

VISTRY GROUP

**LAND EAST OF TYE LANE, WALBERTON,
WEST SUSSEX**

CONSTRUCTION MANAGEMENT PLAN

REPORT REF. 183244-01

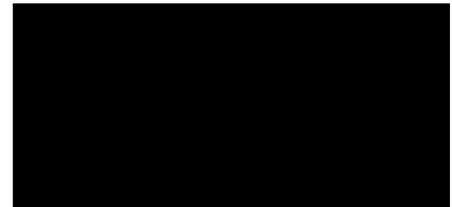
PROJECT NO. 183244

MAY 2020

**LAND EAST OF TYE LANE, WALBERTON,
WEST SUSSEX**

CONSTRUCTION MANAGEMENT PLAN

**Ardent Consulting Engineers
Third Floor
The Hallmark Building
52-56 Leadenhall Street
LONDON
EC3M 5JE**



**REPORT REFERENCE NO 183244-01
PROJECT NO. 183244
MAY 2020**

CONTENTS

	Page
1.0 INTRODUCTION	1
2.0 SITE LOCATION	2
3.0 PROPOSED PROGRAMME AND RESTRICTIONS	5
4.0 SITE SET-UP AND LOGISTICS	6
5.0 HIGHWAY SAFETY AND CONSIDERATE BEHAVIOUR	18

DRAWINGS

183244-001 Temporary Construction Access Swept Path Analysis

DOCUMENT CONTROL SHEET

REV	ISSUE PURPOSE	AUTHOR	CHECKED	APPROVED	DATE
-	Draft Client Issue	DH	KM	DRAFT	15-05-2020
-	Draft LPA Issue	DH	KM	DRAFT	18-05-2020
-	Final LPA Issue	KM			29-05-2020

DISTRIBUTION

This report has been prepared for the exclusive use of **Vistry Group**. It should not be reproduced in whole or in part, or relied upon by third parties, without the express written authority of Ardent Consulting Engineers.

1.0 INTRODUCTION

- 1.1 Ardent Consulting Engineers (ACE) has been appointed by Vistry Group to provide support in connection with the consented residential development comprising 175 dwellings on the land east of Tye Lane, Walberton. Permission was granted in February 2018 under Arun District Council (ADC) planning application reference WA/44/17/OUT with Condition 6 securing the preparation of a Construction Management Plan (CMP) to support the build out.
- 1.2 This CMP has been prepared to outline changes to the strategy that was set out within the consented CMP prepared to discharge Condition 6, which was also prepared by ACE (**ACE Report Reference: 183240-06**).
- 1.3 The approved CMP outlined that the Developer will be responsible for ensuring the document is updated as and when necessary, to include any amendments, revisions or improvements to the construction logistics or adaptations to address unforeseeable changes to the construction programme, as and when applicable.
- 1.4 In accordance with the approved CMP, this CMP has been prepared to detail a change in construction vehicle access and routing to separate construction and prospective resident traffic/movements. This revised strategy has therefore been proposed in order to provide a significant safety benefit to existing residents in the vicinity as well as prospective residents of the site as the build progresses.
- 1.5 The aim of this report remains to provide the local planning authority, ADC and West Sussex County Council (WSCC) as local Highway Authority, with sufficient information on the management of construction traffic during the construction phases.

2.0 SITE LOCATION / DEVELOPMENT PROPOSALS

Site Location

- 2.1 The development site is located along Yapton Lane, Walberton and shown within **Plate 2.1** below.

