LAND SOUTH OF LITTLEHAMPTON ACADEMY, FITZALAN ROAD, LITTLEHAMPTON

**Residential Development**

# Construction Environmental Management Plan (Full)

Prepared on behalf of BoKlok

**20/5433/CEMP05**

April 2022

[redacted]

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# 1 INTRODUCTION

## 1.1 Background

1.1.1 This Construction Environmental Management Plan (CEMP) has been prepared to inform the demolition and construction processes of the proposed residential development of land to the south of Littlehampton Academy, Located on Fitzalan Road, Littlehampton ("the site").

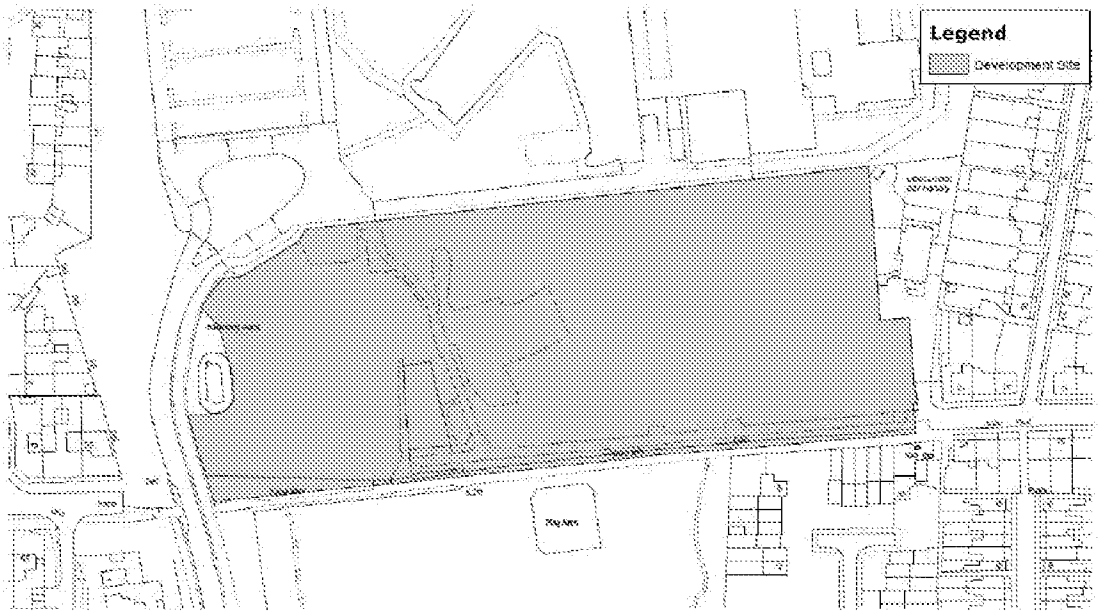



**Figure 1.1 Site Location & Extents**

1.1.1 The site is formed of surplus land following the part demolition and redevelopment of the Littlehampton Academy in 2010, constructed on land immediately to the north. The application for Littlehampton Academy (including a new 1900 pupil facility) was granted in 2010 and opened in 2012.

1.1.2 The site, when forming part of the Academy, was historically accessed via a network of residential streets to the east, including Elm Grove Road. The redeveloped Littlehampton Academy is now served primarily by a new access on its western side, connecting to the recently constructed section of the wider Fitzalan Link Road. The development site would also provide access via Fitzalan Road, with the closure of access via Elm Grove Road to all traffic other than emergency vehicles.

1.1.3 This CEMP supports the site clearance, excavation and construction works associated with the proposed construction of 112 residential dwellings, comprising 32 flats/apartments (in a single block) and 80 houses. A copy of the proposed Masterplan layout is attached at **Appendix A**.



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1.1.4 The site would be constructed on behalf of BoKlok and would include the construction of pre-fabricated modular homes that would transported to the site and constructed in a short period of time.

1.1.5 The proposed construction works would be facilitated by a temporary access off Fitzalan Road on the western boundary of the site. This access would be sited in the same location of the final proposed residential access, although would be designed initially to accommodate the larger delivery vehicles of the modular units.

## 1.2 Scope of this Construction Environmental Management Plan

1.2.1 The aim of this CEMP is to ensure that any commitments to environmental protection are adhered to throughout the construction stage. This CEMP also ensures that best practice methods are employed by all contractors and sub-contractors, particularly with respect to traffic/transport related impacts.

1.2.2 A CEMP provides a considered approach to how the potential impact of construction -related traffic would be minimised and mitigated. The following key environmental topics are addressed by this CEMP:

- Transport;
- Noise and vibration;
- Air quality;
- Ground conditions;
- Waste;
- Water resources and flood risk;
- Ecology;
- Townscape and visual amenity;
- Cultural heritage; and
- Socio-economics.


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1.2.3 This document complements a number of planning documents including a Transport Assessment (TA) and Travel Plan (TP), all of which have been prepared by RGP. These reports should also be read in conjunction with this CEMP.

## 1.3 Management of this CEMP

1.3.1 The CEMP is a live document that will be updated as required throughout the course of the construction programme. The CEMP will be reviewed and updated by the appointed Principal Contractor prior to commencement of the site set up and enabling works. It will then be the ongoing responsibility of the Principal Contractor to regularly update and implement the final CEMP and ensure that all site personnel are made aware of its contents.

1.3.2 The finalisation of the CEMP will involve the following activities/responsibilities of the Principal Contractor:

(i) Establish site logistics, access and welfare facilitates, including the completion of a Construction Phase Plan;

(ii) Set out site management protocols and health and safety practices;

(iii) Prepare a detailed Method Statement for construction activities;

(iv) Re-assess site activities which may give rise to environmental impacts;

(v) Prepare a detailed Traffic Management/Logistics Plan;

(vi) Prepare a detailed Site Waste Management Plan;

(vii) Confirm responsibilities for actioning and reporting;

(viii) Develop a communications strategy, including a log of liaison and feedback from the public and actions made in response.

1.3.3 The contractor will operate under an Environmental Management System (EMS) which complies, as a minimum, to the requirements of BS EN ISO 14001:2004. This standard includes the preparation and use of a CEMP which provides a high-level structure to the system that will be implemented for the construction phase of the project. The CEMP will be reviewed regularly by the Principal Contractor's 'Environmental Manager in consultation with the project team to ensure that it remains relevant and effective.


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## 2 CONSTRUCTION PROGRAMME AND PHASING

### 2.1 Construction Programme

2.1.1 A copy of the construction programme for all phases of the works is attached at **Appendix B**.

2.1.2 No demolition works are required on site (no existing structures) but some pre-start works are required to remove made ground, and existing services, as well as site setup. This is due to commence May 2022 and will involve the works listed under condition 6 of the planning permission (LU/16/21/PL)

2.1.3 The Enabling works are due to commence in May 2022 and the main works are due to commence in September 2022, lasting approximately 15 months, until November 2023.

2.1.4 The modular buildings are scheduled to be shipped from January 2023 for phase 1 and June 2023 for phase 2.

2.1.5 The programme of works will be subject to review to take into account external factors like the works programme the works to the Fitzalan Link Road, for example, and subject to any extenuating circumstances, such as COVID-19.

2.1.6 Further detail regarding the average number of vehicles and types of vehicles anticipated during each phase of works is provided in Section 3 of this report.

### 2.2 Construction Phasing

2.2.1 A phasing plan for the works is attached at **Appendix C**, this includes the overall phase plan, enabling works phasing and main works set up. As confirmed by the construction programme, the initial works for form the temporary access, sales office and parking and the site compound will be undertaken prior to commencement of construction.

2.2.2 It is proposed that the construction of the show homes will form part of the enabling works, in line with condition 6. Phase 1 will include 58 houses and the apartment block (32 apartments) and this will be built from the western end of the site towards the east. Phase 2 will follow and will be the remaining 20 houses.

### 2.3 Proposed Working Hours

2.3.1 Construction works on the site will typically commence/finish at the following times:

(i) Monday to Friday 8.00am - 6.00pm



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(ii) Saturday 8.00am - 1.00pm

(iii) No Sunday, bank holiday or public holiday working

2.3.2 The term 'working' shall, for the purpose of clarification include the use of any plant or machinery (mechanical or other) and the carrying out of any maintenance/cleaning work on any plant or machinery. Under no circumstances will construction works take place outside of these times specified without prior agreement with WSCC.

2.3.3 It is anticipated that all construction deliveries would be managed by the Principal Contractor in order to ensure deliveries avoid opening and closing times associated with Littlehampton Academy and hence minimise the impact of construction on the operations of the local highway network.

2.3.4 It is anticipated that construction deliveries would be undertaken between 10am and 2.30pm only during term time and between 8am and 4pm outside of term time (or as per agreement with Littlehampton Academy). No night-time movement would be permitted with prior agreement with the Local Planning Authority.


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# 3 CONSTRUCTION VEHICLE ACCESS & ROUTING STRATEGY

## 3.1 Vehicular Access Arrangements

3.1.1 The plan at **Appendix C** confirms the indicative site set up and access arrangements through the site. All construction traffic would gain access via Fitzalan Road only, with the exception of the enabling works were Elmgrove Road will need to be utilised for initial construction traffic as it is the only entrance into the site. All construction deliveries will be undertaken on the site and off the public highway.

3.1.2 An agreement has been put in place with the Littlehampton Academy to utilise the school entrance outside of term time only, for specific deliveries while the entrance off Fitzalan Road is being formed.

3.1.3 The works will require the delivery of the pre-fabricated modular units that will be delivered to the site on large low loaders.

3.1.4 The supply of the modular units would be completed by Modular Movements, who has completed a Site Survey Report, including further details of the types of vehicles and the size of loads that need access and the routing strategy. A copy of the report is attached at **Appendix D**.

3.1.5 The requirements for access for these modular units will require the formation of temporary site access at a slightly reorientated alignment to the final access position. Drawing **6805** attached hereto illustrates the proposed temporary access arrangement to be implemented during the construction phase. The proposed access would be widened on its northern side to allow the larger vehicles to access and egress the site. The modular vehicles will be required to travel utilise the new roundabout on Fitzalan Road when entering and exiting.

3.1.6 As illustrated on drawings **6806** and **6807** attached hereto, these vehicles will be able to undertake such manoeuvres with amble space, guided by traffic marshals and police escorts (if deemed necessary) to stop opposing traffic for a short period.

3.1.7 A temporary haul road would be formed around the site to provide a circulatory route to all dwelling locations and ensure that these vehicles can also exit the site safety without having to undertake any invasive reverse manoeuvres.

3.1.8 All other vehicles would be able to access and egress the site in the normal way (right and left out) travelling from and to the south along Fitzalan Road. The various types of vehicle that would require access are confirmed in Section 3.2. All movements to and from the site will be controlled by traffic marshals and banksmen to ensure the safety of all passing road users at all times.


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3.1.9 As illustrated at **Appendix C**, a separate route off the main site access would be formed for the show homes, with separate and segregated parking for the public.

3.1.10 In addition, access would be retained from Elmgrove Road during the construction period for emergencies only, gated and locked with a 'fire access lock' that can be opened by emergency services. No through route would be provided and no access for pedestrians would be permitted during the construction phase.

### 3.2 Construction Vehicle Management

3.2.1 On-site car parking for construction workers will be restricted to an absolute minimum, with provisions made within the site for essential on-site parking only. The construction workers will be encouraged to use the nearby public transport connections available, with the Principal Contractor to consider the use of a mini-bus to transport works to and from Littlehampton town centre and Rail Station.

3.2.2 Parking on local residential roads will be discouraged by the Principal Contractor, particularly on Fitzalan Road. Any site personnel that require a parking space will be directed to the local public car parks in the town centre.

3.2.3 To minimise the likelihood of congestion during the construction period, strict monitoring and control of vehicles accessing and egressing, and travelling across the site will be implemented. All on-site construction vehicle trips will be pre-arranged and pre-booked as part of the efficient operation of construction work. The use of a booking system and having the delivery times agreed with each contractor means that vehicles are not forced to wait prior to entering the site.

3.2.4 In addition to the deliveries of the modular units, it is anticipated that large delivery vehicles would generally be used by the various trades employed and throughout the various phases of construction in order to reduce the frequency of deliveries, which would be managed appropriately to avoid excessive impact on the local highway network.

