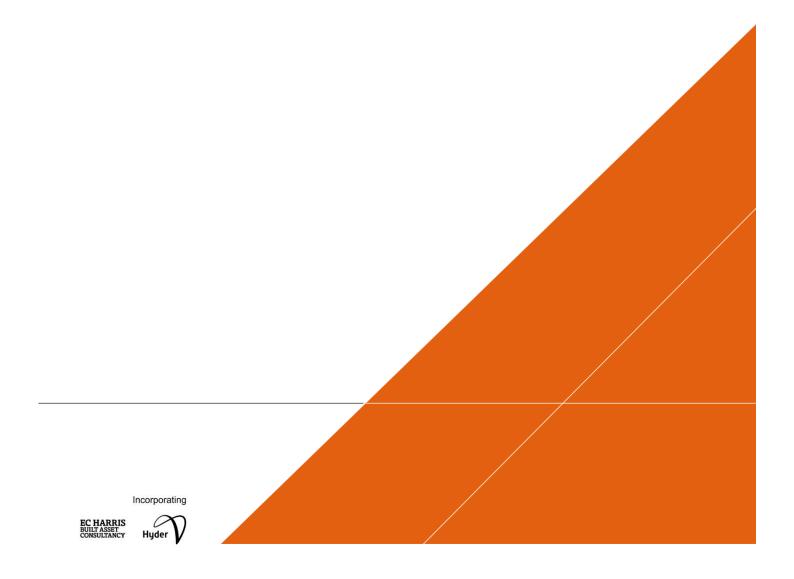


ELMSBROOK: PHASES 3 & 4

Construction Traffic Management Plan

JULY 2018



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VERSION CONTROL

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01	27 th June 2018	C. Collins	First Issue
02	3 rd July 2018	C. Collins	Updated following client comments

This report dated 03 July 2018 has been prepared for Crest Nicholson (the "Client") in accordance with the terms and conditions of appointment dated 26 June 2018 (date fee accepted) between the Client and **Arcadis UK** ("Arcadis") for the purposes specified in the Appointment. For avoidance of doubt, no other person(s) may use or rely upon this report or its contents, and Arcadis accepts no responsibility for any such use or reliance thereon by any other third party.

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1 INTRODUCTION

1.1 Background

Arcadis Consulting (UK) Ltd ('Arcadis') has been commissioned by Crest Nicholson Ltd to produce a Construction Traffic Management Plan (CTMP) to satisfy Planning Condition 59, imposed as part of the planning application (Ref. 10/01780/HYBRID) comprising 393 dwellings and their associated accesses, landscaping and parking arrangements.

Condition 59 - "No development shall commence on site until a Construction Management Travel Plan providing full details of the phasing of the development and addressing each construction activity within each phase has been submitted to and approved in writing by the Local Planning Authority (in consultation with the Local Highway Authority). This plan is to include details of wheel washing facilities, a restriction on construction and delivery traffic during development and routes to the Exemplar development site. The approved Plan shall be implemented in full during the entire construction phase and shall reflect the measures included in the Construction Method Statement received".

The purpose of this CTMP is to provide transportation advice, to assess the development impact and identify appropriate mitigation during the construction of Elmsbrook (known formerly as the Exemplar site) for Phases 3 and 4. It will predominantly focus on the transport issues related to the construction period, including the transportation of deliveries to/ from the site and the construction workforce commute.

1.2 Site Location

The site is located within Elmsbrook to the North West of Bicester as outlined on the Site Location Plan in Appendix A. Elmsbrook has four phases and this CTMP focuses on Phases 3 and 4, located to the north of the site adjacent to Banbury Road.

1.3 Proposed Development

Elmsbrook will deliver a total of 393 houses and flats as well as a school, public house, nursery, supermarket, community centre and associated external areas. The scheme is designed to provide energy efficient development combined with efficient use of local facilities whilst also giving due regard for all environmental issues such as wildlife habitat. Table 1 provides details of the overall phasing schedule, including the number of dwellings and key dates, as presented in Appendix A.

Table	1 Residential	Dhacina	Schodula
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Reference	Unit Nos.	Proposed Start Date	Anticipated Completion Date
Infrastructure	N/A	-	Complete
Phase 1	94	-	Complete
Phase 2	72	-	Complete
Phase 3	89	April 2018 (site set up)	June 2019
Phase 4	138	November 2018	October 2020

Temporary construction compound and associated car parking is situated on land in the north-west area of the site, north of the haul road. Appendix A provides an indicative site layout plan presenting the temporary construction compound, car park, material stores and haul road. The works for Phases 3 and 4 will typically employ the following sequencing:

- Hard landscaped areas up to base course;
- On plot groundwork's and properties built up to oversight with all hard areas constructed around the units, rear gardens formed and top soiled, then fenced off to avoid access by site vehicles;

Construction Traffic Management Plan

• Erection of scaffold followed by the timber frame construction. Roofing and cladding to the frame will follow along with internal first and second fixing followed by decoration and final landscaping; and

 Handover of units to sequence across the phases in order to ensure that residents access over completed areas.

