

Technical Note 1: Construction Management Plan



Project: Land West of Maypole Lane, Barnham
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Date: 08/11/2018

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1.0 Introduction

- 1.1 This Construction Management Plan (CMP) has been prepared on behalf of Eric Wall Limited pursuant to the grant of planning permission on land west of Maypole Lane, Barnham (planning reference: Y/92/15/PL) in January 2016. This application related to the erection of a glasshouse and reservoir with associated buildings. Condition 4 of the decision notice states:

"No development shall take place, until a Construction Management Plan has been submitted to and approved in writing by the Local Planning Authority. Thereafter the approved Plan shall be implemented and adhered to throughout the entire construction period. The Plan shall provide details as appropriate but not necessarily be restricted to the following matters:

- ▶ *the anticipated number, frequency and types of vehicles used during construction;*
- ▶ *the method of access and routing of vehicles during construction;*
- ▶ *the parking of vehicles by site operatives and visitors;*
- ▶ *the loading and unloading of plant, materials and waste;*
- ▶ *the storage of plant and materials used in construction of the development;*
- ▶ *the erection and maintenance of security hoarding;*
- ▶ *the provision of wheel washing facilities and other works required to mitigate the impact of construction upon the public highway (including the provision of temporary Traffic Regulation Orders);*
- ▶ *measures to control the emission of dust and dirt during demolition and construction, lighting for construction and security; and*
- ▶ *details of public engagement both prior to and during construction works."*

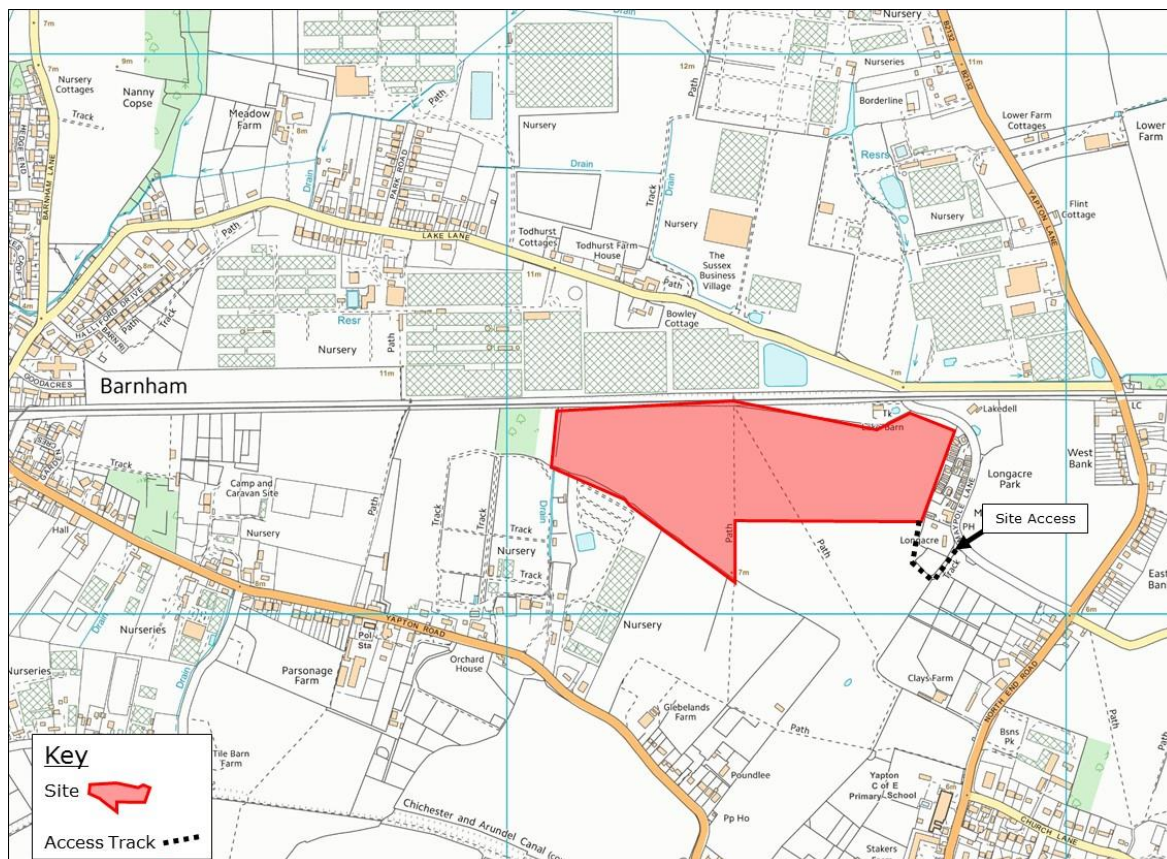
- 1.2 The purpose of this CMP is to provide details of the proposed construction arrangements having regard to the criteria outlined in this condition, which are set out in the next section of this CMP. A summary of the CMP is provided in the final section.