3.2.5 The following list provides an indication of the types of vehicles regularly anticipated during the construction process.

| Construction Vehicle | Operation | Dimensions |
|---|---|---|
| Skip Lorries | Waste Removal | Length: 6.3m<br>Width: 2.9m<br>Height: 2.9m |


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| | | |
|---|---|---|
| Large Tipper Lorries | Transporting loose material | Length: 10.2m<br>Width: 2.5m<br>Height: 2.9m |
| Small Tipper Lorries | Transporting loose material | Length: 6.5m<br>Width: 2.5m<br>Height: 2.9m |
| Concrete Lorries | Mixing components and materials | Length: 8.4m<br>Width: 2.4m<br>Height: 4.0m |
| Flat-bed Trucks | Transport Materials / Steels etc | Length: 8.0m<br>Width: 2.1m |
| Transit Vans | It is anticipated that these will be used for the majority of finishing materials and sanitary ware | Length: 5.3m<br>Width: 2.0m<br>Height: 2.5m |

**Figure 3.1: Types of Construction Vehicles**

3.2.6 In addition to these regular vehicles, there will be a requirement for access for mobile cranes for the delivery of modular units and road sweepers.

## 3.3 Routing Strategy

3.3.1 The report at **Appendix D** provides an assessment of the initial observations on the routing strategy for the delivery of the modular units. All larger vehicles may require a police escort and permission is to be obtained by the delivery company prior to commencement.

3.3.2 All construction deliveries would be undertaken between 10am and 2.30pm only during term time and between 8am and 4pm outside of term time (or as per agreement with Littlehampton Academy). No night-time movement would be permitted with prior agreement with the Local Planning Authority.

3.3.3 In addition, waiting vehicles will be avoided through strict management of delivery times by the Principal Contractor.


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## 3.4 Estimated Vehicle Movements

3.4.1 For the delivery and construction of the modular units between January 2023 and November 2023, during this time, it is estimated that there will be 6-10 deliveries per day for the modular units, from a mixture of the larger low loader vehicles and other deliveries by flat-bed trucks.

3.4.2 In terms of other movements, the works are anticipated an average of 4-5 deliveries per day, all of which would be managed accordingly by the Site Manager to ensure only one vehicle arrives at the site at any given time. All loading/unloading would be assisted by qualified traffic marshals.

3.4.3 As detailed above, car parking on site would be limited, but some vehicle movements will occur before and after the scheduled working hours (before 8am and after 6pm) when personnel arrive and leave the site. These movements would be outside of the peak hours of activity on the local highway network.

## 3.5 Pedestrians and Cycle Access Arrangements

3.5.1 Pedestrian and cycle access during the construction process will principally be restricted to site personnel only, although some pedestrian activity from sales staff and visitors to the show homes will be required at certain times. As illustrated on the drawing at **Appendix C**, a separate entrance/access road to the show rooms will be created, with the remainder of the construction site closed off with hoarding/gates.

3.5.2 The existing foot/cycleway adjacent to the site will be kept open as much as possible, with all vehicle movements in and out of the site to be controlled by traffic marshals.

3.5.3 It is not anticipated that any footway or cycleway diversions would be necessary during the construction process. However, it may be necessary to apply a temporary closure of the footway across the site frontage on Fitzalan Road in order to facilitate the implementation of the temporary construction access at the pre-start phase, for example.

3.5.4 The Site Manager will consider the need for any footway closures or diversions as works progress on the site and as site conditions change. Any such closures would not be implemented until the appropriate permissions and licences have been obtained.


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# 4 SITE SETUP

## 4.1 Overview

4.1.1 The proposed site setup plan is attached at **Appendix C**, illustrating the locations of the site compound, car parking facilities and welfare units.

## 4.2 Pre-commencement and Enabling Works

4.2.1 Further details of the pre-commencement work and the roles and responsibilities in implementing these tasks are provided in Sections 6 and 7. These tasks will include:

(i) Site investigation or surveys

(ii) Ecological preparation works

(iii) The provision of security fencing, hoarding and sales signage

(iv) The clearance of the site

(v) The provision of any temporary site point of access for construction traffic

(vi) Provision of temporary welfare and accommodation

(vii) Temporary builders supply

(viii) Installation of temporary sales and marketing suite including show home and temporary parking.

4.2.2 Prior to any works commencing, site hoarding or heras fencing will be installed around the curtilage of the site works to prevent unauthorised access to the construction areas of the site and to warn pedestrians of the potential dangers of construction zones. The hoarding would not affect the ability for pedestrians to use the footway on Fitzalan Road, see **Appendix C** for proposed hoarding arrangement.

4.2.3 The appropriate hoarding licenses would be acquired by the Principal Contractor in advance and prior to commencement of work on the site.


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4.2.4 Appropriate signage would be erected around the curtilage of the site by the Principal Contractor. Signage would also give clear instruction for safe routes of passage by both vehicles and pedestrians and will be continually adapted to suit any varied stages of construction. Temporary lighting will also be provided across the site, as necessary, particularly during the winter months.

### 4.3 Demolition/Site Clearance

4.3.1 There are no existing buildings on the site and 'demolition' works will be limited to the removal of spoil and soil heaps.

4.3.2 Recycling works associated with demolition/excavation materials would be managed to avoid disturbance out-with the site, including the restriction of activity to the centre of the site and undertaking activities within normal working hours. The segregation of bulk material will take place during the pre-start period.

4.3.3 The site offices and welfare facilities would be made available during the initial pre-site and site clearance phases of the residential scheme. These arrangements are shown at **Appendix C**.

### 4.4 Construction Site Setup

4.4.1 The location of the site compound and material stockpiles will be determined by the appointed contractor according to measures detailed in a Construction Method Statement, to be agreed and implemented prior to commencement. The site layout is shown at **Appendix C**.

4.4.2 The site will be set up appropriately to ensure that there is no requirement for skips to be located on the public highway, with all goods stored on the site at all times.

4.4.3 Monitoring of the above elements will be undertaken by a Site Manager, appointed by the Principal Contractor, throughout the programme of works, for the safety of all those staff associated with the works, the adjacent Academy and users of the public highway, at all times. The above elements will be amended, with additional mitigation processes put in place, as required, as the construction programme evolves.

### 4.5 Storage of Plant and Materials

4.5.1 All plant and materials would be stored within designated storage compounds on the site during the pre-start phase, to be determined by the Principal Contractor.


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4.5.2 The development would be constructed in phases, with construction generally commencing at the western end of the site, closest to Fitzalan Road, and progressing to the easiern end of the site towards Elm Grove Road. As such, all plant and materials would be stored within a designated storage compound at the western part of the site during the initial building phases, as illustrated at **Appendix C**. It is anticipated that the designated area could be used up until completion of all building works and removed at the end of the programme to implement the final parking and landscaping works.

4.5.3 Safe and ade-quate access will be provided to all parts of the site, and the site must be kept tidy. When the work has stopped for the day, the site will be secured, all ladders and access removed, the plant must be immobilised, and all hazardous materials will be safely stored.

4.5.4 Storage locations will need to be constantly reviewed as work progresses and the site conditions change. Signage and pedestrian protection will need to be constantly updated and communicated to all as these works develop.

4.5.5 There will be no storage of goods or waste on the local highway. All plant and materials will be stored on the site at all times.

4.5.6 Some operations including sheet piling, concrete pours and super-structure construction may require the use of a crane to offload, lift and distribute materials for use. Crane lifts will be contained within the secured site boundary as to not disturb the adjacent properties in such an event. The relevant licenses and design detail would be confirmed by the appointed Principal Contractor prior to commencement.


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# 5 MANAGEMENT OF TRAFFIC IMPACTS

## 5.1 Planned Measures Checklist

5.1.1 All traffic management measures will be managed by an appointed Site Manager who will enforce compliance and monitor any change in circumstances that may arise. The Site Manager will be the key point of contact with WSCC with regard to all issues relating to construction traffic impacts.

5.1.2 **Figure 5.1** provides a list of the likely measures that need to be committed, proposed or considered during the project. Each of these measures are discussed in this section.

| Planned Measures Checklist | Committed | Proposed | Considered |
|---|---|---|---|
| **Measures influencing construction vehicles and deliveries** | | | |
| Safety and environmental standards and programmes | X | | |
| Adherence to designated routes | X | | |
| Delivery scheduling | X | | |
| Re-timing for out of peak deliveries | X | | |
| Re-timing for out of hours deliveries | | X | |
| Use of holding areas and vehicle call off areas | | | X |
| Use of logistics and consolidation centres | | | X |
| Vehicle Choice | | | X |
| **Measures to encourage sustainable freight** | | | |
| Freight by Water | X | | |
| Freight by Rail | | | X |
| **Material Procurement Measures** | | | |
| DfMA and off-site manufacture | X | | |
| Re-use of Materials on site | | X | |
| Smart Procurement | | X | |
| **Other Measures** | | | |
| Collaboration with other sites in the area | | | X |
| Implement a Staff Travel Plan | X | | |
| FOPS | X | | |

**Figure 5.1: Planned Measures Checklist Table**


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5.1.3 It is also noted that the production of a *'delivery schedule'* will be a committed measure to ensure that there is no overlap with delivery vehicles, no unscheduled deliveries and the public highway is kept as free flowing as possible. As a result of this the *'use of a holding area or vehicle call off area'* will only be considered, but not likely to be needed given that there is unlikely to be any unscheduled deliveries.

## 5.2 Committed Measures

*Safety and environmental standards and programmes*

5.2.1 The Principal Contractor is committed to ensuring all staff and sub-contractor vehicles arriving at site comply with the details outlined in this document.

5.2.2 All vehicles and driver management practices are required to comply with the FORS accreditation and Construction Logistics and Community Safety (CLOCS), details of which are included at **Appendix E** of this report.

5.2.3 The Principal Contractor will sweep the roads and footpaths on the local highway network as required to remove any spoil or debris deposited on the highway resulting from the construction. A wheel wash facility will be set up at the construction entrance off Fitzalan Road to help prevent mud and debris onto the road.

*Adherence to designated routes*

5.2.4 All vehicles would be required to adhere to the routes identified in order to minimise impact on the local highway and to reduce associated emission levels. This principally includes the prioritisation of the use of the strategic highway network and A-roads and avoiding the use of any local streets as much as possible.

5.2.5 Delivery drivers will be notified of the proposed access arrangements prior to their scheduled delivery time and adhere to the agreed routes and access arrangements.

5.2.6 All deliveries will be supported by traffic marshals and banksmen to ensure the safe passage of materials to and from the site, without impacting on highway or pedestrian safety.

5.2.7 Vehicles being off-loaded with goods at the site shall switch off their engines to avoid nuisance to the adjacent uses and to prevent dust generation.

*Delivery scheduling*

5.2.8 All deliveries will be booked in advance and managed by the Site Manager, in liaison with the relevant supplier/construction company, in order to ensure that only one delivery vehicle arrives and/or departs the site at any given time.


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5.2.9 A delivery schedule will be prepared and kept up to date by the Site Manager. The delivery schedule will detail the anticipated time of the delivery, contact details for the supplier, the type of delivery (i.e. plant, materials, scaffolding) and the size of vehicle anticipated.

5.2.10 All construction deliveries would be booked at least 48 hours in advance in advance with the Site Manager, with 30-minute time slots allocated to each delivery vehicle (unless greater time is needed) and undertaken in a timely fashion to ensure only one delivery vehicle arrives at the site at any given time. All deliveries will be made within the designated delivery times (10:00am to 2:30pm) to avoid interaction with the peak periods of operation at the College and Schools.

5.2.11 Construction vehicle drivers will be issued with a project route map to prevent unnecessary routing mistake to and from the site and to avoid particular routes.

5.2.12 Through the use of a delivery schedule, the number of construction deliveries each day can be restricted in order to minimise impact on the adjacent highway network and to pedestrians.

5.2.13 Whilst unlikely given the booking system in place, construction vehicles may be held in an off-site holding area until the site is ready to receive the vehicle. The Site Manager will communicate by mobile phone call or text with the construction vehicle drivers to inform them when they can proceed to the site.

5.2.14 Traffic Marshals and banksmen will be informed and will be ready for arrival of the delivery, anticipating the type of delivery and the unloading method to be utilised.

5.2.15 Any deliveries not booked in may be turned away at the Contractor's cost.

***Re-timing for out of peak deliveries***

5.2.16 Re-timing for out of peak time will aid the operational efficiency of the construction site and also the neighbouring area.