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2 SITE ACCESS AND TRAFFIC MOVEMENTS

2.1 Overview

This chapter provides details of the site access, proposed key routes for construction vehicles, and sets out the required traffic management measures and environmental mitigation.

2.2 Site Access

All construction traffic (including HGVs) will enter and leave the site via the northern site access junction, located off the B4100. The access will form the only access and egress point for the site during the construction period.

2.3 Vehicle Routing

The authorised routes for all vehicles to the construction site is as follows:

- From the North. North West and Midlands (Junction 10 of M40, A43, B4100);
- From the North East (Junction 13 of M1, A421, A43, B4100);
- From the East (A41, A4421, A4095, B4100); and
- From the South/ South West (Junction 9 of M40, A41, A4421, A4095, B4100).

Vehicles will not be permitted to route along Howes Lane, Lords Lane and Middleton Stoney Road during the construction phase.

2.4 Traffic Management Measures

The following measures will be implemented to mitigate the impact of construction traffic on the surrounding highway network and local communities.

Construction Hours

In order to minimise disruption to the local area, all construction deliveries will be made outside of the highway and school peak periods taking place between the hours of **09:00 and 15:30 (Monday to Friday)**. Any requirement for deliveries to take place outside of the off-peak period will be agreed with the local highway authority in advance.

Construction Vehicle Routing and Communication

All deliveries will be via the designated route as detailed in Section 2.3 to minimise disruption to existing residents. Robust signage will be displayed directing traffic to/ from site and traffic movements into/ out of site will be controlled by suitably qualified, trained and certificated banksmen.

Following construction of Phase 3 (2019) the existing haul road is to be opened allowing for through traffic movements. As such, all egress/ access vehicle movements will be banksman controlled. Delivery vehicles will be given allocated time slots and drivers must not arrive more than 30 minutes prior to their allocated delivery time. All delivery vehicles are required to leave site immediately after being off loaded/ reloaded and no delivery vehicles are to be parked on site overnight. Conflicts between school/ business traffic and pedestrians are not envisaged as the proposed access routes generally avoid minor roads. However, this will be closely monitored through close liaison with the local highway authority and delivery times amended as required.

The Principal Contractor will ensure that local residents are kept informed of significant deliveries and are liaised with throughout the construction programme. Contact details for the responsible person to whom issues should be raised with in the first instance will be provided and a record kept of these and subsequent resolution.

Site Access

Access to the site during construction will be controlled by the contractor's gate person at the site entrance. A gate person will prevent access to any unauthorised persons and direct deliveries to the appropriate area.

Construction Traffic Management Plan

The gate person will also be responsible for monitoring the route taken by vehicles travelling to the construction site, as well as directing vehicles exiting the site. This will ensure that vehicles access and egress the site using the approved access route. Temporary access arrangements will be agreed and approved by the local highway authority prior to their implementation on site.

Throughout the course of the construction works the site access will retain suitable standard signage advising pedestrians of the construction site. This will include health and safety information implemented to legislative requirements. Where temporary footpath diversions are required to facilitate safe construction access, these will be agreed in advance with the local highway authority with suitable information/ directional signage and security hoarding/ segregation implemented to retain robust health and safety arrangements for pedestrians. The temporary access arrangements will be frequently inspected by the Principal Contractor to ensure the condition and safety of the route remains satisfactory for use.

Construction Compound and Material Stores

The construction compound and material stores will be securely situated within the site and will remain throughout the construction period. The compound/ material stores will be of sufficient size to store materials and equipment required for construction. All delivery vehicles will be able to enter the site and unload within the compound area. The site compound will include offices, meeting rooms, a staff canteen and toilet facilities. During construction all materials will be stored within the confines of the construction site. During the fit out, work storage areas will be formed within the site boundary, with the more sensitive or delicate materials stored securely within steel containers.

Contractor and Visitor Parking

Vehicle parking for staff and visitors during the construction phase will be accommodated on site and no vehicles associated with the construction will park on the local highway network. This will be managed by the gate person. Construction staff parking will be within the site, located adjacent to the site compound. The parking area will be located away from the construction area and the turning area for HGVs. It is expected that staff will travel to site in cars and vans, although workers will be encouraged to car share in order to reduce the number of vehicle movements. In addition, parking will not be permitted within completed Phases 1 and 2. All staff will be briefed to avoid parking away from permitted areas and signs erected to inform visitors accordingly.

