or Manager.

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16.2 Traffic Management & Pedestrian Segregation Plan

- 16.2.1 This plan must be produced to address all those anticipated risks for every specific site. Consequently it is unlikely that a plan for one site can be used as a model for another.
- 16.2.2 However the following topics need to be considered prior to start on a site and at regular intervals and at certain stages for the duration of the site:-
 - Fencing, Hoardings & Security
 - Location of temporary accommodation units (TAU's)
 - Pedestrian Access around, to and from site
 - Mobile Plant
 - Deliveries
 - Parking
 - Mobile Plant on Public Roads
 - Signage

16.3 Fencing, Hoarding and Security

- 16.3.1 The design, specification and positioning of the hoarding to the site requires careful consideration. The client may have a specific requirement as part of the preconstruction information or there may be particular security issues on a site which requires a traditional approach.
- 16.3.2 The CDM regulations 2007 states that "a construction site shall, so far as is reasonably practicable and in accordance with the level of risk posed, either—
 - (a) have its perimeter identified by suitable signs and be so arranged that its extent is readily identifiable; or
 - (b) be fenced off, or both."

Consequently, the design of the hoardings or perimeter is dependent on the risk of malicious or unintended access by the public or others.

16.3.3 Furthermore, in the interests of Corporate and Brand image the standard of the perimeter hoarding may be dictated by the need to present a good public impression of the site. To establish a robust timber post and plywood hoarding to the perimeter of the site will require excavations to be undertaken in possible close proximity of buried services. Consequently a strict permit system must be introduced with the use of CAT & Genny detection devices as a minimum together with statutory Undertakings surveys and plans. Where the risk of contact with buried services is high or the surface of the ground will be difficult to break through then freestanding fencing should be considered with appropriately designed stabiliser or base weights. In many cases the use of such bases could be included in a Temporary Works Register.

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- 16.3.4 Freestanding Heras type fencing panels may be more appropriate in certain cases though often in conjunction with traditional timber hoardings. Care need to be taken to ensure Heras-type fencing panels are erected with 2 brackets for each connection and that bracing is introduced in accordance with the manufacturers instructions (usually 1 every 2 panels) The result of fixing signs to such panels could be that they are more susceptible to wind pressure and may blow over.
- 16.3.5 The use of fencing to segregate pedestrians from vehicles on site is essential and needs to be carefully planned. Various options should be considered:-
 - 1. Heras-type fencing should only be used for semi-permanent lines of demarcation but quite robust. Most expensive
 - 2. Pedestrian Barriers easy to more around for temporary situations but can be easily damaged by mobile plant. Fairly expensive
 - 3. Orange netting though very flimsy, if placed in position with long metal pins with at least 300mm in the ground, can produce a cheap and effective option. Very easy to move and is easily reinstated if damaged by mobile plant

All the above fencing will need daily inspection to ensure integrity and effectiveness. The orange netting can be moved at a moments notice to establish demarcation as the site progresses but needs to be correctly and substantially installed to prevent sagging or damage.

16.4 Location of temporary accommodation units (TAU's)

- 16.4.1 The location of TAU's is a crucial decision which, if wrongly positioned, can effect the efficiency and safety of the site. Even the positioning of a temporary Oasis unit can prejudice the smooth running and management of the site from day 1.
- 16.4.2 Furthermore, the route that workers use to go to the TAU's, welfare and the work place on site can be anticipated and needs to be planned carefully to minimise crossing traffic routes. Such crossings need to be identified and placed so that vehicles can see approaching pedestrians from each direction.
- 16.4.3 Ideally TAU's should be placed near the site entrance but if this is not practical then pedestrian only corridors need to be established from the site entrance to the TAU's.
- 16.4.4 If the TAU's are not near the site entrance then due consideration should be made as to how deliveries are controlled. The best option is to have a gateman who controls the deliveries and drivers. If this is not reasonably practicable then a gating design needs to be considered which corrals the vehicles using a "air lock" system of 2 sets of gates. In this way such delivery drivers will not be tempted to drive straight onto site unimpeded and without any site induction, explanation of site rules, where they should report etc.

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16.5 Pedestrian Access around, to and from site

- 16.5.1 The basic requirement for pedestrian access around, to and from the site is that it should be free from risks eg. slips, trips, mobile plant and deliveries. This means that the movement of all pedestrians needs to be anticipated, planned and controlled.
- 16.5.2 From the site entrance to the site car park, if one is provided, to the TAU's and to every place of work on site should be fenced off from site traffic, be level or gently sloping without trip hazards and free from obstructions and other site hazards.
- 16.5.3 Any need to cross a haul road or vehicle route needs to be minimised but where necessary to be identified with a proper crossing point, with warning signs and positioned where vehicle drivers can see approaching pedestrians in any direction. Pedestrians must be given priority. If possible such crossings should be further identified with raised surfaces eg. with surplus concrete which also acts as a traffic calming measure.