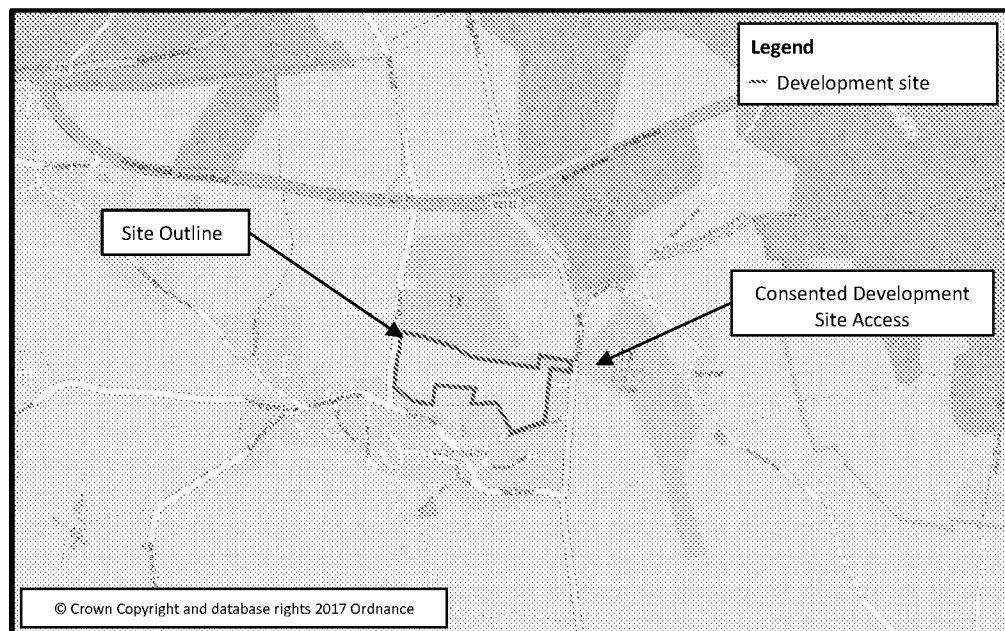


Plate 2.1: Site Location Plan

Local Highway

- 2.2 The Consented site access to serve the built out scheme will be provided directly from Yapton Lane, comprising a simple priority 'T' junction, with a 5.5 metres carriageway width with 2.0 metres footways on either side.
- 2.3 Yapton Lane is a two-way single carriageway road of varying width, between 6.5 metres and 7.1 metres. Yapton lane is subject to a 30mph speed limit to the south of the site access point; while the speed limit is 40mph heading north.

- 2.4 The approved CMP detailed that the main site access would be utilised in order to provide access for construction vehicles to build out the scheme.
- 2.5 However, this has been further reviewed and it is considered more appropriate that construction traffic and residential traffic for the proposed site be separated to reduce any potential conflict between the two, and as such will have a material safety improvement compared to the consented arrangements as put forward within the approved CMP.
- 2.6 This is in-line with guidance from RoSPA and the CIHT which advocate segregation of construction and HGV movements with pedestrians and non-construction traffic.
- 2.7 This revised strategy will have a further benefit of removing construction traffic from Yapton Lane and hence separate construction traffic from existing residential traffic using Yapton Lane, which is the primary route to/from Walburton and the A27, limiting the number of accesses and potential opportunities for conflict
- 2.8 The A27 is approximately 700m north of the main site access along Yapton Lane. The A27 runs broadly in east – west direction and provides connections to Portsmouth and Chichester to the west and Worthing, Brighton and Eastbourne to the east.
- 2.9 The proposed site layout incorporates an emergency access on the western boundary of the site that would connect the development to Tye Lane.
- 2.10 It is now proposed that a modified version of the emergency access point is utilised to support construction activity in order that construction traffic is removed from Yapton Lane, and hence provide the safety benefit of separating residential and construction traffic associated with the site.

2.11 The temporary construction access arrangement is detailed in **ACE Drawing 183244-001**. The temporary construction access is considered in further detail in **Section 4.0**.

3.0 PROPOSED PROGRAMME AND RESTRICTIONS

- 3.1 The works associated with the development have started and are envisaged to take circa 60 months to complete, with the first start on site using the approved construction access arrangements from Yapton Lane.
- 3.2 Details of build out were provided within the approved CMP and apart first stage of works and commencement date being different from the approved document, largely the same approach will be taken to build out the site but with the benefit of construction vehicles no longer being required to route through the full length of the site. Under the revised proposals, more direct access is achieved to parking and compound facilities that are located in the western end of the site.
- 3.3 Working Hours will be in line with planning consent:-
- Monday to Friday - 08:00 to 18:00 hours
 - Saturday - 08:00 to 13:00 hours
 - Sundays and Bank Holidays - No working to take place
- 3.4 Working hours to remain as consented unless otherwise agreed in writing from ADC.
- 3.5 Outside the above times there will be no construction works, including vehicle movement on site, which are audible at the boundary of noise sensitive premises in the vicinity of the site.

4.0 SITE SET-UP AND LOGISTICS

Site Contact Details

- 4.1 Vistry Group are the Site Contractors. These details will be placed on the hoardings on the front of the site to identify the site manager.
- 4.2 The below outlines the anticipated set-up procedures and logistical impact/mitigation for the construction phases.