Site Management

The appointed Site Manager will be in charge of Health and Safety on site. A Health and Safety board identifying potential hazards will be updated daily with all visitors required to sign in and adhere to on-site Health and Safety practices. All personnel working on site will be required to wear the appropriate Personal Protective Equipment (PPE) including high visibility vest or jacket, steel cap boots, a hard hat, as well as any other activity-specific safety wear.

The site team will plan the daily traffic movements to and from the site as well as within the confines of the site and be tasked with ensuring this plan is monitored and correctly administered. Contacts details of the Project Manager and Site Supervisor responsible for on-site works will be provided to the local authority prior to commencement of construction.

Site Design

The construction site will retain security hoarding along exposed boundaries with 2.4m high time hoarding with access to the site controlled by a gate person. Wherever practical the layout of the site will include separate routes for vehicular traffic and pedestrians with priority given to safe access and egress to pedestrians. Any road crossings for services/ drainage will be actively managed to ensure that access is always available for local residents. During construction, all materials shall be stored at a suitable location, to reduce the need for crossing the internal spine road with materials stores situated either side.

Construction Vehicle Manoeuvring

It will be ensured that all vehicles will safely utilise the existing internal road network using the assigned haul road. There will be adequate space within the site to pull off the carriageway and manoeuvre within the site thus preventing delay to passing traffic. There will be no queuing, parking, loading or unloading on the public

Construction Traffic Management Plan

highway adjacent to the site and vehicles will be able to access and egress from the site in a forward direction. In the interests of safety and to minimise disturbance from construction traffic, all construction drivers will be requested to travel at a maximum speed limit of 10 mph when travelling within the site. Audible warning devices will be fitted to vehicles that need to reverse, with reversing manoeuvres supervised by a banksman at all times.

Site Compound Inspections

The Principal Contractor will be responsible for completing routine inspections of the site compound and all other associated work areas in line with standard legislative requirements. Where applicable this will as a minimum include the inspection and review of all site specific signage including directional and health and safety related, temporary access arrangements, all work site boundaries including the integrity of security hoarding, scaffolding, as well as all temporary facilities associated with the works compound. In addition, methodologies and processes associated with the safe operation of the site and all associated construction movements to and from the site will be reviewed as required. The Principal Contractor will subsequently be responsible for rectifying any issues arising as a result of these inspections and agree changes with the local highway authority where applicable.

Condition Survey

A before-work commencement highway condition survey will be completed by the Principal Contractor for agreement with the local highway authority (local highway contact number: 0845 310 111).

2.5 Environmental Mitigation

This section sets out the mitigation measures that will be considered in order to minimise any adverse impacts of vehicular movements associated with the proposed development. As part of each subcontractor's works during construction programme, they will be required to complete detailed risk assessments and method statements to support their works proposals. These method statements will contain details of all required environmental mitigation to be implemented.

Wheel Washing and Dust Suppression

All necessary precautions will be taken to minimise the effects of dust caused during the construction works and ensure that debris, mud and dust is not deposited on the site access roads and the adjacent public highway. Permanent road cleaning/ suction sweeper facilities will subsequently be on site to maintain all site roads and adjacent highway accordingly.

In addition, wheel washing facilities will be employed at all site exits and throughout the site if required. These will consist of pressure washer and operatives cleaning the wheels of vehicles prior to leaving the development. These measures will be present at the start of works on site and at all times throughout the construction programme.

Where possible, traffic movements throughout the site are to be restricted to metalled surfaces. Roads, driveways and footpaths will be constructed as soon as feasible to reduce the extent of unmetalled areas. Furthermore, the roads, footpaths, plant and any other traffic will be regularly watered down to keep dust pollution to a minimum, especially in periods of dry weather.

Other methods to be implemented to restrict the spread of dirt/ mud will be the erection of 2.4 metre high security hoarding surrounding the site along the boundary with the B4100 and regular sweeping of roads to and from the site, specifically the B4100.

Workforce Commute

The construction site employees are made up of two primary groups, namely workforce and staff. The workforce represents the construction labour force, generally sourced locally where possible, employed for the duration of the project or an element of the project, and employed mainly by sub-contractors. Staff represents the Principal Contractors management team.

Personal Vehicle Use – Typically the nature of the construction work lends itself to use of the private car due to the proposed working hours outside of standard public transport operators and the need to carry heavy equipment and PPE. An area of hardstanding will be provided within the confines of the site

Construction Traffic Management Plan

compound for staff and workforce parking. Electric Vehicle charging points will be provided within the temporary car park, allowing staff and sub-contractors to charge their hybrid or electric vehicle. Appropriate wording will be included within all sub-contractor orders to ensure that they actively encourage their workforce to car share where possible.

In addition, Crest Nicholson have outlined that, all company cars must achieve less than 120g/km of CO2 and therefore reward all employees through a fuel reimbursement scheme.