***Implement a Staff Travel Plan***

5.2.17 Limited car parking provision will be provided on-site for site personnel, given the availability of public transport services available within the local area. The local area provides frequent bus and rail available from within close proximity of the site. In order to encourage the use of sustainable travel and reduce reliance upon private car use by staff, a number of travel planning measures will be applied by the Principal Contractor. The following principles will be followed:


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(i) Use of local suppliers, as far as reasonably possible, to reduce distance travelled and associated vehicle emissions;

(ii) Use of local labour / operatives who are more likely to reside within the local area and therefore travel by sustainable modes, as far as reasonably possible;

(iii) Providing operatives with timetable bus/rail information, if requested;

(iv) The potential to provide lockers on-site for tools and materials of construction staff will be explored by the Main Contractor to make sustainable travel more convenient for staff. This could be provided in a designated area within the construction compound;

(v) An induction programme for all staff, making them aware of the limited parking available and convenient access via sustainable modes.

5.2.18 A travel leaflet would be provided to all construction workers, with the information to be updated prior to issue. An example leaflet is attached at **Appendix F**.

*FORS*

5.2.19 Delivery companies will be encouraged to sign up to TfL's Freight Operators Recognition Scheme (FORS). This is a voluntary industry-led membership scheme which aims to raise the standard of the fleet and freight industry by improving operators' performance with regards to safety, fuel efficiency, economical operation and vehicle emissions. It seeks to provide a quality and performance benchmark for the freight industry.

*Measures to encourage sustainable freight*

5.2.20 The modules for the apartments will be transported water (across the English Channel) instead of by road to comply with the preference for sustainable freight where possible.

*DfMA and off-site manufacture*

5.2.21 The proposed construction programme will include the manufacture of the modular housing units off-site.


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## 5.3 Proposed Measures

*Re-timing for out of hours deliveries*

5.3.1 The delivery schedule would ensure that there are no unscheduled deliveries however in such an event any unscheduled delivery arrival out of hours will be turned away and re-timed as appropriate.

*Re-use of Materials on site*

5.3.2 The proposed construction works would adopt the principles applied by DEFRA with respect to the management of waste at the site. This gives top priority to re-using materials on the site, wherever possible, and these principles would be adhered to throughout the construction process in order to minimise the environmental impact of the proposed works and to minimise the level of construction deliveries.

5.3.3 Further detail regarding the environmental strategy is set out in Section 7 of this report.

*Smart Procurement*

5.3.4 The site will look to source materials from local suppliers where possible as well as from the same suppliers as other local sites if appropriate to reduce the number of vehicle movements and length of journeys for materials to arrive on site.

## 5.4 Considered Measures

*Use of holding areas and vehicle call off areas*

5.4.1 Whilst this is not considered essential for the residential development, since a delivery schedule will be prepared and there are unlikely to be any unscheduled vehicles, the Site Manager will consider the availability of a temporary holding area to ensure that deliveries do not wait/park on Fitzalan Road or other local roads.

*Vehicle Choice*

5.4.2 **Figure 3.1** outlines the types of vehicles anticipated at the site. It is anticipated that large construction vehicles would generally be used during the main construction phasing of work, in order to minimise the frequency of deliveries to the site.

5.4.3 The Principal Contractor would make every effort to ensure that the level and type of vehicles used are consistent with those outlined in this document.


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# 6 MANAGEMENT OF DEMOLITION, EXCAVATION & CONSTRUCTION ACTIVITIES

## 6.1 Overview

6.1.1 This section sets out the general site management for the construction works, and the roles and responsibilities in implementing the measures outlined in the Full CEMP.

## 6.2 Considerations and Challenges

6.2.1 There are some notable constraints associated with the construction works at the site. The following considerations and challenges are noted for this site:

(i) The proximity of Littlehampton Academy which would remain operational throughout construction;

(ii) The proximity to the works to the Fitzalan Link Road;

(iii) The proximity of the adjacent residential community;

(iv) The constrained vehicle access arrangements serving the development during construction.

6.2.2 The Contractor will therefore need to be committed to carrying out these works in the most practicably sustainable manner. Given the site's location and the scale of construction works proposed, the need to minimise the impact associated with the construction works is fully recognised and the proposed construction works have been considered on this basis within this CEMP.

## 6.3 Key Roles & Responsibilities

6.3.1 The CEMP will form part of the demolition, excavation and construction contracts for the site. Implementation of a CEMP will be the responsibility of the Principal Contractor. The construction procedures in terms of access and site setup and enabling works would be the responsibility of an appointed Site Manager. Environmental support and monitoring during these phases will be provided by an appointed Environmental Manager/SHEQ Manager.

6.3.2 **Figure 6.1** below provides an indicative summary of the key roles and responsibilities of on-site management personnel during the various phases.


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| Designated Role | Responsibilities |
|---|---|
| Project Manager/CDM Co-ordinator | Responsible for ensuring any planning conditions are adhered to by liaising with the Site Manager and Environmental Manager on a regular basis. Responsible for the approval of the CEMP, Construction Phase Plan and Health and Safety Plan in liaison with the Local Planning Authority. |
| Site Manager | Overall responsibility for the specific demolition and construction activities that occur on site. Responsible for enforcing the CEMP and ensuring all personnel on-site adhere to the procedures within it. Responsible for site setup, including completion of a Construction Method Statement.<br><br>In the event of an environmental incident or emergency, the Site Manager will liaise with the Environment Manager and enforce and modifications to method statements or stoppage to works required. |
| Environmental/SHEQ Manager | Ensures that environmental monitoring is undertaken, where necessary. Liaison will be undertaken with the Site Manager in the event of an incident to advise on actions to be taken. |

**Figure 6.1 Roles and Responsibilities**

6.3.3 As detailed above, Site Manager will own and manage the implementation of this document. Their wider responsibilities will include keeping data on:

(i) The number of vehicle movements on site

(ii) Types of vehicles on site;

(iii) Time spent on site;

(iv) Delivery accuracy compared to schedule;

(v) Vehicle routing, unacceptable queuing or parking;


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(vi) Reviewing FORS accreditation;

(vii) Non-Road Mobile Machinery compliance (NRMM) of plant on site;

(viii) Staff travel modes to sites;

(ix) Driver inductions and briefings including accreditation/qualification checks where required.

(x) Distributing Contractor and Driver Handbooks, as appropriate, to ensure all staff are aware of their obligations and the procedures which are set out in detail throughout this report. These would be provided to staff by the Principal Contractor in advance.

6.3.4 The Site Manager will review this document regularly and as conditions change. Records of any updated/revisions will be maintained by the Site Manager and held on file, onsite, including all certificates and inspection records for all plant, equipment, and lifting etc. that are required for traffic management and construction purposes.

6.3.5 In the event of an emergency, the Site Manager should be contacted in the first instance. Relevant procedures will then be advised, or the matter referred to the Environmental Manager if appropriate.

**6.4 Site Induction & Site Safety**

6.4.1 A site induction will be carried out to confirm the site setup and potential environmental impacts of the activities associated with the demolition, excavation and construction stages. This induction would be presented to all site staff and visitors. All site personnel will be required to sign a record of attendance to the induction, to be kept on file by the Site Manager.

6.4.2 All personnel entering the site shall be required to wear suitable Personal Protective Equipment (PPE), which will be provided by the Principal Contractor, if not already available. Any persons not wearing suitable PPE may be asked to leave the site.

6.4.3 The operations of the site will be regularly inspected to ensure that all procedures are in compliance with this document. Daily inspections by the Site Manager will ensure that the setup of the site is concurrent with the construction phases and there are no potential hazards. Any adverse impacts shall be recorded and immediately rectified if they arise.

6.4.4 All records of logistic-related and staff-related incidents or injuries will be held on file onsite at all times.


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## 6.5 Communication Strategy

6.5.1 The Principal Contractor will be proactive in facilitating communication with local stakeholders. The Environmental/SHEQ Manager will ensure that the Site Manager is fully aware of particular environmental effects of future phases of the works.

6.5.2 The contact details of the Site Manager including an emergency out-of-hours contact will be published at the front of the site and will seek to respond to any formal complaint received within 7 business days with respect to community concerns, vehicle routing issues and unacceptable parking by staff, for example.

6.5.3 As outlined in this document, it is a requirement for vehicles and contractors to adhere to the FOPS and CLOCS initiatives. Any contractors who are in breach of these schemes and requirements shall be notified and any disciplinary issues dealt with as appropriate.

6.5.4 The Site Manager will be expected to develop a constructive relationship with those in the immediate vicinity and community of the development. A forum for consultation with the public will be set up, where feedback will be encouraged and updates on the development will be posted to keep the community up to date with activities on site.


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# 7 ENVIRONMENTAL STRATEGY (MITIGATION & MONITORING)

## 7.1 Overview

7.1.1 This section summarises the key measures to be put in place to ensure that the environmental impacts of the demolition and construction works are minimised.

7.1.2 All demolition, excavation and construction activities will be carried out using methods which minimise the impacts on environmental receptors. See **Appendix N** for environmental control measures.

7.1.3 The assessments and mitigation measures identified in this section have been set out with reference to other consultancy reports prepared to support the planning application. where referenced, the consultancy reports should be read fully to understand the implications of the site investigations and remedial work required.

## 7.2 Management and Mitigation of Noise & Vibration

7.2.1 Construction works are generally high noise generating sources of activity and given that the adjacent uses would be operational throughout the construction process, a number of mitigation measures will be enforced and/or considered to suppress noise and vibration generated on the site.

7.2.2 The Site Manager will be responsible for the monitoring and management of noise at the site and adhering to the Noise Working Standards set out by the Local Authority and Environmental Health Department.

7.2.3 If the measured noise level rises more than 3dB (A) above the predicted noise level, or in the event that a noise complaint is received locally, the Site Manager shall investigate the cause and noise levels shall be reduced, if it is reasonably practicable to do so. A number of mitigation measures shall be considered to suppress noise generated on the site, including:

(i) Ensuring that all work is undertaken within the restricted working hours;

(ii) Using 'silenced' plant and/or equipment and low vibration construction methods, wherever possible;

(iii) Using mains power instead of generators, wherever possible;

(iv) Ensuring all operatives are professionally trained and provided with ear and eye protection;


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(v) Ensuring delivery drivers turn off their engines upon arrival and when loading/unloading goods. No plant shall be left running when not in use;

(vi) Using protection plates and mobile screens around those parts of the site likely to generate significant levels of noise. Such screens will have sufficient mass as to be able to resist the passage of sound;

(vii) Strategically placing noise generating plant as far as possible from sensitive receptors and the general public;

(viii) Ensuring all deliveries are scheduled and assisted by a Traffic Marshal to ensure deliveries do not need to wait to park. Idling will in no instances be acceptable.

(ix) All plant and machinery shall be maintained in good and efficient working order.

7.2.4 Furthermore, this list of mitigation measures is not exhaustive, and the Site Manager is encouraged to investigate other potential measures throughout the construction process.

7.2.5 In the case of vibration, measured vibration levels shall be compared with the criteria in BS 5228:2009 part 2 (i.e. 1mms$^{-1}$ PPV for potential disturbance in residential properties and using a suggested trigger criterion of 2mms$^{-1}$ for commercial properties).

7.2.6 Lower limits must be agreed with the Council if there is a risk that vibration levels may interfere with vibration sensitive equipment or other vibration sensitive objects.

## 7.3 Management of Air Quality

7.3.1 Impacts on air quality can arise as a result of construction activities, particularly the annoyance of dirt, dust and debris. A number of mitigation measures which are to be enforced at the site are detailed below.

7.3.2 An Air Quality Assessment (AQA) has been prepared by Hydrock in support of the planning application submission that sets out the requirements for air quality and dust management during the construction process. The AQA includes a '*Construction Dust Risk Assessment*', undertaken in line with IAQM guidance. This considers the risks of impacts during the construction phase in terms of nuisance dust, human health and ecological impacts.

7.3.3 The qualitative construction dust risk assessment shows that the site is Medium Risk for adverse impacts during construction, as a worst case, in the absence of mitigation.