Enabling Works/Formation of Site Perimeter

- 4.3 At commencement, the perimeter of the site will be established and securely protected complete with all necessary signage in accordance with HSE requirements. An indicative site setup plan is provided within the approved CMP and will largely remain the same, except construction access will be from Tye Lane and hence vehicles will not route through the centre of the site to compound facilities etc which are to be located on the opposite side of the site from Yapton Lane.

Site Facilities

- 4.4 The site offices and associated portacabin etc. will be located within the site. These areas could also be designated for any cycle parking as well as welfare facilities.
- 4.5 The dedicated areas for recycling / waste store and plant storage facility will also be provided.

Excavation and Ground Works

- 4.6 Prior to commencing excavations, the site area will be checked for overhead and underground services. Service Plans will be obtained from Utility providers.

- 4.7 Once identified, the service routes will be identified and clearly marked. If markings are lost during the working operation, the exercise will be repeated to ensure service routes remain clearly marked as required during the duration of the works.
- 4.8 Works will be undertaken in accordance with the relevant HSE Guidance Document.
- 4.9 Trenches will be inspected regularly and excess groundwater pumped out regularly during inclement weather.
- 4.10 Vehicle plant will be kept at a safe working distance from the trench to prevent potential collapse.

Access and Egress, Deliveries and Loading of Plant Material

- 4.11 The access to the construction site will be from the location where an emergency only access will be provided to serve the completed site. During the build however a temporary construction access will be formed as presented on **ACE Drawing 183244-001**.
- 4.12 This is a revised approach from the consented CMP in order to separate construction vehicle traffic from the residential traffic associated with the proposals as the scheme develops. This will also contribute to separating construction traffic from the bulk of existing traffic flows along Yapton Lane which is the main connection between Walberton and the A27.
- 4.13 There is a clear safety benefit from separating these traffic movements from each other, and by adopting an approach route that is also separated from the bulk of existing traffic locally given Tye Lane is a quieter route than Yapton Lane. As mentioned above this is in-line with guidance from both SoRSA and CIHT which both advocate the separation of construction/HGV movements where possible,

particularly with more vulnerable road users such as pedestrian, which this arrangement provides.

- 4.14 The form of the access has been based upon the largest construction vehicle anticipated to serve the site utilising swept path analysis, as also outlined on **ACE Drawing 183244-001**.
- 4.15 Any service/delivery vehicles will be accompanied onto and from the site by the qualified banksman. Visibility for a banksman has also been considered in the context of measured vehicle speeds along Tye Lane and as demonstrated on **ACE Drawing 183244-001** can be achieved.
- 4.16 The results of speed surveys undertaken on Tye Lane to support the planning application have been utilised in order to consider visibility splay requirements at the temporary construction access point, including both junction visibility splays and forward stopping sight distance splays.
- 4.17 Junction visibility splays commensurate with measured 95th percentile wet weather speeds of 36.4mph northbound and 38.9mph southbound have been considered for the temporary construction access. Applying 1.5s reaction time and 0.45g deceleration rate as per Manual for Streets amounts to junction visibility splays of 2.4m x 60m to the right (north) and 2.4m x 54m to the left (south).
- 4.18 As shown on **ACE Drawing 183244-001** and **ACE Drawing LHS240-1205-T2** both the temporary construction access and permanent emergency access are in the same location, and there will not be any further impact on trees.
- 4.19 Forward visibility (stopping sight distance) has also been considered for vehicles approaching the temporary construction access along Tye Lane. Again, based upon the measured speeds along Tye Lane these have been considered and amount to 63m forward splay for vehicles

approaching from the north, and 57m for vehicles approaching from the south. These are also demonstrated on **ACE Drawing 183244-001**, which demonstrates that these visibility splays are achievable without requiring the loss of any trees, although low-level clearance of vegetation up to 600mm may be required.

4.20 It is anticipated that the temporary construction access will be subject to Road Safety Audit (RSA) but the above analysis indicates that the form of the junction is satisfactory to serve construction access to the site. It is anticipated that this RSA would be undertaken as part of works for the permanent works for the emergency access onto Tye Lane.