Pedestrian Barriers used to segregate pedestrian access from site activities. Note free standing hoarding to allow for temporary repositioning

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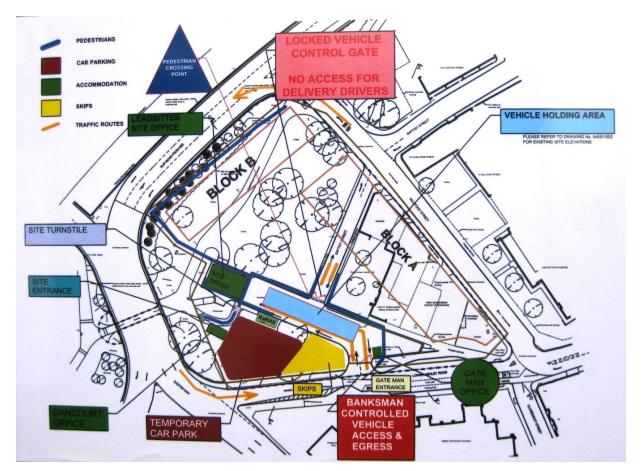


Properly integrated pedestrian crossing point with signage used in conjunction with pedestrian barriers and Heras fencing



Well installed orange netting demarking pedestrian walkway from mobile plant areas

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Good example of Site Traffic Plan - note locked gate & delivery holding area

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16.6 Mobile Plant

- 16.6.1 The use of mobile plant on site is often greatly reduced or indeed eliminated if the choice is made to use a crane to move materials and equipment around the site. This choice has to be made at the early planning stage of the site and a wide variety of cranes are available to suit all manner of situations. In view of the impact this decision has on future management of traffic and pedestrian segregation, it is important that staff involved with these strategic options carefully risk assess the effects of these alternatives.
- 16.6.2The use of all mobile plant regardless of size, function or complexity have inherent risks. They include:-
 - Manoeuvrability
 - Maintenance & servicing
 - Visibility
 - Speed
 - Competency of drivers
 - Refueling
 - Capacity and/or loading
 - · Limitations of use
- 16.6.3 Though the drivers are usually expected to be fully aware of all these risks, that is dependent on their competency, training, experience, ability and attitude. Even the most competent of drivers can become complacent and overlook the most basic of their responsibilities. The risks of mobile plant to the site in general and pedestrians in particular cannot be overstated.
- 16.6.4 Consequently, it is essential that the following steps are fully addressed BEFORE a driver, especially a forklift, telehander or dumper driver is permitted to drive an item of mobile plant:-
 - 1. That the driver shows you his correct CPCS card for the item of plant. The card must then copied and attached to his induction record form. If he is not in possession of the card but has a number this can be checked with CPCS as long as he gives an example of his photo identity (eg. a drivers licence). If he cannot give a photo ID or a CPCS Card he cannot be permitted to drive an item of mobile plant.
 - 2. After he has satisfied the first step, he should also have a copy of his operator logbook which explains the experience he has had since he first received his CPCS card. This should show a pattern of work and mobile plant he has driven to give an indication the value of his experience. If this is not available, familiarisation training should be considered by his employer to ensure his abilities to use the particular item of plant.
 - 3. When steps 1 & 2 have been satisfactorily addressed, it is essential that the driver is properly briefed about the site and the item of plant. Particular emphasis should be given to the site layout, location of silos, waste skip, pedestrian crossings, speed limits, fuel tanks and notably the traffic route for the plant. In addition the details of the item of plant needs to be explained and the set of driver's instructions, usually behind the driver's seat.

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- 4. The next step is to monitor the way in which the driver undertakes his duties. This is not an exhaustive or very onerous task, but any obvious problems in the first few hours of working need to be raised and resolved. If this adverse pattern does not improve the driver should be replaced.
- 5. Finally, it should be realised that the mobile plant driver is in a particularly advantageous position to report to the manager any observed H&S issue which he may see. He should be regarded as a very useful resource to address any diesel spillage, observe the behaviour of persons on site and to report any concerns or near misses. Consequently, it is recommended that he is given a briefing at least every day to explain his area of work, changes in the site layout and traffic plan and to give him the opportunity to raise any issue.
- 16.6.5 Mobile Plant on site may comprise of a variety of plant, including
 - sit-on rollers
 - excavators
 - Mobile elevating work platforms (MEWP's)
 - dumpers
 - forklift trucks
 - telehandlers
- 16.6.6 In all cases the above 5 steps should be covered unless the items of plant are either very small or that do not present a foreseeable significant risk to pedestrians eg. mini-diggers. However, adequate evidence of competency will be required in all cases. If in doubt discuss driver competency with your visiting Lincsafe H&S Advisor.
- 16.6.7 Consideration should also be made to how the driver will safely gain access to welfare facilities from his place of work. He should not be permitted to simply dismount form the machine and walk across the site. Consequently, he needs to be instructed to drive the mobile plant to a safe access to a pedestrian walkway and then dismount safely. On some sites a dedicated enclosure or parking area can be prepared to act as a safe corral for mobile plant adjacent to a pedestrian walkway.
- 16.6.8 All MEWP's, cranes, piling rigs other large items of plant must have a cordon around them to ensure that overhead risks for pedestrians are minimised as well as to protect passers-by from risks when vehicles start off or slew.