2.0 Construction Transport Management Arrangements

Access

- 2.1 As described in the Transport Statements accompanying the application and shown on the plan below, the existing access to the site is via a gated field access sited on the outside of a bend on Maypole Lane. Maypole Lane is a single carriageway no through road. Whilst the road is narrow, there are existing informal passing opportunities between the site access and junction with North End Road.
- 2.2 Maypole Lane is accessed from North End Road (B2131) to the southeast of the site. North End Road is subject to a 30 mile per hour (mph) speed limit. Visibility from Maypole Lane onto North End Road is currently obscured by vegetation to the south of Maypole Lane within the highway boundary. A drawing included within the Transport Statement illustrated the maximum achievable visibility splays achievable within the highway boundary at this junction and identified that vegetation within this splay can be trimmed back to the highway boundary.

- 2.3 It is intended that all vehicles associated with construction will utilise this existing point of access. An existing access track leads south from Maypole Lane and access to the site will be via this existing track, which leads northwest to the site from the entrance gate. Staff will be available on-site during operational hours of construction, to assist larger vehicles entering/exiting the site as necessary.



Site Location

- 2.4 One of the first tasks in setting up the site for construction of the glasshouse and reservoir will involve construction of an internal road network, which is shown on the plan within **Appendix A**. This 'road' network will consist of 4 to 5 metre width hardcore tracks with passing places and turning areas to allow vehicles access to all relevant areas of the site. Some of these access roads will be removed following construction of the development and others will be converted to concrete/tarmac to form the internal access roads. This will assist in reducing the potential for mud transfer from the site onto the public highway (further considered below).

Programme of Works

- 2.5 As part of the pre-commencement works, a condition of the survey of Maypole Lane between the site access and junction with North End Road will be completed prior to the site being set-up for the construction phase.
- 2.6 The proposed construction programme is expected to last approximately 10 months. The table below outlines the core programme of works associated with construction activity and a more detailed programme is provided in **Appendix B**. This has been prepared based on a construction programme applied for earlier glasshouse construction projects at the main Eric Wall nursery off Lake Lane. The detailed programme is subject to change following appointment of a site contractor, however, it is considered the core programme identifies the principle stages/activities and duration for the purpose of this CMP.

Stage	Activity	Duration
Pre-commencement	Serve/obtain relevant notices/permissions.	3-6 months
	Inform residents/landowners on Maypole Lane of construction programme.	
	Condition survey of Maypole Lane.	
	Install tree/telegraph pole protection works.	
	Cutting back of vegetation within highway at Maypole Lane/North End Road junction.	
Site set-up	Installation of access/gates and internal construction roads network.	3-6 months
	Site set up (including setting up areas for parking, wheel washing, loading/unloading and storage of plant and materials for the duration of works).	
	Erect site fencing/signage and security.	
	Installation of gas, electric/power and water.	
Construction	Reservoir construction and site levelling.	9 months
	Foundations.	
	Glasshouse construction/fit-out.	
	External site works e.g. layout/construct internal access road, parking and turning areas.	
	Implementation of highway works and repair to Maypole Lane (if any) based on pre-commencement condition survey.	
Completion	All construction equipment and facilities to be removed from site for final occupation.	-

Table 2.1 – Programme of Works

- 2.7 There is no specific condition included in the planning decision notice relating to construction hours or days.
- 2.8 In relation to the pre-commencement and site set-up stages (referenced in the table above) and works linked with reservoir, groundworks and other trades/sub-contractors during the main construction phase, it is anticipated that works will take place within the hours 08:00 to 18:00 Monday to Friday and 08:00 to 13:00 hours on a Saturday.
- 2.9 With regard to construction of the glasshouse, the working pattern is expected to follow a 14-day cycle, where construction takes place for a consecutive 10-day period (commencing on a Monday), followed by a 4-day rest period. Construction activities linked with the glasshouse will take place between 07:00 and 19:00 hours (natural light allowing) and works associated with heating and screens associated with the glasshouse will also follow this schedule.
- 2.10 These hours of operation will also apply to all vehicles and plant arriving to and leaving the site.