4.21 It is envisaged that the following movements will occur as part of the construction phase, along with anticipated timescales:

- The delivery and pick up of contractor equipment (generators, storage facilities) would occur at the beginning and end of the project. This could comprise deliveries using a 16.5 metres articulated lorry;
- The delivery of concrete (ready mixed /precast blocks) would occur throughout this phase. It is estimated that this would comprise deliveries using a large tipper/concrete mixer/7.5 tonne lorry type vehicle, with timely deliveries to avoid quieting on the public highway;
- Delivery of steel products such as sheets or reinforcement would utilise as much as possible rigid trucks, and on occasions when necessary articulated vehicles will have to be used to carry longer lengths of these items;
- The delivery of aggregates/cement would comprise deliveries using a 7.5 tonne lorry/rigid truck type vehicle;
- The delivery of general building materials would occur throughout this phase using a large tipper/7.5 tonne lorry type vehicle;

- Delivery of fuel would occur throughout this phase using a small oil tanker/rigid truck type vehicle, however the use of diesel storage bowsters on site would minimise the need for excessive number of deliveries.
- Any delivery of a crane would be required to arrive at the beginning of the construction phase and removed at the end unless an alternative lifting method is used; and
- Small routine deliveries would occur throughout the contract using a transit type van.

4.22 Considering the scale of development, and dispersal of vehicle movements throughout the day, it is not anticipated that there would be a significant number of movements in any one peak hour which would result in a detrimental impact to the operation or safety of the local highway network.

Routing

4.23 Construction access to the site will take place utilising a temporary construction access on Tye Lane formed where the emergency access to serve the completed development will be taken. The final stage of works will be to remove the construction access and form the approved emergency access arrangement.

4.24 The construction access arrangements are detailed on **ACE Drawing 183244-001** and involve use of Tye Lane to/from the A27 to the north, with drivers/vehicles prohibited from accessing the site from the south, through Walburton village. This will limit impact on traffic associated with Walberton that will largely utilise Yapton Lane, whilst also separating construction traffic from future residents of the development, thereby providing a safety benefit.

4.25 Vehicle movements between the A27 and Tye Lane would be via the existing left-in/left-out priority junction which benefits from an diverge taper for those turning left in. Vehicles egressing are afforded

excellent visibility to the right to approaching vehicles, and considering the low number of HGV movements it is not considered there would be any highway safety or capacity concerns with the operation of this junction.

4.26 On a wider network basis, given the A27 provides easy connections to the strategic highway network in the region, it is likely to be a primary route taken by construction traffic, with vehicles able to use the Arundel Roundabout when approaching from the west. This route has been chosen as it minimises the potential for vehicles passing sensitive locations such as residential areas and schools. Drivers will be issued with routing instructions and the site access will be clearly signed.

4.27 The arrangements proposed within this CMP are an improvement in terms of reducing potential conflict between construction traffic and residential travel travelling to/from local residential areas when compared to the strategy that was agreed within the previous iteration of the CMP prepared to support the site.

Procedures

4.28 Vistry Group will apply the following measures:

- Ensure that the management and interaction of pedestrians and vehicular movements to and from site are controlled, managed and shall be safe at all times through the use of pedestrian walkways which will be segregated from construction traffic where possible;
- Use of maximum speed limit of 10mph around site;
- Signage will be provided to guide both vehicles and pedestrians;
- Secure hoarding will be provided to prevent unauthorised access to the site; and,

- Temporary lighting will be provided to ensure that there is a safe environment for pedestrians after dark.
- 4.29 The placement of orders for materials shall be carefully managed to ensure that vehicle movements to and from site are minimised. Opportunities to combine and consolidate deliveries (and use of initiatives such as reverse logistics) shall be explored.
- 4.30 Combining the delivery of aggregates with the removal of demolition material could significantly reduce the number of HGV movements. Vistry Group will employ additional measures to manage the potential impact associated with deliveries to the site.
- 4.31 The management and control strategy shall include, but not be limited to:
- The identification and establishment of designated routes within the site to ensure that safe and controlled movement of vehicles and pedestrians around the site, provision for waiting vehicles and controlled parking areas if and where appropriate;
 - The identification of systems that will ensure that pedestrians and vehicles are segregated and kept apart as far as is practical;
 - The use of temporary road closures, diversions and footway closures (if necessary);
 - Control on the timing of lorry movements which will be confined to the permitted hours;
 - Management of abnormal loads and large plant which may need to take place at other times, with prior consent of the Council.
- 4.32 The movement of all construction related vehicles will be monitored by the Project Manager/Site Manager Contractor.