Public Transport – Staff and sub-contractors will be encouraged to use public transport where possible. This will be communicated to the sub-contractors via notice boards and in handouts provided as part of their site induction. Information will provide details on bus stops and train station locations, costs and frequency of services.

Under the terms of Schedule 21 of the S106 agreement, the developer is required to provide a regular bus service to the development prior to first occupation. Current bus services for Phases 1 and 2 access and egress via the southern access. There will also be space provided for staff to store tools and equipment overnight to encourage the use of non-car modes.

2.6 Walking and Cycling

A primary objective of the construction phases is to promote the use of local labour and suppliers as well as minimising CO2 emissions resulting from vehicle trips to and from the site. On this basis there is an increased likelihood that site users will travel to and from site on foot or by bike. Personnel using these methods will access the site at the entrance gate whereby they will be directed along designated pedestrian routes to the site compound. Cyclists will be required to dismount at the site gate and secure storage facilities will be provided within the site compound.

Areas for cycles to be parked will be provided on site to help encourage the construction workforce to cycle to site. There will also be space provided for staff to store tools and equipment overnight. Furthermore, Crest Nicholson operate a "Bike-to-Work" scheme for their employees who are able to purchase bikes through a government backed incentive enabling them to save on the cost of a bike and related safety equipment through a monthly salary sacrifice scheme.

Construction Traffic Management Plan

3 MONITORING STRATEGY

3.1 Overview

The monitoring of the CTMP is central to ensuring that sustainable travel planning aims are delivered. A robust monitoring strategy is needed to measure the success or otherwise of the various elements of the CTMP. An effective monitoring strategy will therefore highlight the best performing areas and it will also identify the elements that are not performing as well as anticipated.

3.2 Measures

The following measures are proposed to be undertaken as part of the monitoring strategy.

Annual Travel Survey

This will be the main tool for gathering information on travel behaviour. Undertaken on an annual basis this questionnaire will be designed to allow recipients the opportunity to record how they normally travel to work as well as enabling them to identify what initiatives will encourage them to travel by more sustainable means. A sample Travel to Work questionnaire is provided in Appendix B. The final questionnaire will be designed by the Principal Contractor in consultation with the local highway authority.

Car Share Database Registrations

With assistance from the Oxfordshire County Council Travel Plan Co-ordinators it will be possible to monitor usage levels on the car share database. Reports providing information on membership levels and the number of successful matches can be obtained and scrutinised to establish how effectively this particular element is performing.

Cycle Parking

The number of cycles parked on site will be recorded on two different occasions throughout the year. In subsequent years, the cycle counts will be undertaken on the same two dates to ensure a consistent approach is implemented.

Public Transport - Bus

The number of passengers disembarking from buses servicing the site will be counted and recorded on two different occasions throughout the year. In following years, the count will take place on the same two dates.

3.3 Summary

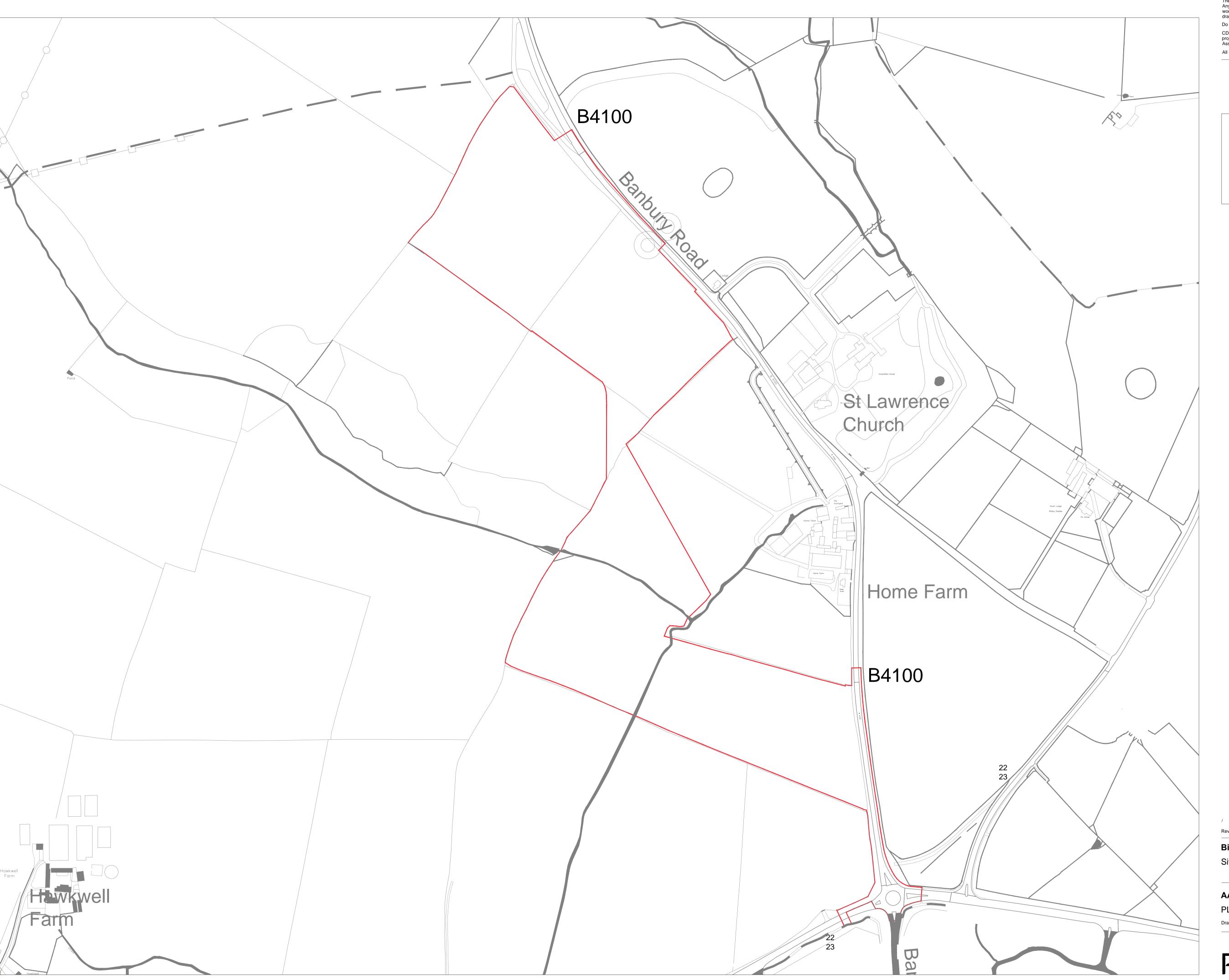
This CTMP presents a foundation upon which an extensive range of sustainable transport measures can be developed. This CTMP will evolve as more information about the construction site and its employees becomes available. A key recommendation is to identify, as far as possible, the locations from which the workforce will be travelling. Once this has been established, targets will be developed in agreement with the local authority.