Vehicles

- 2.11 The table below identifies the anticipated type and approximate number/frequency of vehicles linked with construction stage/activities based on information provided by the applicant's construction consultant. At this stage, no contractors have been appointed for construction of the development. The numbers provided in the table below therefore are based on previous experience and could be subject to change.

Stage	Approx. Number of Vehicle			Activity
	Total	Frequency	Type	
Pre-commencement	2-4	-	Cars/vans	Various (see 'Programme of Works' above)
Site set-up	8	-	Low-loader HGV (40 tonnes)	Transporting construction vehicles to site e.g. bulldozers, earth-scrappers, excavators, rollers and dumpers
	80-120	Up to 10 per day	Rigid lorries (20 tonnes)	Hardcore deliveries (roadway construction)
	-	Up to 6 per day	Concrete mixer	Mixer lorries (foundations/path areas)
	6-8	-	Other rigid/articulated lorries	Deliveries (materials, pipes, cables)
	2-4	-	Other construction vehicles driven to site (up to 10 tonnes)	To be based on-site during construction for unloading, site lifting, roadway construction e.g. JCBs, tele-handler, crane
	-	8 per day	Cars/vans	20 staff/sub-contractors per day travelling in groups/crew vehicles
Construction	50	Up to 4 per day	Articulated lorries (up to 44 tonnes)	Deliveries (glasshouse construction materials)
	20-25	-	Concrete mixer	Delivering concrete
	8-10	1-2 per week	Skip lorries (up to 30 tonnes)	Delivering/removing skips with recyclable and non-recyclable waste (e.g. 12-yard skip, 16-yard REL, 35-yard roll-on/roll-off)
	-	8 per day	Cars/vans	20 staff/sub-contractors per day travelling in groups/crew vehicles
	10-12	-	Low-loader HGVs (40 tonnes)	Transporting construction vehicles to site e.g. elevators, tractors, trailers, scissor lifts
Completion	20	-	Low-loader HGV (40 tonnes)	Transporting construction vehicles off site
	2-4	-	Other construction vehicles driven off site (up to 10 tonnes)	Driven off site

Table 2.2 – Anticipated Type and Approximate Number of Vehicles by Stage/Activity

- 2.12 The approved works relate to the erection of a glasshouse and reservoir with associated buildings. It is anticipated that there will be approximately 20-25 vehicles each day during the site set-up and main construction period. These will include a mix of cars, vans and larger vehicles, including heavy goods vehicles (HGVs). Prior to this, site activities are likely to have fewer vehicle movements.
- 2.13 In relation to staff, it is expected that typically up to 20 construction staff will be on-site for the majority of the main construction period, including sub-contractors. However, staff numbers will vary by construction phase/activity with specialist teams used for different stages, which will be mainly coordinated by the glasshouse contractor. It is expected that typically staff will travel to the site in groups/crew vehicles.
- 2.14 During construction of the roadways, it is estimated there will be approximately 10 rigid vehicles a day delivering hardcore and up to 6 concrete mixer lorries associated with the foundations and path areas. In relation to the glasshouse, it is estimated that there will be circa 4 articulated vehicles each day visiting the site associated with construction material deliveries. The largest materials to be delivered to the site include the steels and glass. Other materials for construction include aluminium, glass, heating, screens, gas and drainage pipes for example.
- 2.15 It is intended that waste soil/excavation material, such as from the reservoir, will be incorporated on-site when land is levelled for glasshouse construction. Waste packaging/construction materials will be removed from site using appropriate skips (e.g. recycling skips for metal, wood, glass, plastics and general non-recyclable waste etc). It is expected skips would be removed from the site via a range of skip lorries, approximately on a weekly basis.