- 4.33 All deliveries will be booked to arrive on site at certain times. In the tender information that will be sent out to sub-contractors they will be reminded of the routes to site and sticking to allocated delivery times when called in by the Site Manager.
- 4.34 Construction traffic management will be an agenda item at all regular meetings and anticipated delivery vehicle movements will be discussed. Any activities not undertaken in accordance with the CMP will be discussed and corrective action taken as appropriate.

Community Engagement

- 4.35 The Contractor will provide newsletters to local stakeholders, as well as arranging meetings with local residents, and Walberton Parish Council so there is a point of contact, and information can easily be shared.

Disruption to Public Highway

- 4.36 It is anticipated that there would not be any significant disruption to the public highway, other than during the construction of the site access and the arrival/departure of vehicles from the site.
- 4.37 In addition to this, vehicles will not be loading along the public highway and therefore won't affect the operation of the public highway.
- 4.38 To warn approaching pedestrians and vehicles, appropriate warning signage will be provided in accordance with the requirements set out within Chapter 8 of the Traffic Signs Manual where appropriate.
- 4.39 During the construction phase, it is envisaged that a crane will be brought into the site. To ensure the safe arrival of this vehicle (if this is an abnormal load), the standard Highways England Electronic Service Delivery for Abnormal Loads (ESDAL) process would be

followed by the contractor. If required, a traffic management plan could also be provided by the contractor detailing vehicle routing, to ADC/WSCC.

- 4.40 The construction access has been designed to accommodate a large articulated vehicle and as such will be suitable to meet the access requirements of construction vehicles.
- 4.41 The Contractor will work closely with ADC/WSCC to minimise disruption to the operation of the existing highway network during demolition/construction. The Contractor will maintain engagement with local authority officers to establish a work program to minimising conflicts.

Measures to Reduce the Need to Travel

- 4.42 The on-site parking spaces for visitors will be available within the hoarding lines. These spaces will be kept to a minimum and will be managed accordingly, with visitors booking a space in advance of their arrival. Construction workers will be encouraged to travel to the site by sustainable modes.
- 4.43 Drivers of delivery vehicles travelling to the site will be informed of the routing to and from the site, to ensure that the most direct and efficient routes are taken, thereby reducing vehicle emissions.
- 4.44 Materials used to construct the development would be locally sourced where possible to reduce the distance travelled from the suppliers to the site, and boost the local economy.

Recycling/Disposing of Waste and Environmental Controls

- 4.45 Suitable on-site measures will be put in place to maximise recycling potential. This may involve using materials within the site or for materials to be taken off-site to recycling facilities.

- 4.46 The Contractors will aim to maximise the recycling of materials within the development, thereby minimising the amount of vehicles carrying waste.

Fuel Storage

- 4.47 All fuel storage will be kept to a minimum on site. Where fuel is stored the following measures will be in place: -

- Contained in a double-skinned proprietary fuel storage vessel.
- Clearly sign posted.
- Kept locked at all times with authorised access only.
- Emergency spill kit will be provided adjacent to the fuel store.
- Emergency procedures will be included within the Site Health and Safety Plan.

Dust Monitoring

- 4.48 The construction of any new building frame are activities prone to generating dust. This may become problematic during prolonged spells of dry weather.

- 4.49 A strict regime of dust control measures will be implemented by the developer/contractor and this will include damping down with water and vapour sprays during dust generating activities. The site management will monitor conditions to ensure the correct measures are implemented and emissions are controlled.

Noise Monitoring/Control

- 4.50 The noise levels will be monitored using a hand-held class 1 sound level meter.
- 4.51 The most appropriate guidance to follow for construction noise is BS 5228-1:2009+A1:2014 'Code of practice for noise and vibration

control on construction and open sites. Noise'. To assess the limits for reasonable construction noise experienced at the nearest residential properties, Example Method 1 (the ABC Method) of BS 5228, within section E.3.2, should be used. Table E.1 from the standard is reproduced below. The site would fall under category A, therefore the daytime limit would be 65dBA and 55dBA on evenings and weekends (if applicable).