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7.3.4 To effectively reduce the risk of impacts to negligible, appropriate mitigation measures should be adopted. The full CEMP will include appropriate measures for the construction of the proposed development, to include:

(i) Ideally cutting, grinding and sawing should not be conducted on-site and pre-fabricated material and modules should be brought in where possible. Where such work must take place, water suppression should be used to reduce the amount of dust generated;

(ii) skips, chutes and conveyors should be completely covered and, if necessary, enclosed to ensure that dust does not escape;

(iii) any excess material should be reused or recycled on-site;

(iv) developers should produce a waste or recycling plan;

(v) following earthworks, exposed areas and soil stockpiles should be re-vegetated to stabilise surfaces, or otherwise covered with hessian or mulches;

(vi) stockpiles should be stored in enclosed or bunded containers or silos and kept damp where necessary;

(vii) hard surfaces should be used for haul routes where possible;

(viii) haul routes should be swept/washed regularly;

(ix) vehicle wheels should be washed on leaving the site;

(x) all vehicles carrying dusty materials should be securely covered; and

(xi) delivery areas, stockpiles and particularly dusty items of construction plant should be kept as far away from neighbouring properties as possible.

7.3.5 Implementing these measures should effectively reduce the risks of construction phase impacts on the local area to negligible.

7.3.6 The AQA also confirms that there are no identified ecological receptors that would be affected by the works that would require further assessment.

7.3.7 All construction vehicles will prioritise the use of the strategic road network in order to access the site from the wider highway network to reduce the impact of vehicle emissions.


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7.3.8 The Principal Contractor will liaise with ADC/WSCC throughout the construction process and any incidents leading to excessive elevations of dust levels will be reported to the Environmental Health Department. Any complaints received shall be documented by the Site Manager, who will also act as a point of contact for residents who may be concerned about elevated dust levels.

## 7.4 Control of Light

7.4.1 The use of light would principally be controlled by the operating hours of the site ensuring that works are typically undertaken during daylight hours only.

7.4.2 Lighting shall be kept a minimum necessary for adequate security and safety. To minimise the potential for nuisance, lighting shall not be located or directed towards neighbouring or adjoining properties.

7.4.3 The Site Manager would consider the following measures to limit the impacts of light:

(i) Provision of minimum light levels necessary for safe working conditions;

(ii) Avoidance of unnecessary light spillage through appropriate direction of lighting towards the area of works and shielding if necessary; and

(iii) Inclusion of a period of darkness to allow bat species to commute across the site.

## 7.5 Waste Management & Prevention

7.5.1 The Principal Contractor will be responsible for the careful management of waste as a result of construction works at the site. This will be achieved by adopting the key principles of the Waste Hierarchy (**Figure 7.1**, below), as outlined by the Department for Environment Food and Rural Affairs (DEFRA).

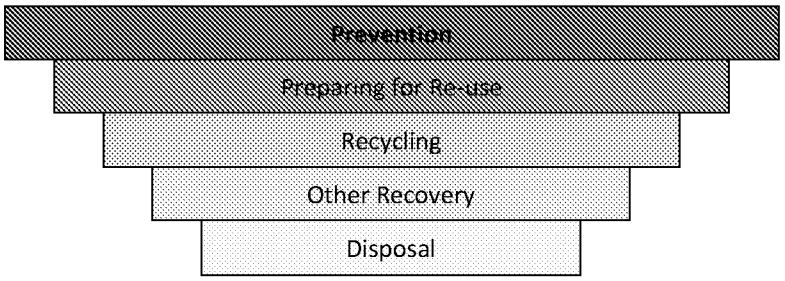



**Figure 7.1 DEFRA Waste Hierarchy (Preferred to Least Preferred Option)**


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7.5.2 This gives top priority to preventing waste in the first instance and provides a procedure to follow when waste is created, including re-using, recycling, recovery and the disposing of waste as a worst case.

7.5.3 All waste generated on the site during construction will be securely stored and collected from the designated construction compounds on the site only.

*Prevention*

7.5.4 The primary aim with regards to the management of waste during the construction process is prevention, wherever possible, by way of utilising materials which are more durable, and which are less hazardous to the environment, staff and the local community. Once the Principal Contractor is appointed it is anticipated that the site will operate on a 'just-in-time' basis for all goods and waste, to ensure the minimum amount of goods and waste are stored on the site at any given time.

*Re-use and Recycling*

7.5.5 Opportunities for on-site re-use and recycling of materials will be sought wherever practicable. This will also help to reduce the amount of goods and materials being delivered to the site throughout construction and hence it is appropriate to provide designated areas for the storage of goods during demolition/site clearance.

7.5.6 Prior to commencement, a pre-clearance audit will be carried out which will consider the potential for recovering as much material as possible. This will be summarised into a bill of quantities, setting out the anticipated quantities of surplus materials, for example.

7.5.7 Where it is not practical to re-use existing materials on the site, recycling will be sought as a suitable alternative ahead of the possibility of disposal. This could include, but is not limited to, turning waste into a new substance or material such as composting, for example.

*Other Recovery*

7.5.8 Other opportunities for recovering products and goods will also be considered in the event that recycling cannot be utilised. This may include using different forms of energy recovery technologies such as combustion with energy or anaerobic digestion, for example.


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*Disposal*

7.5.9 The disposal of waste will by no means be encouraged and will only be sought where disposal is the only option. At no time will the dumping of waste be permitted both on the site or off the site. Any waste must be collected from the site only and disposed of by a registered licensed contractor at a licensed landfill site suitable for the type of waste generated.

7.5.10 Burning of surplus material or material arising from the site will not be permitted within the site as confirmed below.

*Site Waste Management Plan*

7.5.11 A Site Waste Management Plan (SWMP) will be produced to identify waste streams likely throughout the project.

7.5.12 The SWMP will ensure compliance with the statutory waste management Duty of Care, which requires that waste is stored and handled in a manner that prevents its escape. Waste producer records will be kept which cover the transfer of waste to registered waste carriers and its management and disposal at a licenced or permitted facility.

7.5.13 The SWMP will identify key roles and responsibilities within the project team and will include the designated procedures for monitoring, reporting, and record keeping, training and periodic review.

7.5.14 The Mitigation measures to minimise environmental impacts from the storage, transportation and disposal of wastes will likely include:

(i) Careful location of stockpiles and other storage areas;

(ii) Segregation of waste streams to maximise opportunities for reuse and recycling;

(iii) Use of an on-site recycling plant, such as concrete crushing;

(iv) Use of good practice in the design of waste storage areas and the use of suitable waste containers;

(v) Use of sheeting, screening, damping and seeding of stockpiles where appropriate and practicable;

(vi) Control and treatment of runoff from soil and waste soil stockpiles;


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(vii) Minimising storage periods;

(viii) Minimising haulage distances; and

(ix) Sheeting of vehicles.

7.5.15 Such measures would help to mitigate the potential impacts remaining after waste minimisation, recycling and reuse have been optimised. Quantities of waste leaving the site will be monitored and recorded under the SWMP.

**7.6 Prevention and Control of Fires and Burning**

7.6.1 The Site Manager will be responsible for ensuring that fire-fighting equipment and procedures are in place. Appropriate equipment (beaters, sand buckets, extinguishers) are to be located at key locations around the site, close to offices and welfare areas and storage areas. No fires shall be permitted.

7.6.2 The Site Manager will be responsible for ensuring that all personnel are informed of the location of fire-fighting equipment. All personnel will be notified of fire safety procedures, such as safe meeting/assembly points, as part of the induction process.

**7.7 Storage of Fuels, Oils and Chemicals**

7.7.1 The safe storage of fuels and chemicals shall conform with Government regulations and best practice guidance published by the Environment Agency. The storage areas for such materials shall not be located near sensitive receptors (such as watercourses) to avoid contamination. Site spill kits will be appropriately located.

**7.8 Contaminated Land**

7.8.1 A *'Phase I Desk Study, Site Reconnaissance and Phase II Site Investigation Report'* has been prepared by Leap Environment Limited to assess the site for contaminants. The desk study has identified a number of potential sources of contamination associated with the site's former use, together with large stockpiles of material to the south and west of the site. The site is note mapped in an area affected by radon gas.

7.8.2 A geo-environmental risk assessment has been carried out, which identified benzo(a)pyrene in shallow made ground at concentrations above generic assessment criteria for a residential land use with gardens.

7.8.3 Prior to commencement, further investigations across the site and in particular beneath the existing stockpile areas which have not been able to be accessed will be required. This will be coordinated by the Principal Contractor prior to any remediation works taking place.


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7.8.4 All excavations will be controlled to maximise the opportunity for classification and disposal of inert and non-hazardous waste. A watching brief on contaminated land will be undertaken by members of the contractors site team during the site preparation and excavation in order to identify any unforeseen contamination that may arise during the works which is not identified as part of the site investigation work undertaken prior.

7.8.5 The preferred mitigation measure for excavated contaminated material is treatment off site prior to the return of the recovered material for reuse on site. The suitability of landfills to accept such material will be based on its classification according to the Landfill Regulations and the Environment Agency Waste Acceptance Criteria. Preliminary analysis indicates that while some contaminated excavated material could be disposed of at landfill permitted to accept inert waste, some may require disposal at non-hazardous and hazardous waste sites. Further Waste Acceptance Criteria testing of materials designated for disposal off site will be undertaken once works commence on the Site.

7.8.6 Areas affected by soil chemical contamination at levels above the relevant guideline values for the type of end use will require remediation.

7.8.7 All proposed garden and soft landscape areas within the site will be remediated as a precaution by removing the made ground to a depth of at least 600mm or to natural ground, whichever is shallowest.

7.8.8 Wherever possible, contaminated soil that must be removed from site will be sent to an off-site treatment centre rather than to landfill. The quantities of such material likely to arise on the Site are so small that on site treatment is not a practical or economic possibility.

7.8.9 Potential impacts of contaminants in soil on groundwater and surface waters during construction will be mitigated by use of containment and prevention of run-off from stockpiled excavated contaminated materials entering controlled waters.

7.8.10 The above mitigation is required only where there is an ongoing risk of direct exposure to contaminants. Where contaminated material is to remain undisturbed on-site potential health impacts will be mitigated where required by containment beneath a capping layer. This situation would apply where potentially contaminated material is situated under roads or car parks.

7.8.11 Mitigation of health impacts of contaminants in soil on construction workers will be through a safe system of work and if required, the use of appropriate protection (Personal Protective Equipment). The principal risk from PAHs arises from direct skin contact, although there is also a risk of exposure via inhalation. Therefore, protection will include face masks and gloves for any personnel coming into direct contact with the material. In addition, where ground works are to take place in areas identified to be at risk of contamination there will be restrictions on access and measures will be taken to control dust during the works, thereby mitigating the inhalation risks.


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7.8.12 To prevent excessive exposure to Carbon Dioxide, a safe system of work for any personnel entering enclosed spaces or deep excavations will be implemented. This will involve risk assessments, gas testing prior to entry and provision of breathing equipment where appropriate.

7.8.13 All joints and penetrations will also be sealed against ingress of gas in both cases.

7.8.14 In addition, mitigation for ground stability will be included through specification for resistant materials.

7.8.15 In terms of monitoring, a watching brief on contaminated land will be undertaken by members of the contractor's site team during site preparation and excavation in order to identify any unforeseen contamination that may arise during the works which was not identified as part of the site investigation work done to date.

7.8.16 Further testing of soil contaminants for the purposes of selecting the most appropriate treatment/disposal site will be required.

**7.9 Water Management & Flood Risk**

7.9.1 A Flood Risk Assessment and Drainage Strategy have been prepared by AKS Ward to support the proposals at the planning application stage. The site is identified as being within Flood Zone 1 and constitutes *'land assessed as having a low annual probability of rivers or sea flooding in any year'*. No historic flood incidents have been recorded.

7.9.2 The Principal Contractor will be responsible for the implementation of measures to prevent pollution/contamination and control the use of water on the site.

7.9.3 The closest watercourse to the site is identified as being approximately 877 metres to the southwest of the site which would unlikely be affected by works on the site and there will be no requirement to discharge surface water (from run-off or dewatering).

7.9.4 Measures to reduce the possibility of disturbing or damaging the existing drainage systems and water supply network will include:

(i) Utilisation of signs to warn of the presence of utility infrastructure;

(ii) Immediate repair of any damage to the drainage network; and

(iii) Preparation of an emergency response plan to ensure that spillages and leakages are immediately contained.


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7.9.5 Water saving measures will be adopted where possible, thereby reducing the magnitude of effect on the water supply network including:

(i) Selection and specification of equipment to reduce the amount of water required;

(ii) Implementation of staff-based initiatives such as turning off taps, plant and equipment when not in use both on-site and within site offices; and

(iii) Use of a grey water recycling water systems where possible such as wheel washes.