A Travel Plan Management Board including local transport operators will be created three months prior to the commencement of construction. A Travel Plan Co-ordinator will also be provided for the duration of the construction phase. The first task of the Travel Plan Co-ordinator will be to review the Travel Plan measures to progress their implementation.

Construction Traffic Management Plan

APPENDIX A

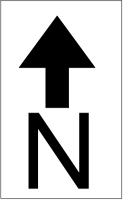
Site Location Plan
Elmsbrook Park Phasing Plan
Overall Site Plan



The contractor is responsible for checking dimensions, tolerances and references. Any discrepancy to be verified with the Architect before proceeding with the works. Where an item is covered by drawings to different scales the larger scale drawing is to be worked to.

Do not scale drawing. Figured dimensions to be worked to in all cases. CDM REGULATIONS 2015. All current drawings and specifications for the project must be read in conjunction with the Designer's Hazard and Environment Assessment Record

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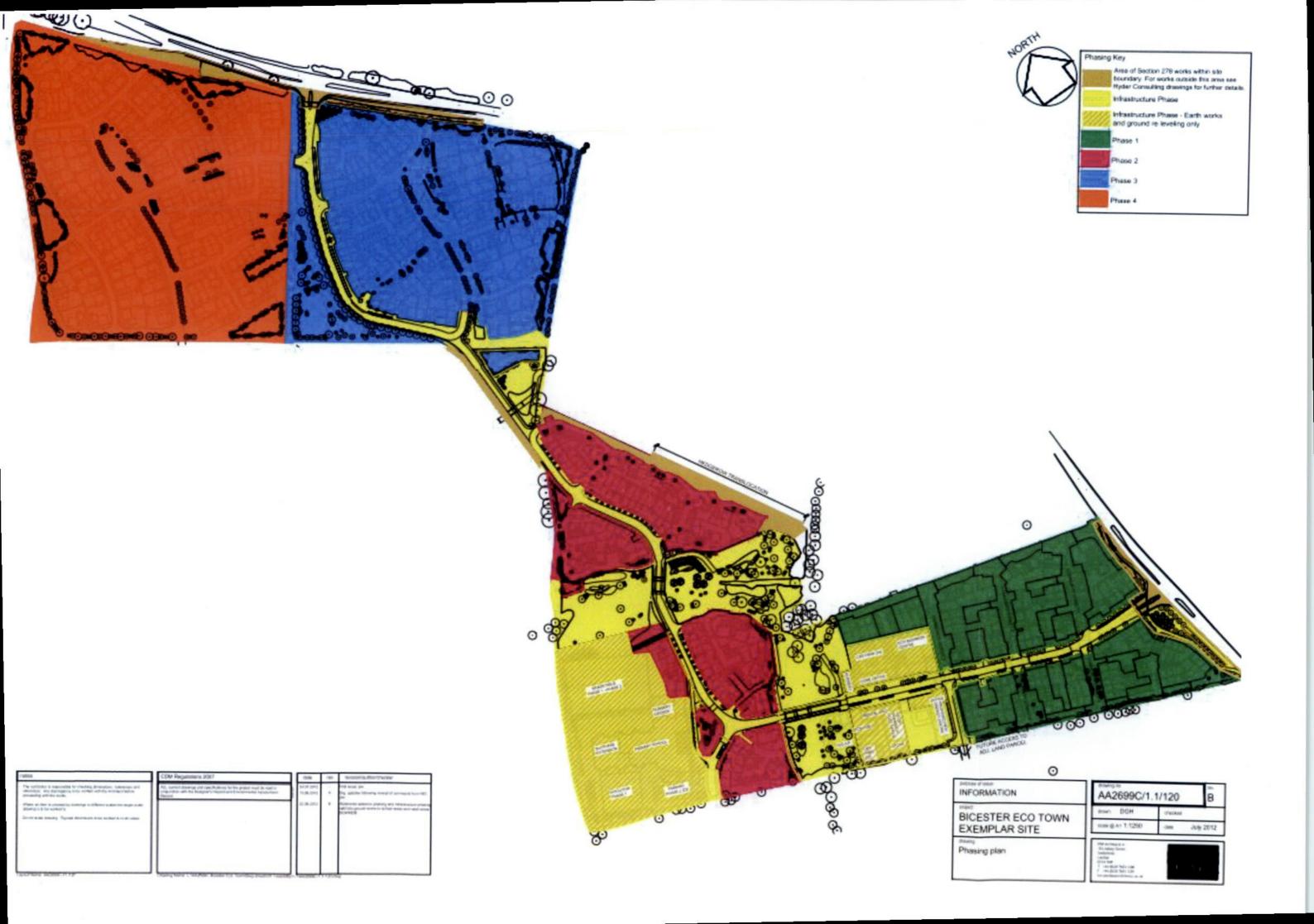


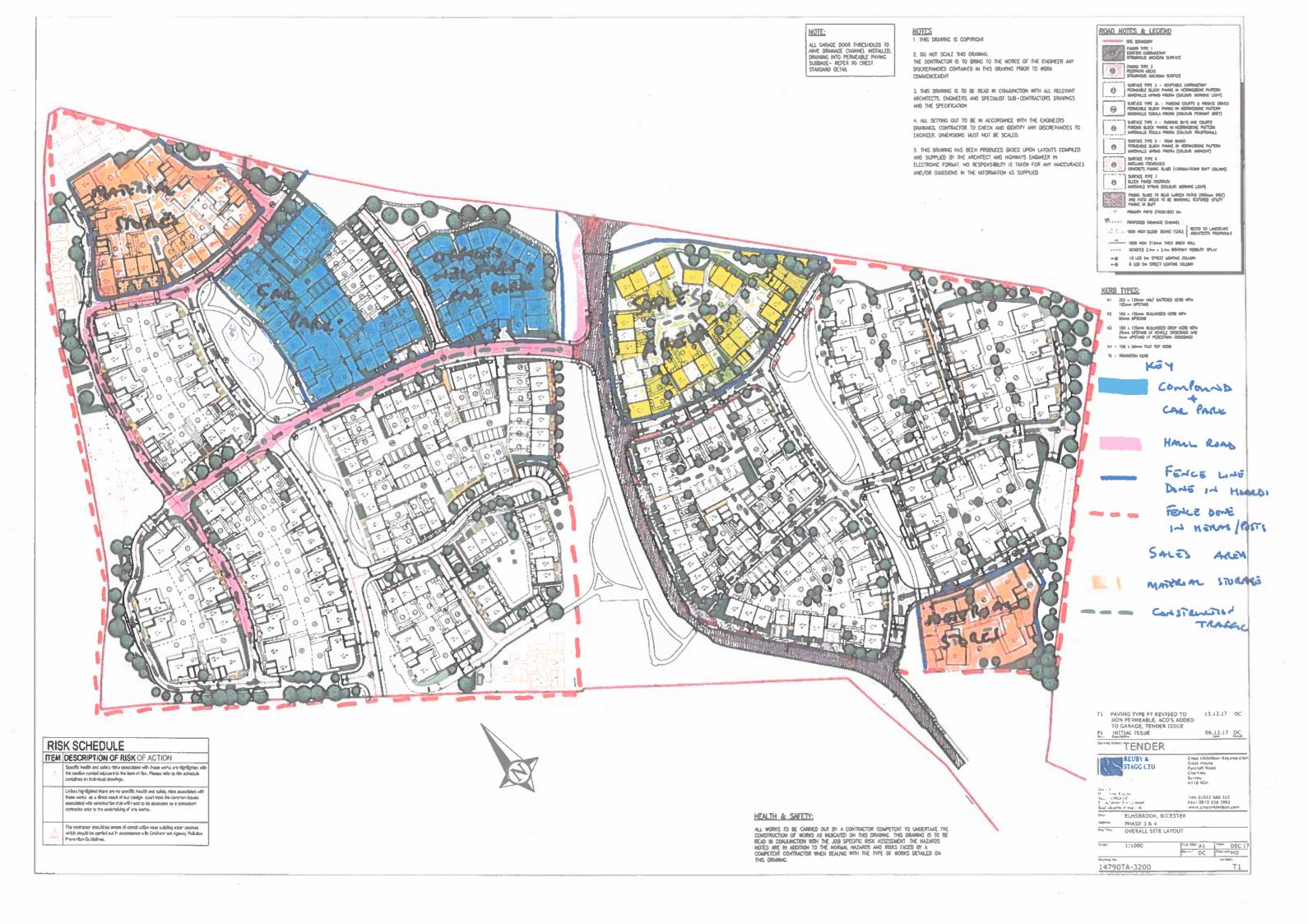
Bicester Eco Town - Phases 3&4 Site Location Plan