Table E.1 Example threshold of significant effect at dwellings

Assessment category and threshold value period (L_{max})	Threshold value, in decibels (dB)		
	Category A ^a	Category B ^a	Category C ^a
Night-time (23.00–07.00)	45	50	55
Evenings and weekends ^b	55	60	65
Daytime (07.00–19.00) and Saturdays (07.00–13.00)	65	70	75

NOTE 1 A significant effect has been deemed to occur if the total L_{max} noise level, including construction, exceeds the threshold level for the Category appropriate to the ambient noise level.

NOTE 2 If the ambient noise level exceeds the threshold values given in the table (i.e. the ambient noise level is higher than the above values), then a significant effect is deemed to occur if the total L_{max} noise level for the period increases by more than 3 dB due to construction activity.

NOTE 3 Applied to residential receptors only.

^a Category A: threshold values to use when ambient noise levels (when rounded to the nearest 5 dB) are less than these values.

^a Category B: threshold values to use when ambient noise levels (when rounded to the nearest 5 dB) are the same as category A values.

^a Category C: threshold values to use when ambient noise levels (when rounded to the nearest 5 dB) are higher than category A values.

^b 19.00–23.00 weekdays, 13.00–23.00 Saturdays and 07.00–23.00 Sundays.

Plate 4.1: Example Thresholds of Significant Effect at Dwellings

4.52 Should any non-compliance be identified through the monitoring process, inspection records will be issued to the site management team and copied to Director level for action.

4.53 The specific measures on site will be taken as follows to reduce noise generated by operations on the site: -

- All plant will be silenced in accordance with current best practice.
- Wherever practical plant used for breaking out will be 'crushing' rather than hammering (e.g. cutting down piles).

- Where practical all fixings and holes will be formed / cast into concrete to avoid drilling and cutting on site (e.g. cast in situ fire sleeves will be used for all Soil Vent Pipes.
- As far as practical, off-site manufacture will be utilised to reduce production activity on site.
- Where extremely noisy activities are unavoidable (e.g. elements of demolition) methods of working will be agreed with ADC and WSCC.

5.0 HIGHWAY SAFETY AND CONSIDERATE BEHAVIOUR

- 5.1 Where possible, all deliveries will be made outside of the peak traffic periods and school arrival/departure times.
- 5.2 Engines of vehicles will be switched off when possible, to ensure unnecessary noise is kept to a minimum.

Training, Induction and Best Practice

- 5.3 All HGVs/drivers accessing the site would conform to the requirements of the Fleet Operator Recognition Scheme (FORS) and CLOCS (Construction Logistics and Cycle Safety) standard for construction logistics.
- 5.4 All drivers who attend the site on a regular basis will attend an induction, which will comprise:
- *Site procedures including waiting, parking and loading areas;*
 - *Access routes;*
 - *Cyclist awareness;*
 - *Environmental considerations including noise, vibration, dust and cleanliness procedures;*
 - *Review of hazards and risk reduction*

Highway Conditions

- 5.5 Any damage made to the public highway that is a direct result of construction works associated with the site will be repaired by the developer.
- 5.6 Wheel washing facilities will be provided within the site in order to remove any sediment that may be deposited along the public highway. This could include wheel spinners with water jets. The

location of the wheel washing facility is provided in close proximity to the construction access point.