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16.6 Deliveries

- 16.6.1 In view of recent experiences, all deliveries to site must be stopped prior to entering the site. This can be achieved by either:
 - a) having a full-time gateman
 - b) having 2 sets of gates (airlock) system which safety allows the delivery to get off the road without going into any work area.
 - c) Parking the delivery near the site entrance so that the driver has to ring or walk to the site office.
- 16.6.2 Obviously the best solution would be to have a combination of a) and b) above however, due to logistics, lack of space or resources, b) or c) may have to be considered.
- 16.6.3 In all cases, it is essential to consider the requirements of safe delivery from the driver's perspective. For example, when he first arrives on site, he needs to know if he is at the right place, what to do next, who to get in touch with and where can he use the toilet.
- 16.6.4 All these matters should be addressed with signage which will include:-
 - The site name, address and postcode
 - Who to call to announce the delivery (often the site manager) or where to go to get assistance
 - What to do (be aware of local traffic issues eg. school, fire station) and NOT to do(eg. sound horn)
 - Where the nearest toilet is (it may be possible to put a Portaloo between the 2 sets of gates)
- 16.6.5 When the site is made aware of the delivery then an appropriate site induction should be given. This may be just a question of advising the driver of the particular features of the site layout, current hazards, obvious site rules (PPE, no reversing, speed limits etc) This induction could be written on a sheet for the driver to sign as being understood by him. Obviously graphics could be more beneficial in some cases.
- 16.6.6 Regular drivers, once inducted, may not need additional training except where site conditions or discharge areas change eg. concrete wagon drivers.
- 16.6.7 The main emphasis of this section of these procedures is to use the same segregation principles for all deliveries as we should have for mobile plant from pedestrian. This is a particularly difficult but not impossible requirement as the additional risks with delivery drivers include:-
 - Their lack of knowledge of the site and conditions
 - Their possible tiredness after having driven from the last stop.
 - Possible time constraints and keenness to go to their next stop Consequently, at the possible risk of antagonising some delivery drivers, basic site standards cannot be compromised.

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16.7 Parking

- 16.7.1 Many sites have a requirement that there is no parking on site. This then requires that all workers walk onto the site. In this way a separate pedestrian access on to site is essential.
- 16.7.2 Where parking is permitted on site, the location of such areas needs to be carefully planned and access from it to the workplace of the welfare facilities needs to be segregated from mobile plant and indeed other cars.
- 16.7.3 The only exception may be the requirement of certain road vehicles to gain access to various parts of the site, eg. maintenance fitters and workers who have tools and equipment in their vans. The risks of these type of vehicles on site has proved to be very significant as the driver leaves the vehicle, usually in a site roadway, he is not segregated from passing mobile plant and is therefore at very high risk. Furthermore, the vehicle is likely to be an obstruction. Consequently, if such a relaxation is being contemplated then it could be permitted to allow the workers to unload their tools and equipment locally and then take the van to a designated area.
- 16.7.4 Where this is not possible, as is often the case for maintenance and tyre fitters, then a cordon must be placed around the van to allow safe access and egress for the driver. This cordon may be pedestrian barriers, Heras fencing or orange netting as before. On no account can road vehicles be permitted to park on site without a protective barrier around them

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16.8 Mobile Plant on Public Roads

Not Applicable

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16.10 Mortar supply (CPI or similar)

Not applicable

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APPENDIX 1 TRAFFIC MANAGEMENT & PEDESTRIAN SEGREGATION PLAN CHECKLIST

INITIAL TRAFFIC MANAGEMENT AND PEDESTRIAN SEGREGATION PLAN CHECKLIST

(refer to TMPS Procedures for more information – to be updated for each phase or monthly)

Site :- Date :-

Craneage to be used on site :-

Security issues & Hoarding comprises :- Timber post & ply sheeting/Heras Fencing/anti vandal paint/ barbed wire/security arrangements

Fencing: Heras Fencing/pedestrian barriers/orange netting – see site layout

Location of temporary accommodation units (TAU's) – see site layout

Pedestrian Access around, to and from site – initial works areas and segregated walkways from TAU/car parks to every place of work

Mobile Plant – Telehander/MEWP/Dumper/excavator/roller Temporary site roads to be identified on site layout

Cordons around large visiting plant – Mobile Cranes, MEWP's, Piling Rigs, Mortar Silo deliveries

Mobile Plant Drivers – CPCS Cards, Check on briefings, competency, attitude

Deliveries – Clear arrival instruction signage to be positioned where

Parking - Parking on site/parking off site/van management

Mobile Plant on Public Roads – Yes/No/Banksman required

Signage - External list:-Internal list :-

Next revision date :- Signed :-