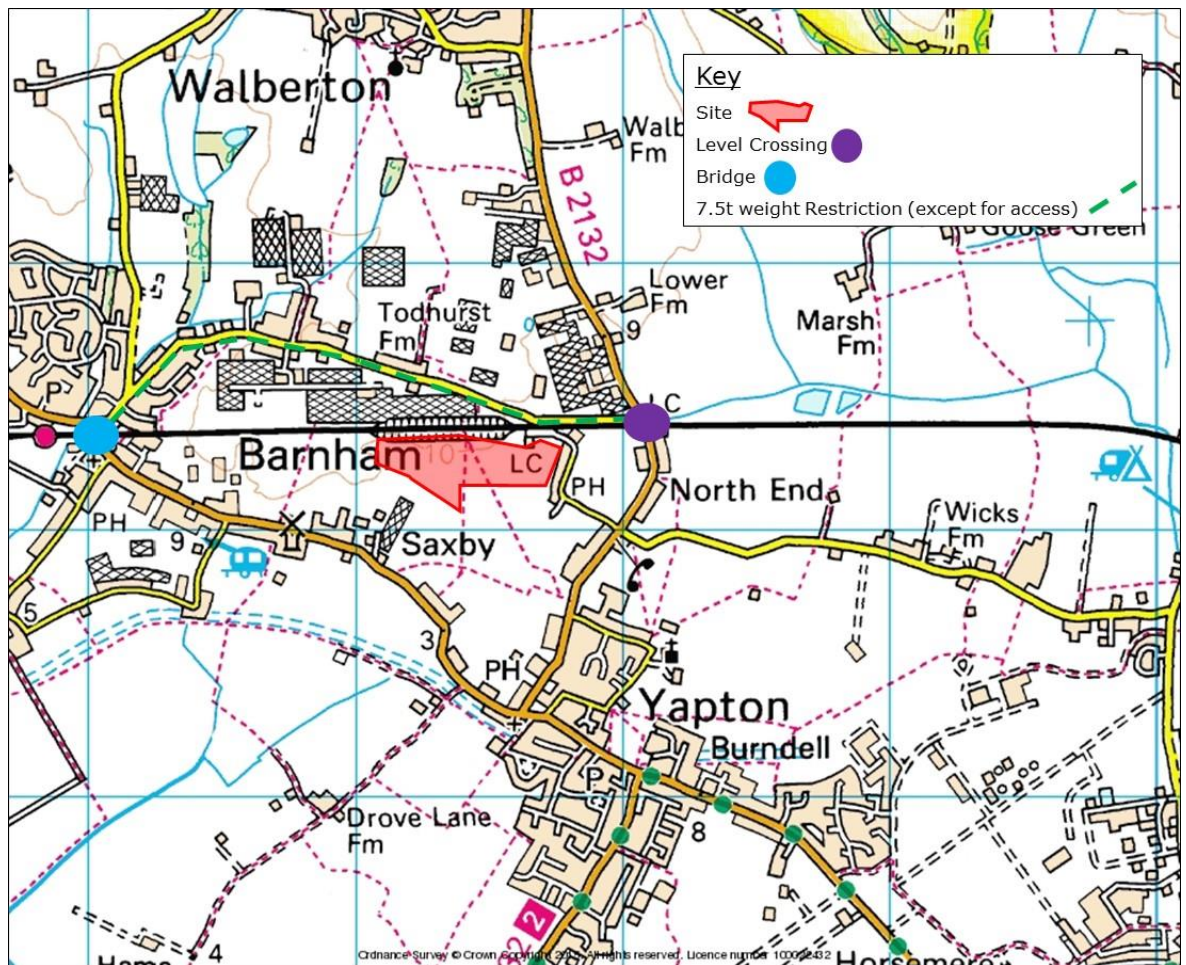
- 2.16 A number of items of plant will be brought onto the site to construct the roadways and for reservoir/glasshouse construction, which will remain on-site during the relevant construction stage, as well as porta loos. It is intended a low-loader HGV will be used to transport earth scrapers, bulldozers and other tracked vehicles (e.g. caterpillar vehicle) for constructing foundations. Other vehicles will be driven directly to/from the site at the beginning/end of the relevant construction stage for which they are required.
- 2.17 Swept path analysis within **Appendix C** demonstrates the ability of the largest of vehicles to access the site (anticipated to be an articulated lorry) to turn into the site access, manoeuvre along the access track (and pass another vehicle), turn within the site and exist onto Maypole Lane in a forward gear.