Waste Management

5.7 The construction works on the site are anticipated to produce the following wastes:

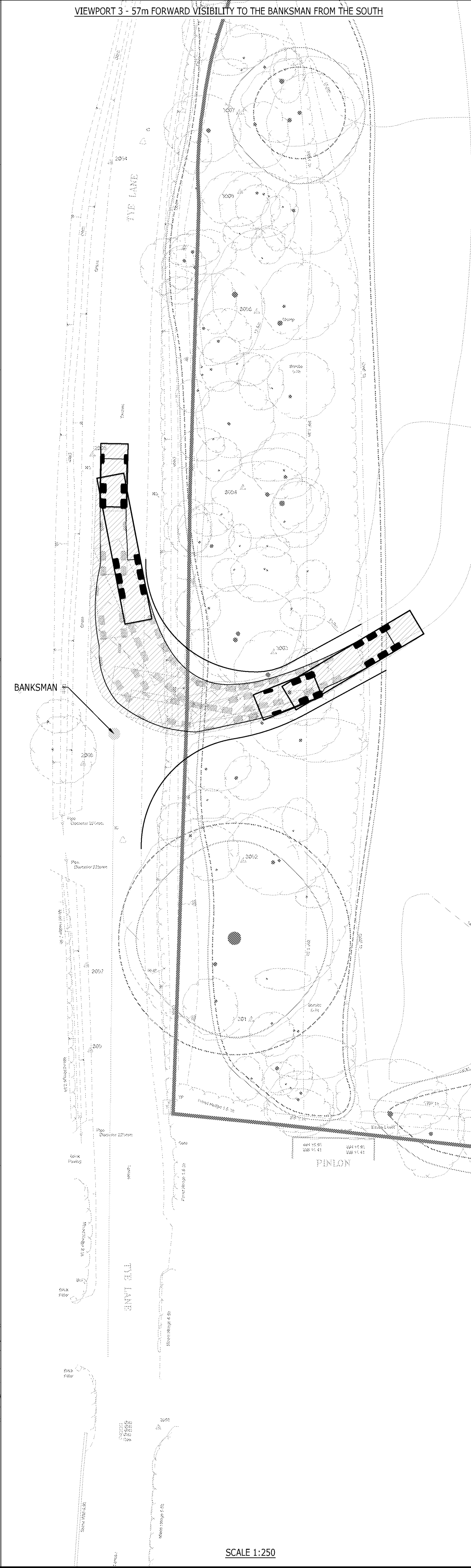
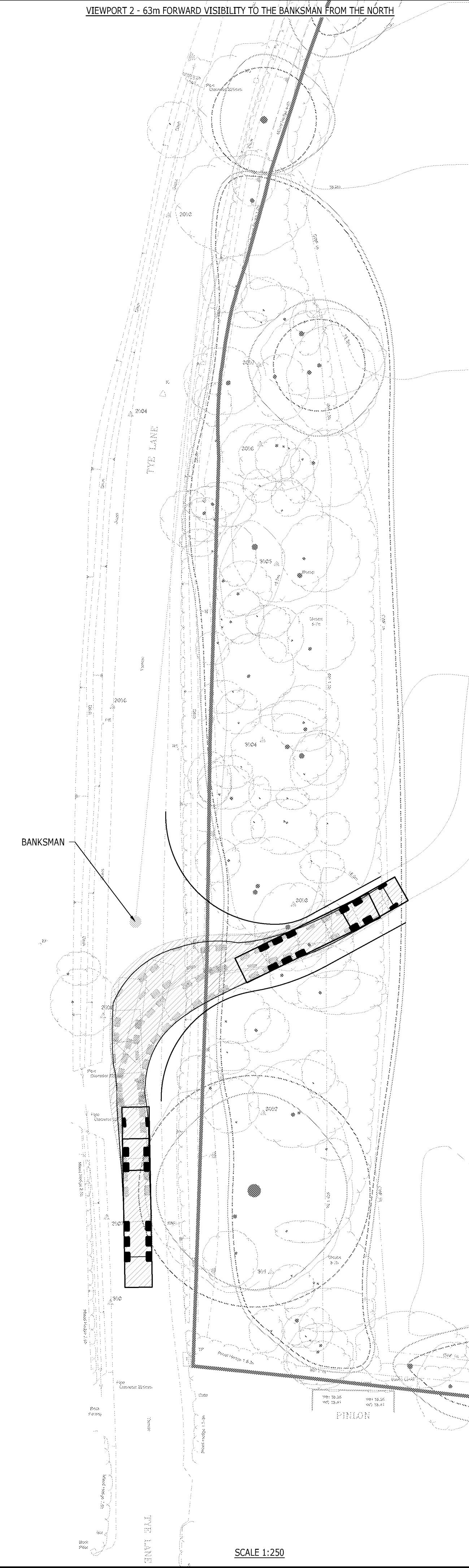
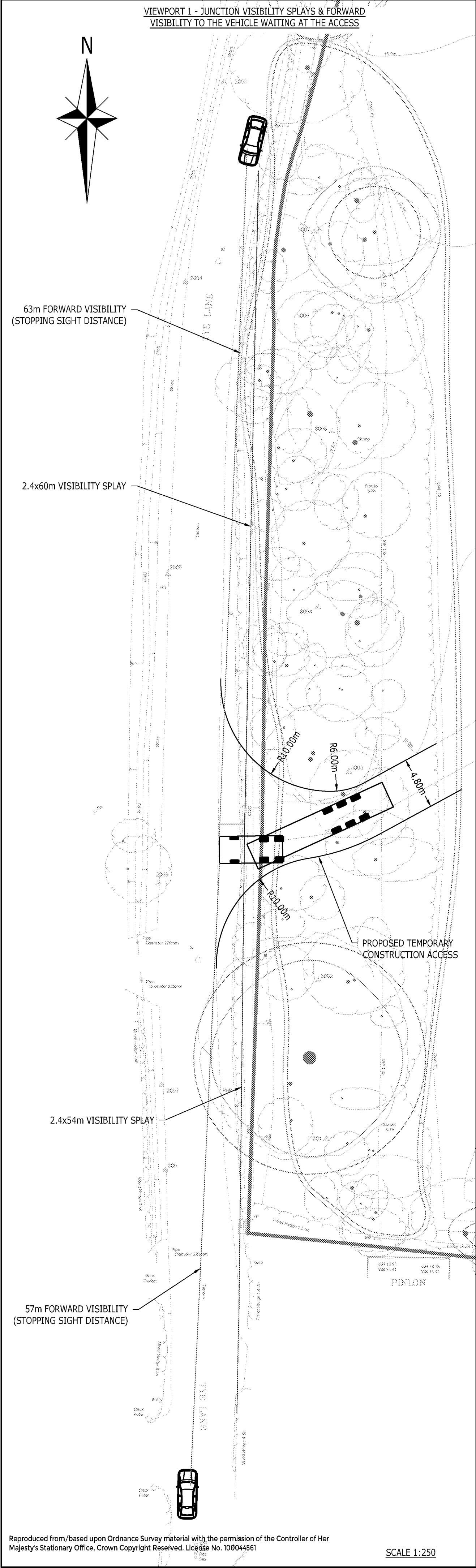
- Mixed construction waste;
- Light mixed and compactable waste;
- Mixed inert waste;
- Timber from construction;
- Plasterboard;
- Mixed metals from construction;
- Paper, cardboard & plastics; and,
- Hazardous waste – small quantities of part full paint tins, mastic tubes and aerosols.