7.9.6 Mitigation measures required in relation to flood risk and surface water drainage include:

(i) Installation of sustainable drainage systems at the commencement of each construction phase;

(ii) Protection of any new SuDS features for long term operation and in particular from being compromised by construction activities in other construction phases;

(iii) Collection and diversion of surface water through temporary or permanent SuDs to prevent surface water flooding during each construction phase;

(iv) All necessary measures, actions and permits to deal with dewatering of excavation during construction (if required).

7.9.7 Additional mitigation measures to control site activities with potential to affect hydrology, flood risk, water quality and hydromorphology of surface waters will include:

(i) Application of standard good practice such as those published by the Environment Agency A (e.g. Pollution Prevention Guidance series) or CIRIA publications;

(ii) Development of a Water Management Plan to accompany the CEMP, which describes the water pollution management measures and controls that the Contractor will implement during the construction process, and details of all drainage systems including flow direction and outlet, pollution sources, methods of pollution prevention and potential receptors (e.g. watercourses and ground);

(iii) Colour coding of clean and foul drainage to minimise the risk of pollution;


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(iv) General site controls including measures for boot wash, vehicle and plant cleaning, spill kits and storage of solvents and chemicals on site;

(v) The storage of oils and fuels away from all watercourses with refuelling carried out in a designated bunded area. Any fuel oil tanks will be located within a secondary containment system and/or bunded, with a minimum bund capacity of 110% of the capacity of the tank. All tanks, pipework bunds and pollution prevention equipment will be checked regularly (including for build-up of any liquids in bunds);

(vi) Provision of a low bund around tanker delivery hardstandings, within which tankers can park whilst offloading fuel. The hard standing will be large enough to accommodate the full length of the tanker. Installation of a system to prevent any fuel spillages discharging into the drainage system, without suitable containment or treatment;

(vii) Daily inspection of the Site works to identify any potential run-off from the Site works. The watercourses adjacent to the Site will be protected to ensure that no runoff from the works can enter them. Where risks are identified, a range of settlement options and barriers such as settlement lagoons and French drains will be deployed to prevent silt and fine sediments from entering watercourses;

(viii) Prevention of surface run-off onto sediment generating surfaces such as excavation areas or exposed ground, by utilising the existing drainage system on other parts of the Site, by using or creating temporary drainage systems or cut-off ditches to divert water away, thus minimising the need for settlement and filtration;

(ix) Minimisation of areas of exposed earthworks and disturbed/compacted and loose soil, and covering of exposed ground and stockpiles, for example with geotextiles, to prevent rainwater generating sediment laden runoff. Stockpile sites will whenever possible be located away from the site boundary, sensitive receptors and surface drains, and will have a self-contained drainage system to prevent untreated water release;

(x) Where groundwater is encountered in excavations, use of all necessary temporary works to ensure this does not cause surface water flooding.

(xi) Appropriate measures will be adopted to undertake dewatering at each phase of construction. No discharge of any kind to watercourses or sewers will be permitted without the prior written consent of the appropriate authority and compliance with all their requirements;


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(xii) Provision of all necessary measures, including suitable pumps, machinery and equipment for temporary works, to enable surface water runoff to be controlled in both dry weather and wet weather conditions, and prevent flooding;

(xiii) Plant and road controls to prevent silt pollution, including wash out facilities for concrete wagons with adequate pollution prevention measures. Regular inspections will be carried out to ensure access roads edges and pathways are swept and damped down to prevent contaminant transfer. Regular removal of dust and mud from Site roads, plants and vehicles;

(xiv) Clear labelling of tanks describing their contents. Prompt removal of empty containers from the Site with appropriate disposal;

(xv) Mixing and storage of cement in a contained area away from pathways, receptors and surface watercourses. Use of appropriate rapid setting concrete near drains and watercourses. Washing of concrete mixing equipment or lorries will be undertaken with cleaning equipment that uses a re-circulating system to avoid discharge of contaminated water;

(xvi) Provision and maintenance of spillage kits, typically containing oil-absorbent granules, floating booms, absorbent mats, polythene sheeting and polythene sacks, on Site with suitably trained persons appointed to deal with any spillages which may occur. Any spillage of diesel or petrol will be confined and removed as quickly as possible. All staff should receive spill procedure training at induction;

(xvii) Storage of spill kits should be stored in marked bag or wheelie bins in well signposted locations. Spill kits will be located adjacent to the fuel storage area, waste compound and fuel bowser. Buckets of sand, earth, straw bales or rags will also be provided for cleaning up small spillages; and

(xviii) Development of a contingency plan for the management of pollution incidents before construction commences.

## 7.10 Monitoring and Mitigation of Ecology Impacts

7.10.1 Any species identified on the site which are listed on Schedule 9 of the Wildlife and Countryside Act 1981 (as amended) will be managed appropriately.

7.10.2 The working area should be clearly demarcated with barrier fencing to avoid the encroachment of works, both vehicular and contractor, into sensitive semi-natural habitats adjacent to the development site. Root protection zones for retained trees within or immediately adjacent to the Site should be demarcated to ensure construction activities to not result in severance or damage of significant tree roots. No dig construction methods will be used near root zones of retained trees.


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7.10.3 All site works should be carried out in accordance with best environmental working practices, such as those described by the Environment Agency or in CIRIA publications. The site induction and toolbox talks should be held with contractors to ensure they are fully aware of their responsibilities with respect to nature conservation issues, including the nature and location of key sensitive receptors and how the works could affect them.

*Vegetation Clearance*

7.10.4 The removal of trees and scrub vegetation capable of supporting breeding birds will, where possible, be undertaken outside the breeding bird season (March to August inclusive). If this is not possible, then all vegetation should be checked by a suitably qualified ecologist prior to removal to confirm the absence of breeding birds. In the event that breeding birds are present, the vegetation will need to remain in place with an exclusion zone around the nest until the young have fledged (the typical breeding season is between March and August, inclusive).

7.10.5 The removal of scrub and thick shrub vegetation capable of concealing a hedgehog nest should be undertaken in a staged manner, avoiding the breeding season between May and October where possible. Vegetation should be cleared in a phased approach, removing vegetation to approximately 150mm from the ground. This will allow for the identification of possible nests prior to clearance to the ground. In the event a nest is discovered, works should stop and further ecological advice sought.

## 7.11 Arboriculture

7.11.1 An Arboricultural assessment has been prepared by SJA Trees which confirms that there are no mature trees, no category 'A' or 'B' trees and no trees of high landscape value or biodiversity value to be removed. A number of minor trees are to be removed which should be undertaken by the Contractor in liaison with the consultant.

7.11.2 No retained trees are to be pruned and none of the proposed dwellings are to be within 10 metres of the canopies of trees to be retained. Therefore, there will be adequate working space for construction of the buildings close to trees and, with a reasonable margin of clearance for future growth.

7.11.3 The proposed car parking and hard standing areas, including the excavation for kerbs and road haunching will result in some minor incursions into existing tree Root Protection Areas (RPA). To install these features in the areas identified in the Arboricultural Assessment, the Principal Contractor will need to undertake these excavations carefully (preferably manually) and under the direct control and supervision of the arboricultural consultant so that any over dig into the RPAs is avoided, and any roots found can be treated properly.

7.11.4 A full Aboricultural Method Statement has been prepared and is attached to this CEMP at **Appendix G**.


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## 7.12 Townscape and Visual Amenity

7.12.1 The following measures will be incorporated to minimise townscape and visual effects:

(i) Tree protection measures for trees to be retained within and adjoining the site including no dig zones, protective fencing and construction exclusion zones;

(ii) The phasing of the construction so that the first phase of development will screen the construction of later phases from residents on Egerton Road;

(iii) Erection of solid hoardings to the site perimeter;

(iv) Location of site offices and storage to minimise the effects on adjacent residents.

## 7.13 Socio-Economics

7.13.1 The development programme has been formulated to minimise disruption for on-site activities and users and for local residents through a number of measures, including those which will minimise disruption from construction traffic and noise.

7.13.2 The proposed works would be undertaken outside of term time if reasonably possible to ensure minimal disruption to the operations of Littlehampton Academy.

7.13.3 Importantly, existing pedestrian routes and footpaths around the site will be maintained at all times during construction works. The use of these existing routes and the toucan crossing to the south will be closely monitored by traffic marshals at the site entrance/exit, who will be aware of the scheduled arrivals and departures of vehicles to implement any temporary traffic management measures.


ARUN DISTRICT COUNCIL LU/144/22/DOC

# 8 SUMMARY AND CONCLUSIONS

8.1.1 This CEMP has been prepared to confirm the management procedures for the construction works to implement the proposed residential development on land to the south of Littlehampton Academy.

8.1.2 This report has been updated from the outline CEMP to the full CEMP. Following the appointment of the Principal Contractor. The Principal Contractor for the Enabling Works will be John Pelly's Civil Engineering and for the main works BoKlok UK. The handover date for PC responsibility from JRCE to BoKlok 10th October 2023.

8.1.3 The key conclusions of this outline CEMP are as follows:

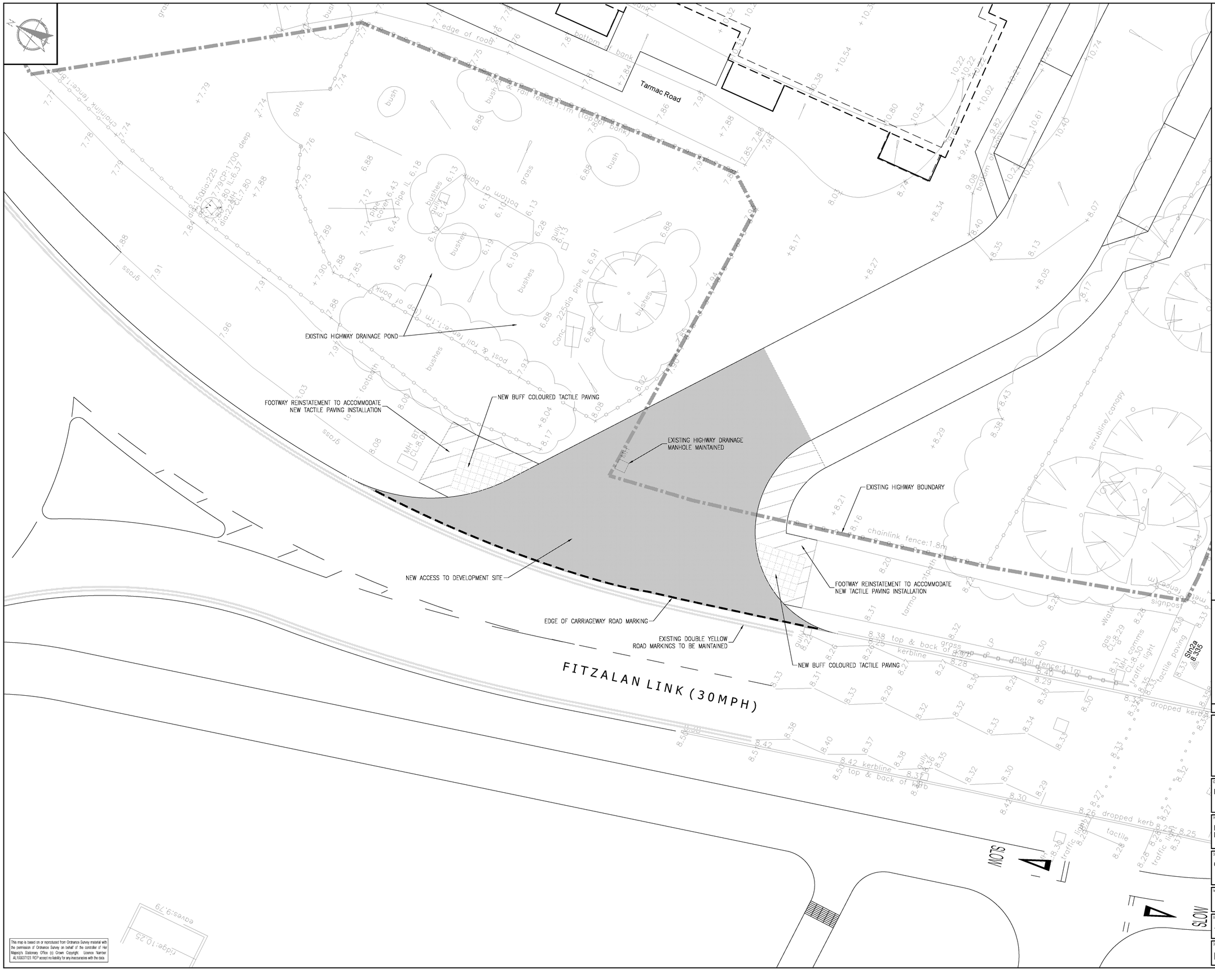
(i) The proposed works on site will be carried out by a competent and qualified Principal Contractor that will be aware of the key risks of the project and will exercise its roles and responsibilities set out in the CEMP to ensure that all confirmed measures are implemented in a safe and well-managed manner, with commitment from all personnel on site;

(ii) The Principal Contractor will ensure that all specialist consultants are kept updated of progress on site and are involved during the construction process to ensure that all environmental facets are monitored and continue to be protected with appropriate mitigation throughout;

(iii) The Principal Contractor will ensure that the access arrangements and procedures for vehicle movements are complied with throughout the process and in close consultation with the Highway Authority and any other interested parties.