Parking, Loading/Unloading, Turning and Storage

- 2.18 The plan within **Appendix A** identifies the position of the following within the site:
- ▶ parking for vehicles of site operatives and visitors;
 - ▶ areas for loading/unloading and storing of plant, materials and waste;
 - ▶ position of maintenance/security hoarding;
 - ▶ areas that can be used for wheel-cleaning to prevent the transfer of mud onto the public highway; and
 - ▶ on-site turning areas for construction vehicles.
- 2.19 As identified on the plan, there is ample space within the site to accommodate these activities/requirements. In relation to the security fencing, the plans identify fencing around the reservoir and a separate fencing around the glasshouse and material store. With regard to the latter, the existing rail line security fencing to the north and hedges to the south-west complete the perimeter around the glasshouse and material store.

Vehicle Routeing & Scheduling

- 2.20 As described above, Maypole Lane leads east from the existing point of access to the site and connects with North End Road (B2131).
- 2.21 The B2131 provides access to Yapton to the south connecting with the B2233, which leads northwest to the centres of Barnham and the railway station and southeast towards Burndell. The B2233 continues southeast and connects with the A259, a key route along the south coast.
- 2.22 North End Road provides access to Walberton to the north and A27 strategic route beyond. There is a level crossing located approximately 430 metres to the north of the Maypole Lane/B2131 junction. Drivers of large, slow or long/low vehicles must phone and get permission to cross the level crossing. In this regard, large is defined as vehicles over 18.75 metres in length or 2.9 metres in width, or 44 tonnes total weight and slow means 5 mph or less.
- 2.23 Lake Lane, which leads west off Yapton Lane to the north of the level crossing is further subject of a 7.5 tonne weight restriction (except for access). There is also a height restricted bridge (3.6 metres) under the railway line to the west of the site on Yapton Road (B2233). The plan below identifies the location of these nearby highway restrictions.



Nearby Highway Restrictions

- 2.24 Having regard to the nearby highway network, general construction traffic accessing the site in connection with construction works will arrive at the site via North End Road from both the north and south. No HGVs will access the site via Lake Lane, which is subject of a 7.5 tonne weight restriction, except for access.
- 2.25 As identified previously, it is anticipated that the largest vehicle requiring access to the site related to construction is an articulated lorry (up to 44 tonnes). This vehicle is below the thresholds specified for the level crossing and as such, it is expected that such vehicles will also be able to approach the site from either the north or south, depending on the origin/destination of the vehicle. Any vehicles exceeding the identified thresholds at the level crossing will need to phone and get permission to cross the level crossing.
- 2.26 Construction vehicles visiting the site will be informed of the proposed access (and routing) arrangements prior to travel and the timing of deliveries and removal of waste will be scheduled. Staff will be on-site during operation hours of construction to receive larger delivery vehicles and provide assistance for vehicles entering/existing the site as required. In addition, should it be necessary, banksmen/marshals could be used to assist larger vehicles with abnormal loads along Maypole Lane (between the site access and junction with North End Road).
- 2.27 Should it be necessary, temporary signage could be erected at the site accesses to further highlight the use of the access for these vehicles. It is not anticipated that any further traffic management measures are required in connection with construction traffic. These access arrangements are considered to ensure disturbance from vehicles entering or leaving the site is kept to a minimum as well as to provide suitable access for vehicles during construction activity.

Measures to Protect the Highway

- 2.28 To prevent mud from the site being deposited on the public highway, an internal hardcore road/track network will be laid out prior to the construction phase up to the existing field gate. A wheel cleaning facility, will be available on this access track to clean wheels of vehicles departing the site, as illustrated on the plan in **Appendix A**. It is intended that wheels will be washed down in this area within the site, as necessary.
- 2.29 The proposed wheel cleaning facility will be retained in working order throughout the construction period to ensure larger vehicles do not carry mud and earth from the site onto the highway. If mud and earth is transported onto the public highway through failure of the wheel washing, it will be the responsibility of the site contractor to clean the highway as soon as possible to prevent danger to highway users.
- 2.30 To protect existing highway apparatus on Maypole Lane during the construction period from vehicle strike, it is anticipated that temporary barriers/fencing will be placed around telegraph poles on Maypole Lane during the 'site set-up' phase. Banksman/marshals assisting larger vehicles with abnormal loads will also assist vehicles using this section of the highway. Further any damage caused to the highway during construction works will be rectified during completion of the highway works, secured by separate planning condition.