5.8 The Site Manager, or nominated other, will be responsible for undertaking checks of the Waste Transfer Notes and Hazardous Waste Consignment Notes to ensure waste is being managed in line with current waste legislation.

5.9 Waste will be segregated into individual waste containers (e.g. metal, hardcore, timber, etc.) and monitored in relation to type and weight/volume. The reuse of materials onsite shall be encourage; and opportunities to recycle materials both on and offsite shall be maximised.

5.10 All waste shall be transferred to suitably permitted or exempt waste treatment or disposal sites.

Drawings



VEHICLE USED:

Max Legal Articulated Vehicle (16.5m)

Overall Length	16.500m
Overall Width	2.500m
Overall Body Height	3.520m
Min Body Ground Clearance	0.380m
Max Track Width	2.500m
Lock to lock time	6.00s
Kerb to Kerb Turning Radius	6.870m

NOTES:

- JUNCTION VISIBILITY SPLAYS BASED ON SPEED SURVEYS UNDERTAKEN ON 08/01/19 RECORDING 85TH PERCENTILE SPEEDS OF 36.4MPH NORTHBOUND AND 38.9MPH SOUTHBOUND AND MIS1 PARAMETERS (1.5secs DRIVER REACTION TIME, 0.45g DECELERATION RATE, SINCE PROPORTION OF HGVs/BUSES <5%)
- BASED ON TOPOGRAPHICAL SURVEY PREPARED BY STIELINE FOR LINDEN HOMES (DRAWING 258WT01 DATED NOVEMBER 2019).

DRAFT

Rev	Description	Dn	Chk	App	Date
ARDENT CONSULTING ENGINEERS					
Third Floor The Hallmark Building 52-56 Leadenhall Street London EC3M 5JE Tel: 020 7680 4088 Web: www.ardent-ce.co.uk E-mail: enquiries@ardent-ce.co.uk					
Client LINDEN HOMES SOUTH					
Project Title: LAND EAST OF TYE LANE, WALBERTON					
Drawing Title: TEMPORARY CONSTRUCTION ACCESS SWEEP PATH ANALYSIS					
A1 Scale	Date	Designed by			
AS SHOWN	MAY 2020	KI			
Drawn by	Checked by	Approved by			
KI	DH	KM			
Drawing Number		183244-001		Rev -	