ARUN DISTRICT COUNCIL LU/144/22/DOC

# DRAWINGS




NOTES:

1. THIS DRAWING IS NOT TO BE SCALED. ALL DIMENSIONS ARE IN mm UNLESS NOTED OTHERWISE.
2. ALL HIGHWAY WORKS TO BE AGREED WITH THE LOCAL COUNCIL PRIOR TO IMPLEMENTATION ON SITE. APPROPRIATE S278/S38 AGREEMENTS TO BE IN PLACE PRIOR TO THE WORKS COMMENCING (IF REQUIRED).
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EXISTING BELOW GROUND SERVICES & DRAINAGE

10. PRIOR TO ANY DEMOLITION OR CONSTRUCTION WORKS BEING UNDERTAKEN ON SITE, THE CONTRACTOR MUST ESTABLISH LOCATIONS OF ANY SERVICES THAT MAY AFFECT THE WORKS AND ENSURING THAT THE SERVICE HAVE BEEN IDENTIFIED AND SAFELY ISOLATED PRIOR TO ITS REMOVAL AND COMMENCEMENT OF THE WORKS.

LEGEND:

HIGHWAY BOUNDARY

ACCESS CONSTRUCTION

FOOTWAY CONSTRUCTION

| Revision | Description | By | Date |
|---|---|---|---|
| P1 | ISSUED FOR INFORMATION | GA | 13.04.22 |


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Transport Planning and Infrastructure Design Consultants

GODALMING & LONDON


Client: BOKLOK

Project: FITZALAN ROAD LITTLEHAMPTON

Drawing Title: GENERAL ARRANGEMENT

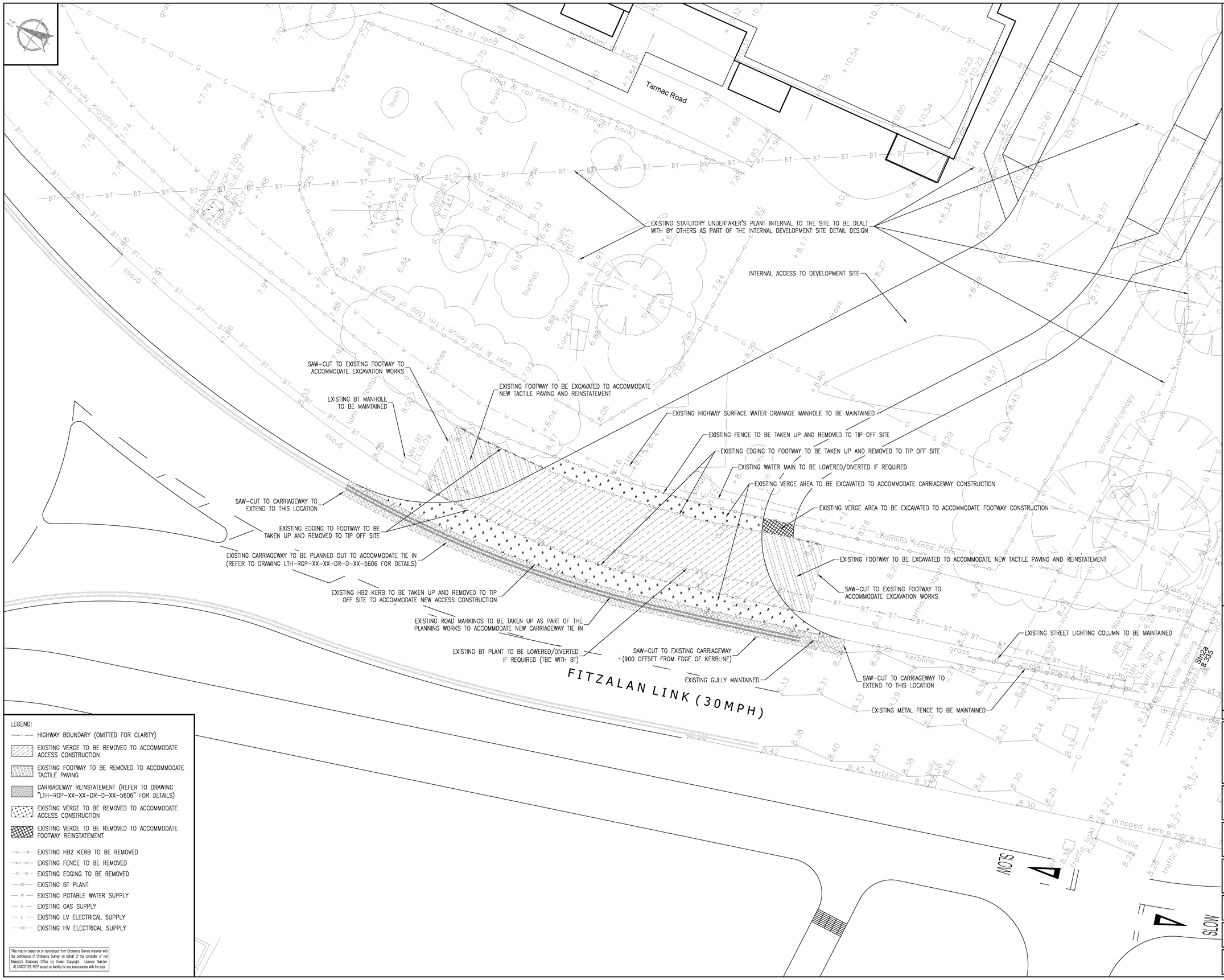
Issue Status: ☐ INFORMATION ☒ PRELIMINARY ☐ TENDER ☐ CONSTRUCTION ☐ RECORD COPY

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Drawing Number: LTH-RGP-XX-XX-DR-D-XX-5600

Revision: P1


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LEGEND:

- HIGHWAY BOUNDARY (OMITTED FOR CLARITY)
- EXISTING VERGE TO BE REMOVED TO ACCOMMODATE ACCESS CONSTRUCTION
- EXISTING FOOTWAY TO BE REMOVED TO ACCOMMODATE TACTILE PAVING
- CARRIAGEWAY REINSTATEMENT (REFER TO DRAWING "LTH-RGP-XX-XX-DR-D-XX-5606" FOR DETAILS)
- EXISTING VERGE TO BE REMOVED TO ACCOMMODATE ACCESS CONSTRUCTION
- EXISTING VERGE TO BE REMOVED TO ACCOMMODATE FOOTWAY REINSTATEMENT
- EXISTING HB2 KERB TO BE REMOVED
- EXISTING FENCE TO BE REMOVED
- EXISTING EDGING TO BE REMOVED
- BT EXISTING BT PLANT
- W EXISTING POTABLE WATER SUPPLY
- G EXISTING GAS SUPPLY
- E EXISTING LV ELECTRICAL SUPPLY
- HV EXISTING HV ELECTRICAL SUPPLY

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| Revision | Description | By | Date |
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| P1 | ISSUED FOR INFORMATION | GA | 13.04.22 |

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Client: BOKLOK

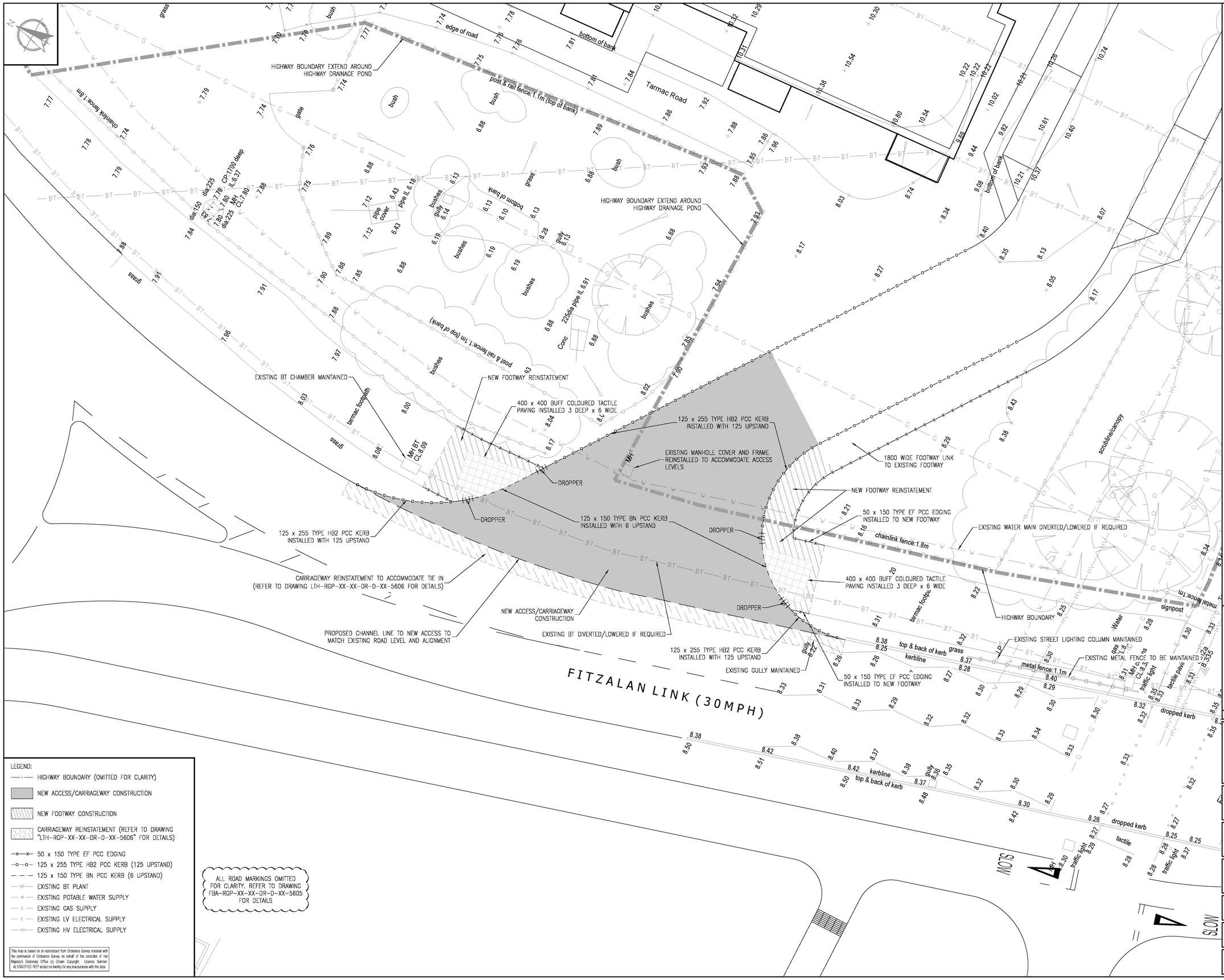
Project: FITZALAN ROAD LITTLEHAMPTON

Drawing Title: HIGHWAY WORKS SITE CLEARANCE LAYOUT

Issue Status: ☐ INFORMATION ☒ PRELIMINARY ☐ TENDER ☐ CONSTRUCTION ☐ RECORD COPY

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Drawing Number: LTH-RGP-XX-XX-DR-D-XX-5601 Revision: P1




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LEGEND:

- HIGHWAY BOUNDARY (OMITTED FOR CLARITY)
- NEW ACCESS/CARRIAGEWAY CONSTRUCTION
- NEW FOOTWAY CONSTRUCTION
- CARRIAGEWAY REINSTATEMENT (REFER TO DRAWING "LTH-RGP-XX-XX-DR-D-XX-5606" FOR DETAILS)
- 50 x 150 TYPE EF PCC EDGING
- 125 x 255 TYPE HB2 PCC KERB (125 UPSTAND)
- 125 x 150 TYPE BN PCC KERB (6 UPSTAND)
- EXISTING BT PLANT
- EXISTING POTABLE WATER SUPPLY
- EXISTING GAS SUPPLY
- EXISTING LV ELECTRICAL SUPPLY
- EXISTING HV ELECTRICAL SUPPLY