Dust, Dirt and Security Lighting

- 2.31 The following measures will be implemented to control emissions of dust/dirt during demolition and construction:
- ▶ Cover all open-backed vehicles;
 - ▶ 'water down' demolition activities;
 - ▶ Switch off vehicle engines when parked/not in use.
- 2.32 As identified previously, it is intended that glasshouse construction will typically take place between 07:00 and 19:00 hours, natural light allowing. In terms of lighting for security, it is intended that PIR and CCTV sensors will be placed on glasshouse and materials store for security. Safety fencing of glasshouse areas near footpath, reservoir and materials store area will be required as identified on the plan included in **Appendix A**.

Public Engagement

- 2.33 It is proposed that residents/landowners on Maypole Lane will be informed of the construction programme prior to construction works commencing on-site. Notices will be placed on Maypole Lane, if appropriate, to provide advance warning of any abnormal deliveries or works (such as the proposed highway works) that may cause inconvenience to residents/businesses during the construction process. A contact name along with appropriate contact details will also be provided for issues and queries to be addressed to before and during construction works.

3.0 Summary and Conclusion

- 3.1 This CMP has been prepared pursuant to the grant of planning permission on land west of Maypole Lane, Barnham and condition 4 of this consent.
- 3.2 As set out within this plan, it is anticipated that construction will last approximately 10 months. This CMP identifies that the existing site access to Maypole Lane and North End Road will be used for all construction traffic. Information on the anticipated type, number and routeing of construction vehicles is provided along with a plan identify areas within the site for parking, storage and loading/unloading of plant and material linked with construction. Swept path analysis also demonstrates the adequacy of the proposed on-site turning areas for the largest of vehicles expected to attend the site. Information on the proposed wheel-cleaning facilities to ensure that construction activities do not deposit mud onto the public highway are also set out along with measures to control construction-related emissions of dust and dirt as well as anticipated security lighting. Residents and business on Maypole Lane will be notified in advance of the proposed construction programme and provided of contact details to direct queries to.
- 3.3 On this basis it is considered that appropriate information has been provided within this CMP to satisfy condition 4 of the planning permission.