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Drawn SW Checked RS Date OCT 2017 Scale @ A1 1:100



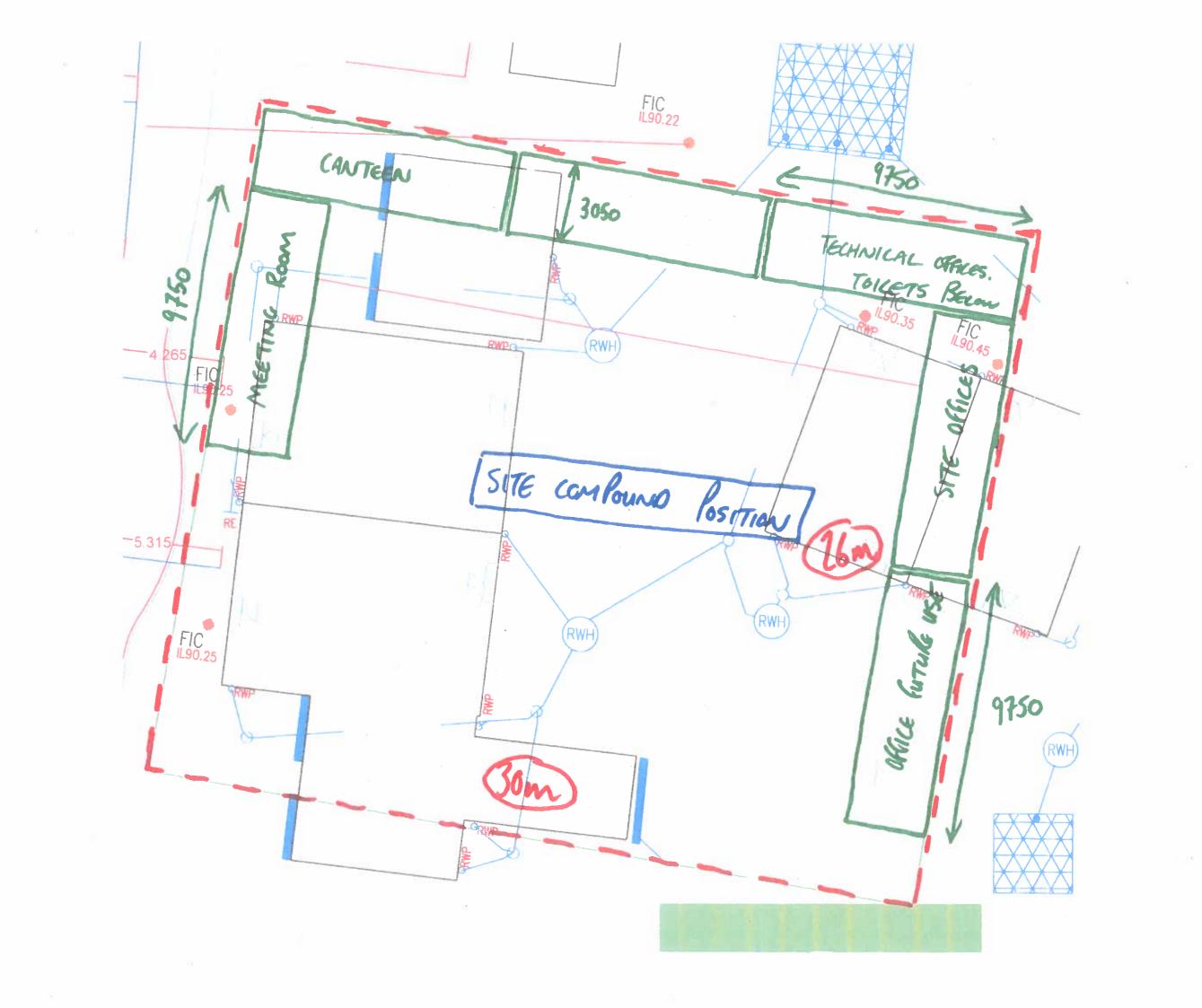


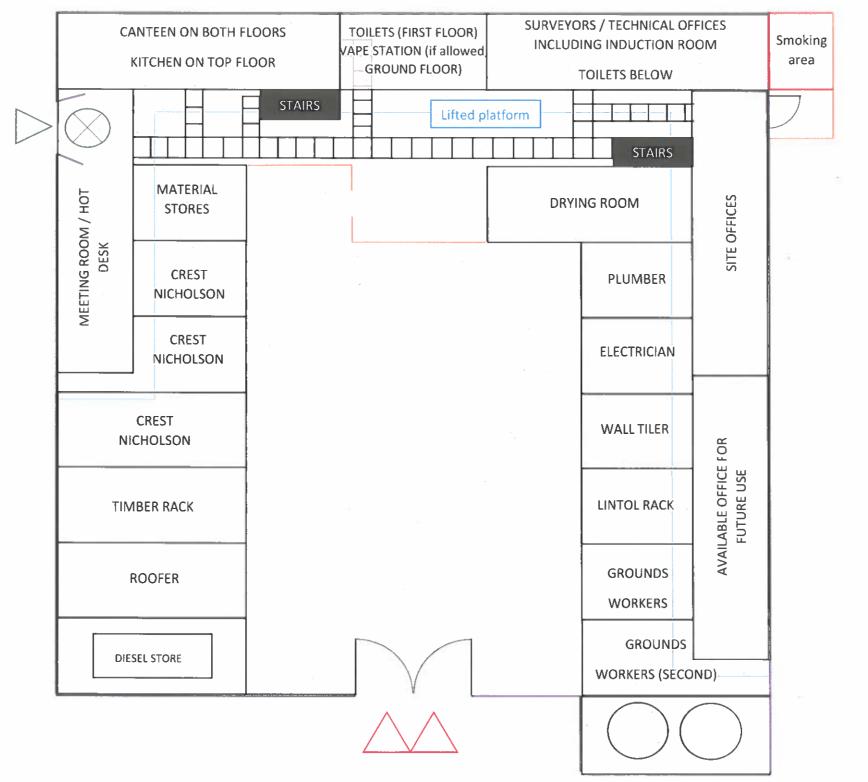












Okey		
	Pedestrian entrance (turnstile sign in)	
$\triangle \triangle$	Vehicle entrance	
	Footpath (slabs)	
	Hoarding	
	Close board fencing	
	Silo	
\otimes	Turnstile sign in	

Construction Traffic Management Plan

APPENDIX B

Sample Travel to Work Questionnaire

SAMPLE EMPLOYEE TRAVEL SURVEY

Please spend 2 minutes on this survey to help us find out more about your journey to work. This information will be useful to management in order to support staff travelling to work, and work with the local council to raise any issues.

Please complete all questions and hand completed surveys back to your manager by [TBC].

1.	Home Postcode	(journey start)	
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	Time In	Time Out
Monday		
Tuesday		
Wednesday		
Thursday		
Friday		
Saturday		
Sunday		
3. How do you usually trav	rel to work (tick one only)?	
□Walk □Cycle □Motorcycle □Bus 4. Would you consider using	□Train □Car Driver □Car Share (Driver) □Car Share ng an alternative method of tr	(Passenger) □Taxi □Other (please specify)
(Please tick all that apply)		
⊒Walk ⊒Cycle ⊒Motorcycle ⊒Bus	□Train □Car Driver □Car Share (Driver) □Car Share (Passenger)	□Taxi □Other (please specify)
5. What would encourage y	you to use an alternative met	hod of travel?
□ Discounted public transport □ More information on walking □ Improved cycle storage and □ Better walking and cycling r □ Discounts/ loans for the pur □ Help in finding a suitable ca □ Other (please specify below	g, cycling and public transport r d facilities routes rchase of cycling equipment ar share partner	outes

6. Would you be interested i	n further information on:		
□Local walking routes □Local cycle routes □Discounted cycles and equipment □Public transport routes, tickets and timetables □Discounted bus/train tickets □How to find a car share partner to obtain a lift □Other (please specify below)			
7. We really welcome your feedback, ideas, comments, suggestions on improving your journey to work:			
8. Your gender?			
□Male	□Female		
Your age group?			
□16–18 □19 – 21 □22 – 24 □25 – 30	□31 - 35 □36 - 40 □41 - 50 □51 - 60	□61 – 70 □71+	

Thank you for your time.



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