ALL ROAD MARKINGS OMITTED FOR CLARITY. REFER TO DRAWING FBA-RGP-XX-XX-DR-D-XX-5605 FOR DETAILS

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Client: BOKLOK

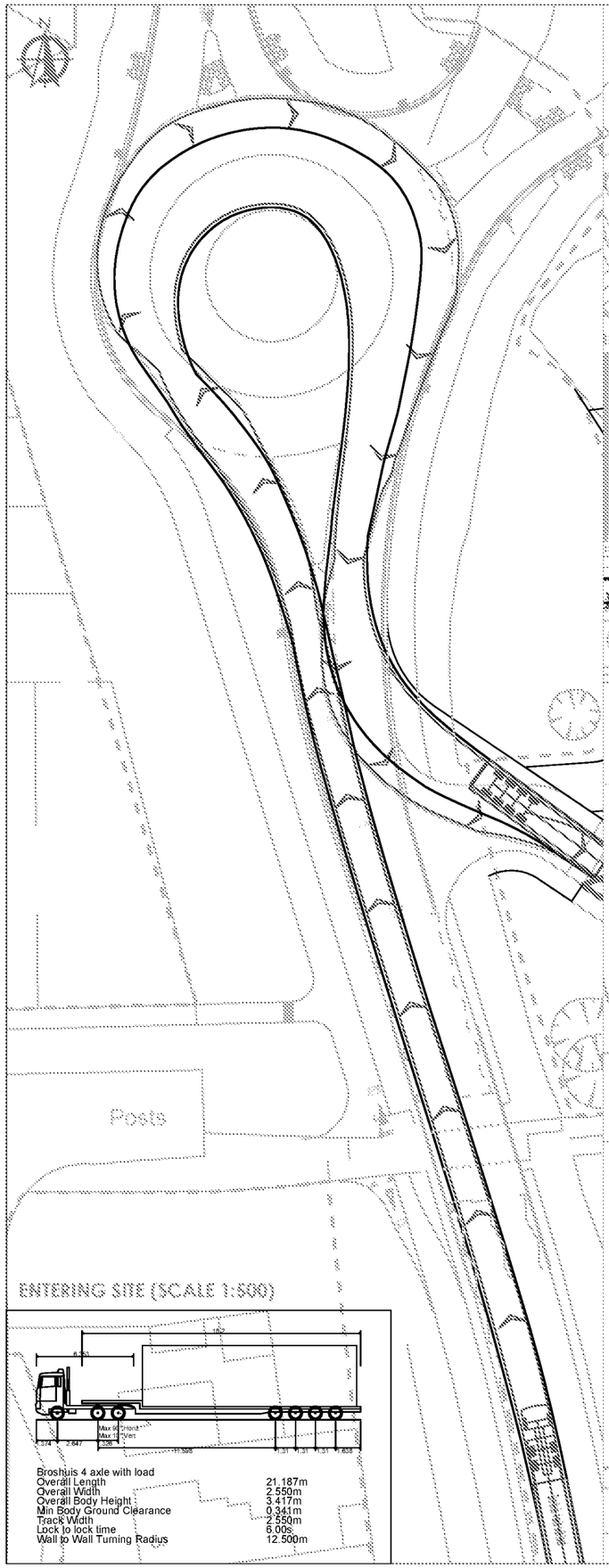
Project: FITZALAN ROAD
LITTLEHAMPTON

Drawing Title: HIGHWAY WORKS
CONSTRUCTION LAYOUT

Issue Status: ☐ INFORMATION ☒ PRELIMINARY ☐ TENDER ☐ CONSTRUCTION ☐ RECORD COPY

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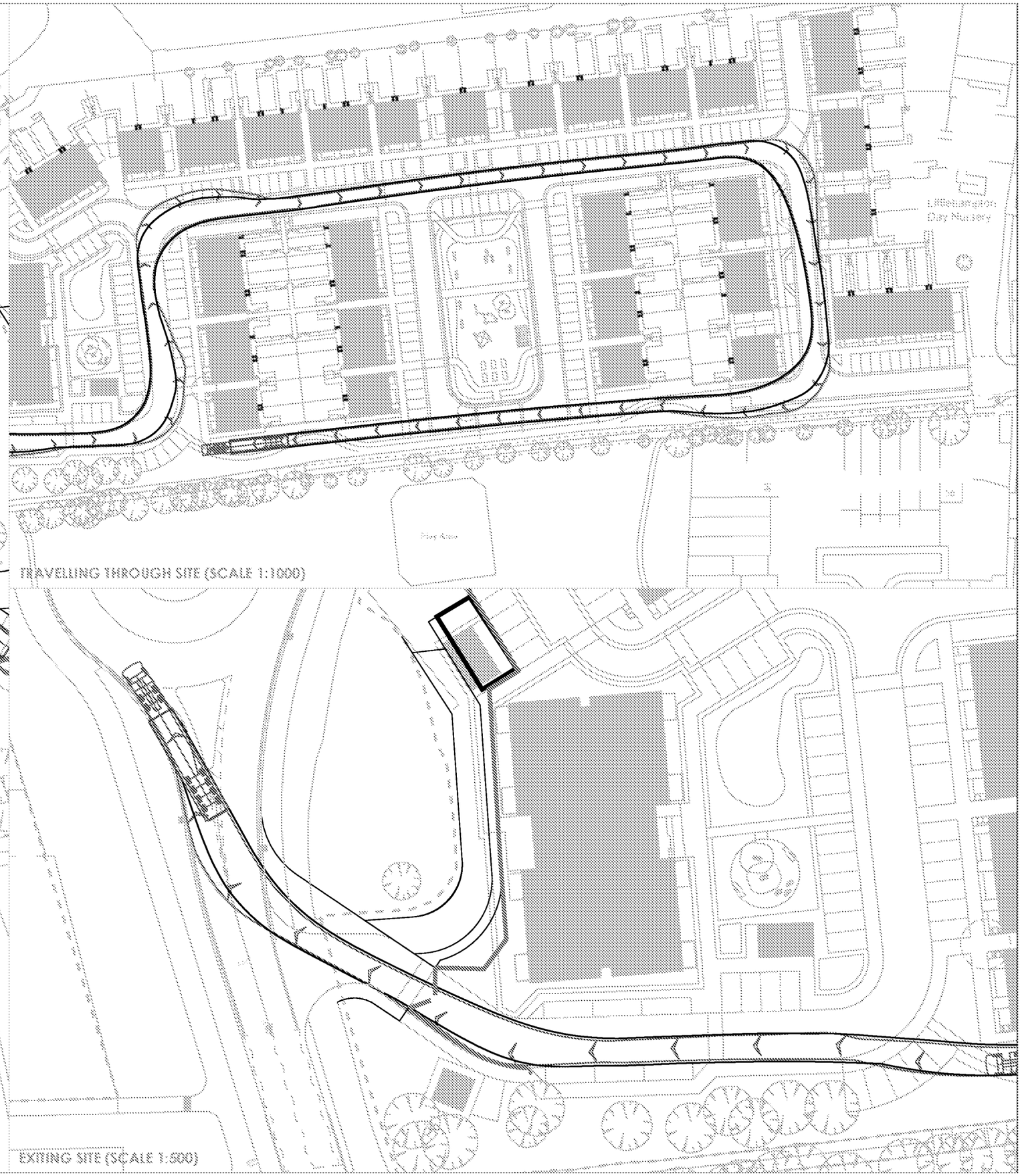
Drawing Number: LTH-RGP-XX-XX-DR-D-XX-5602
Revision: P1




ENTERING SITE (SCALE 1:500)




| Broshuis 4 axle with load | |
|---|---|
| Overall Length | 21.187m |
| Overall Width | 2.550m |
| Overall Body Height | 3.417m |
| Min Body Ground Clearance | 0.341m |
| Track Width | 2.550m |
| Lock to lock time | 6.00s |
| Wall to Wall Turning Radius | 12.500m |




TRAVELLING THROUGH SITE (SCALE 1:1000)

EXITING SITE (SCALE 1:600)

## NOTES

This drawing has been prepared for the purpose of promoting discussions and does not constitute a detailed design drawing, or construction drawing. A Design Hazard Inventory has been prepared by RGP setting out the hazards which have been designed out. This is available upon request.

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## RESIDUAL HAZARDS

In addition to the hazards normally associated with the type of work detailed on this drawing, please note the following residual hazards.

It is assumed that all works will be carried out by a competent contractor working, where appropriate, to an approved risk assessment and method statement.

| Rev. | Drawn | Comments | Date |
|---|---|---|---|
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1 Fellowes Path, Tawstock Bridge, Barnstaple, EX31 3LN
Tel: 01483 861 681 / 01271 376 563 www.rgp.co.uk

Client: Borfok

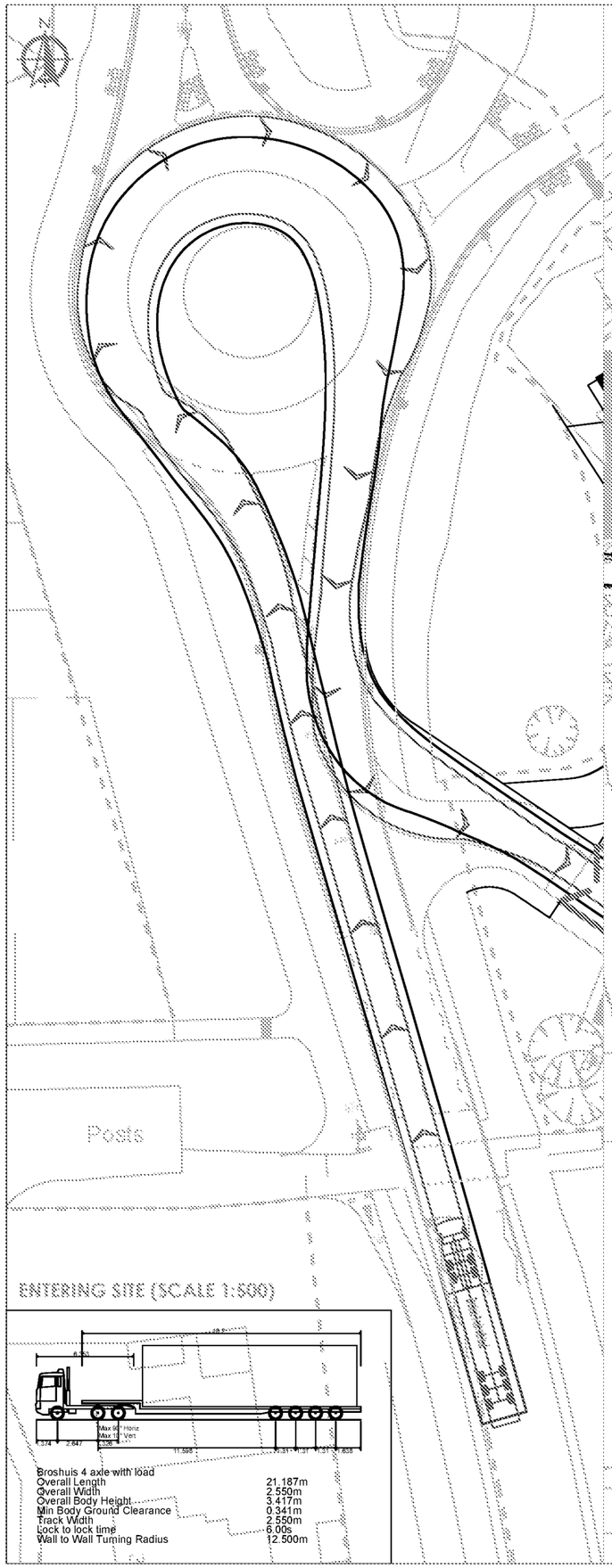
Project: Land to the south of Littlehampton Academy

Drawing title: Vehicle Swept Path Assessment
BROHUIS 4-AXLE DELIVERY

| Drawing no. | Rev. |
|---|---|
| 6807 | P02 |

| Scale | Drawn by | Checked by | Size |
|---|---|---|---|
| As Shown | DLM | SAJ | A1 |