Appendix A

Construction Management Layout Plan

Appendix B

Draft Construction Programme

Eric Wall New Glasshouse site

Construction Management Plan

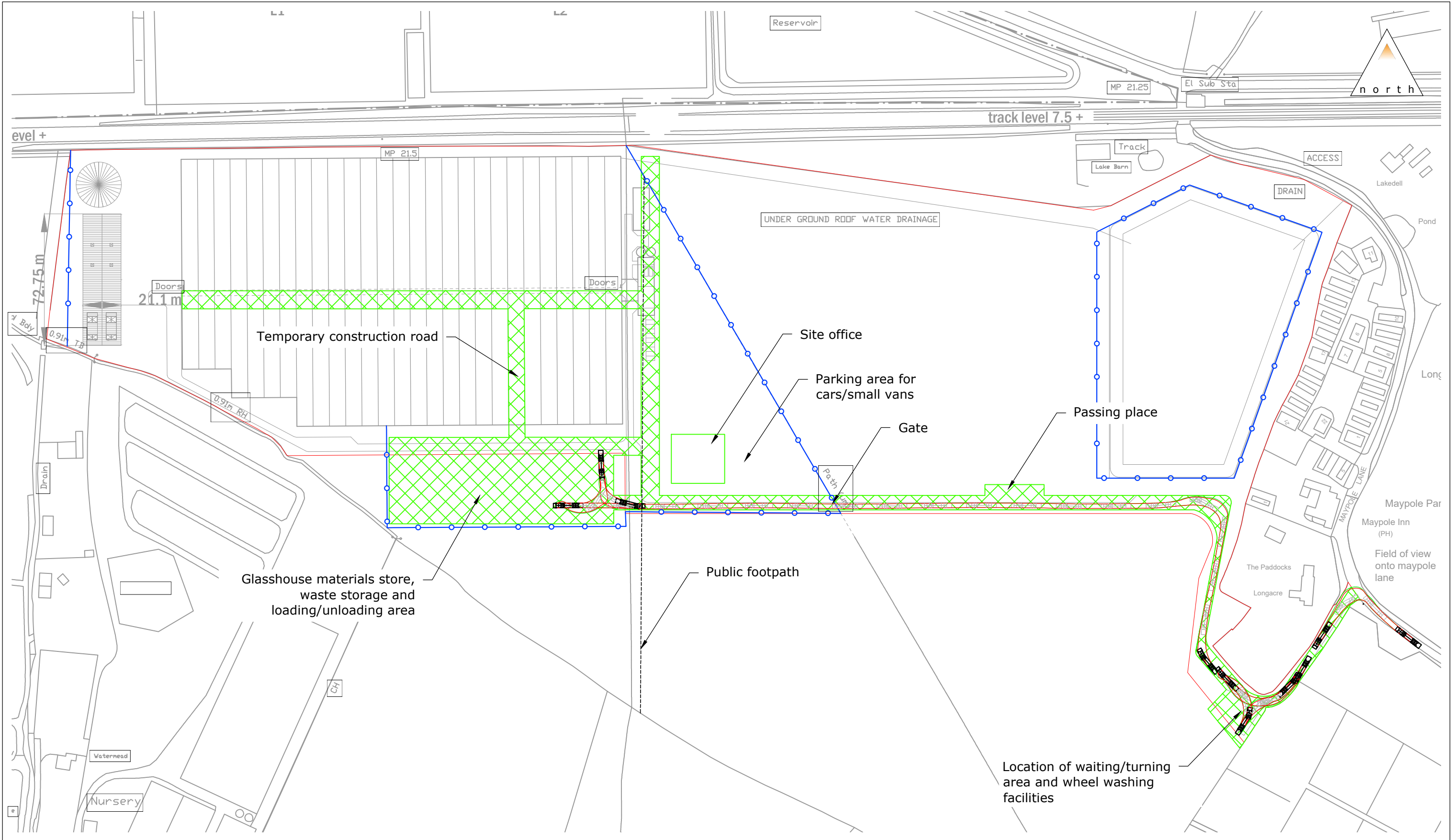
Sep-18

Job	likely	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov
Contractor																
Site levels																
Maypole Road and telegraph pole																
Entrance access and gate.																
Construction roads and materials area																
Site initial levelling and slopes																
Site fencing/signage/security																
gas pipe install																
Power cable install																
Water install																
Water/electric/canteen/portaloo/store																
Divert water & electric cable to house																
Flood bank construction																
Reservoir construction																
Reservoir lining																
Reservoir fencing																
Foundations																
Underground mains-heating																
Steel erection																
Roof drainage & reservoir connection																
Roof glazing																
Vent system																
Gable/side glazing/polycarb fitting																
Service room/boiler house construct																
Screen installation																
Final levelling																
Concrete path/doors																
Service area floor																
Heating system																
CO2 distribution																
Irrigation mains-underground																
Boiler and connections																
Heat Storage tank construction																
Insulation buffertank & GH																
Gas train install																
Irrigation system- above ground																
Water silos dirty/clean/irrigation																
Feed tanks, pumps, Nutriflex,acid																
UV/pasteurisation system																
Electrics																
Enviro computer connections																
Glasshouse equipment fitting out																
Toilets/office/canteen/																
PLANTS IN																

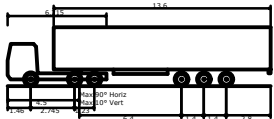
	decisions
	following main contractor plan
	following plan
	completed successfully
	late-not delaying project
	late-delaying project

Appendix C

Swept Path Analysis



- Legend**
-  Construction Road Network
 -  Security Fencing
 -  Site Boundary



Articulated Vehicle with Twin Steered Tractor:
Overall Length 11.600m
Overall Width 2.500m
Overall Body Height 3.691m
Min Body Ground Clearance 0.426m
Max Track Width 2.500m
Lock-to-lock time 6.00s
Curb to Curb Turning Radius 6.970m



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Project:
Land West of Maypole Lane, Barnham

Title:
Construction Management Layout Plan
Swept Path Analysis. 16.5m Articulated Vehicle

Scale: 1:2000 (@ A3)

Notes:

Drawing:
141103-TK07

Revision:
-