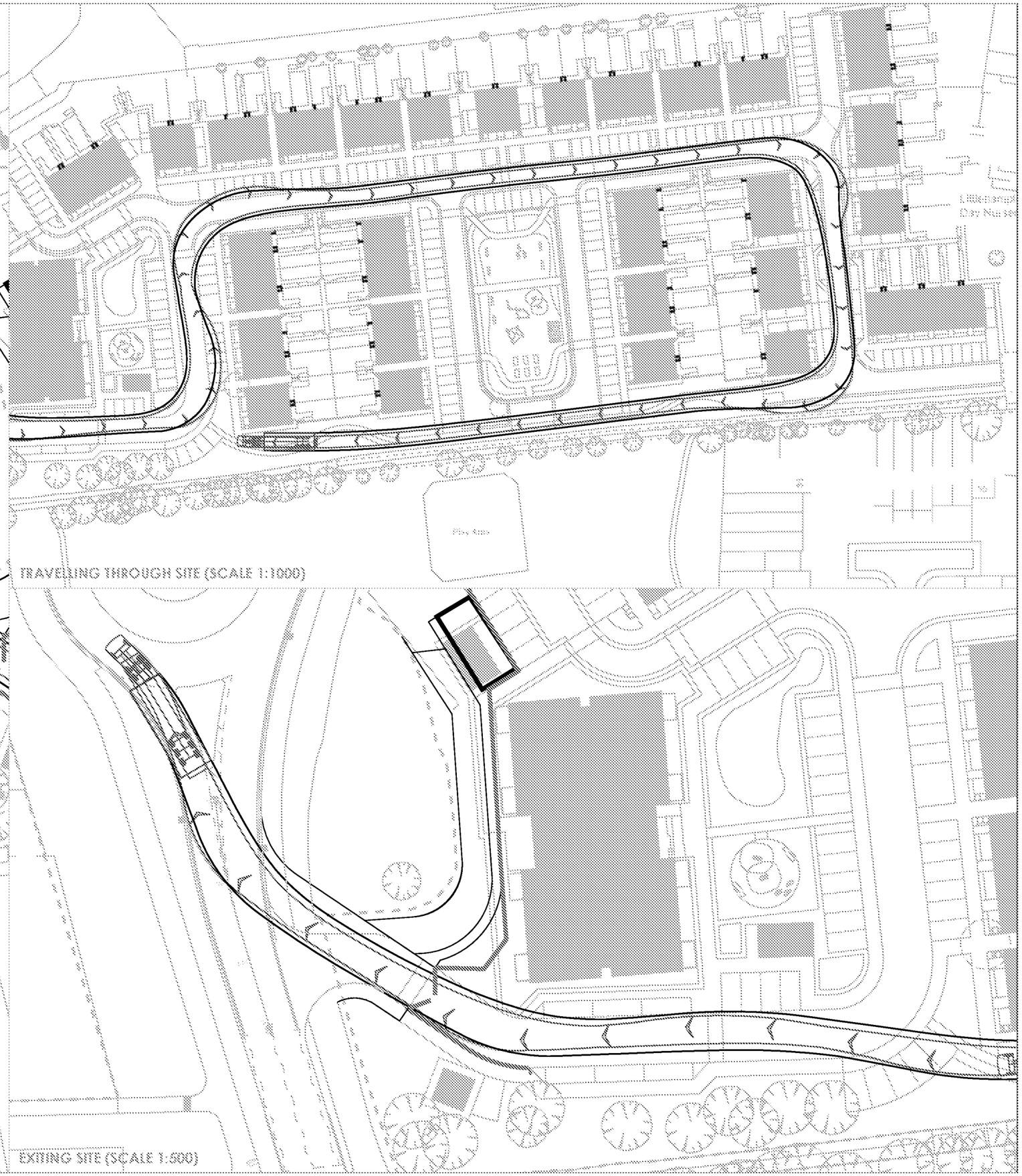
ARUN DISTRICT COUNCIL LU/144/22/DOC




ENTERING SITE (SCALE 1:500)



| | |
|---|---|
| Broshuis 4 axle with load | |
| Overall Length | 21.187m |
| Overall Width | 2.550m |
| Overall Body Height | 3.417m |
| Min Body Ground Clearance | 0.341m |
| Track Width | 2.550m |
| Lock to lock time | 6.00s |
| Wall to Wall Turning Radius | 12.500m |



TRAVELLING THROUGH SITE (SCALE 1:1000)

EXITING SITE (SCALE 1:600)

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1 Telford Road, Crawley Ridge, Horsham RH12 5EW
Tel: 01403 261961 / 020 7870 7660 www.rgpp.co.uk

Client: Borfak

Project: Land to the south of Littlehampton Academy

Drawing Title: Vehicle Swept Path Assessment
BROHUIS 3-AXLE DELIVERY

| Drawing No. | Rev. |
|---|---|
| 6806 | P02 |

| Scale | Drawn by | Checked by | Size |
|---|---|---|---|
| As Shown | DLM | SAJ | A1 |

ARUN DISTRICT COUNCIL LU/144/22/DOC

# APPENDIX A

**Schedule of Accommodations**

| | | | | | | |
|---|---|---|---|---|---|---|
| **Block 1** | - | **Apartments** | | - | **32** | **- 4 storey's** |
| 23 x 1bed 2person | | | | | | |
| 9 x 2bed 4person | | | | | | |
| **2bed 4p** | - | **House** | **81.9m2** | - | **24** | **- 2 storey's** |
| **2bed 4p M4(3)** | - | **House** | **81.9m2** | - | **2** | **- 2 storey's** |
| **3bed 4p** | - | **House** | **88.9m2** | - | **54** | **- 2 storey's** |
| **Aff** | - | **Affordable units** | | | | |
| **CW** | - | **Clear window** | | | | |
| **OW** | - | **Obscured glazing / Privacy film** | | | | |
| + | **Indicated 2 bed houses** | | | | | |

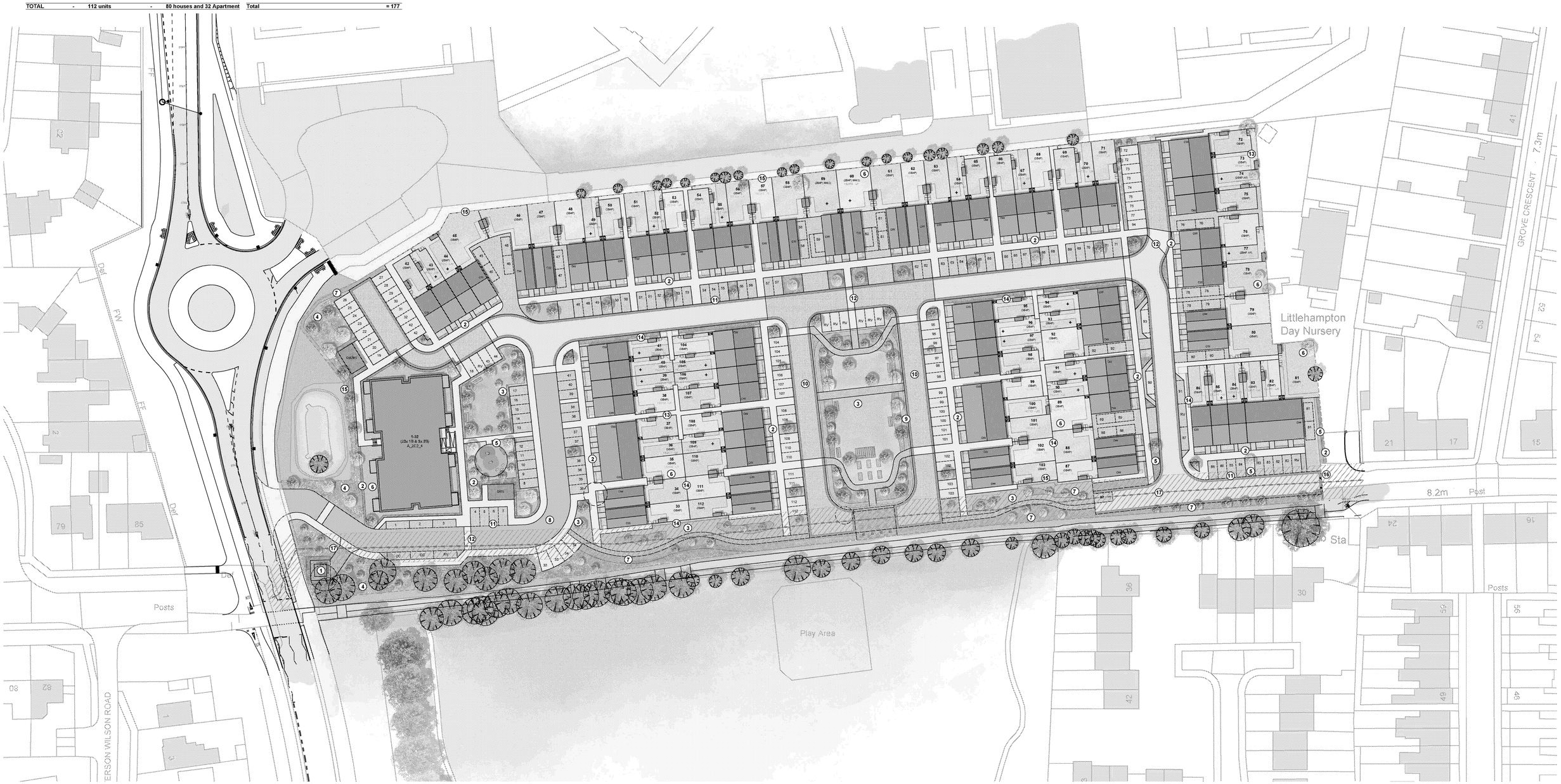
| | | | | | |
|---|---|---|---|---|---|
| **TOTAL** | - | **112 units** | - | **80 houses and 32 Apartment** | |

**car parking -**

| | |
|---|---|
| **1 space per apartment unit** | **= 32** |
| **1 per house 2bed** | **= 27** |
| **2 per house 3bed** | **= 106** |
| **Car Club** | **= 2** |
| **Residents Visitor Parking (10%)** | **= 10** |
| **Total** | **= 177** |

## CDM 2015 Health & Safety Information

This information relates only to 'Significant Hazards' identified on this drawing and is to be read in conjunction with the Designer's Hazard Register.




## KEY:

**NORTH**

1. Substation
2. Low ornamental hedging
3. Grass verges and open spaces using species rich seed mix - Flowering lawn seed mix
4. Wildflower/grass meadow seed mix
5. Low evergreen hedging clipped to table form
6. Private seeded grass garden areas. Strong lawn grass mixture
7. Linear native mixed hedging
8. Adopted main routes/roads Standard black bitumastic macadam
9. Rain garden
10. Shared surface - Concrete block paving
11. Parking bays - Concrete block paving
12. Block demarcation indicating footpath connections
13. Private Terrace/Footpaths - Concrete flag paving
14. Close boarded timber fence 1.8m height to include hedgehog size gaps beneath the fences.
15. 1.8m close boarded timber fence to northern and eastern boundaries
16. Emergency bollards - Emergency access only
17. Confirmed sewer position with easement

Confirmed sewer easement zone
Site Boundary
Existing Trees
ProposedTrees

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Client's Name
BoKlok

Job Title
Land to the South of Littlehampton Academy (6920)

Drawing Title
Illustrative Site Plan

Scale
1:500 @ A1 / 1:1000 @ A3
metres 10 20 30 40

| Drawn | Checked | Date |
|---|---|---|
| FH | MN | 19.08.21 |

Job No / Drawing No / Rev
LTH-ECE-XX-XX-DDR-A-SL-5012 P06

Status
S2 / PRELIMINARY

| Rev | Date | Revision Details | Dr | Ch |
|---|---|---|---|---|
| P06 | 23.03.22 | Landscape features added. Landscape layout updated. | AX | MN |
| P05 | 21.02.22 | Post planning amendments | AX | MN |
| P04 | 10.02.22 | Amendments after comments from sales team emailed on 08.02.22 | FH | MN |
| P03 | 16.12.21 | P03 revision to replace P02 to correct BIM360 issue | FH | MN |
| P02 | 15.12.21 | Parking to plot 74 and 75 revised | FH | MN |
| P01 | 19.08.21 | 1st Issue | FH | MN |

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T 01903 248777 E sussex@ecearchitecture.com
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**ECE Architecture**
www.ecearchitecture.com

CAD Plot date: 24/03/2022 - 12:08:57 6920 post planning site plan.dwg

# APPENDIX B

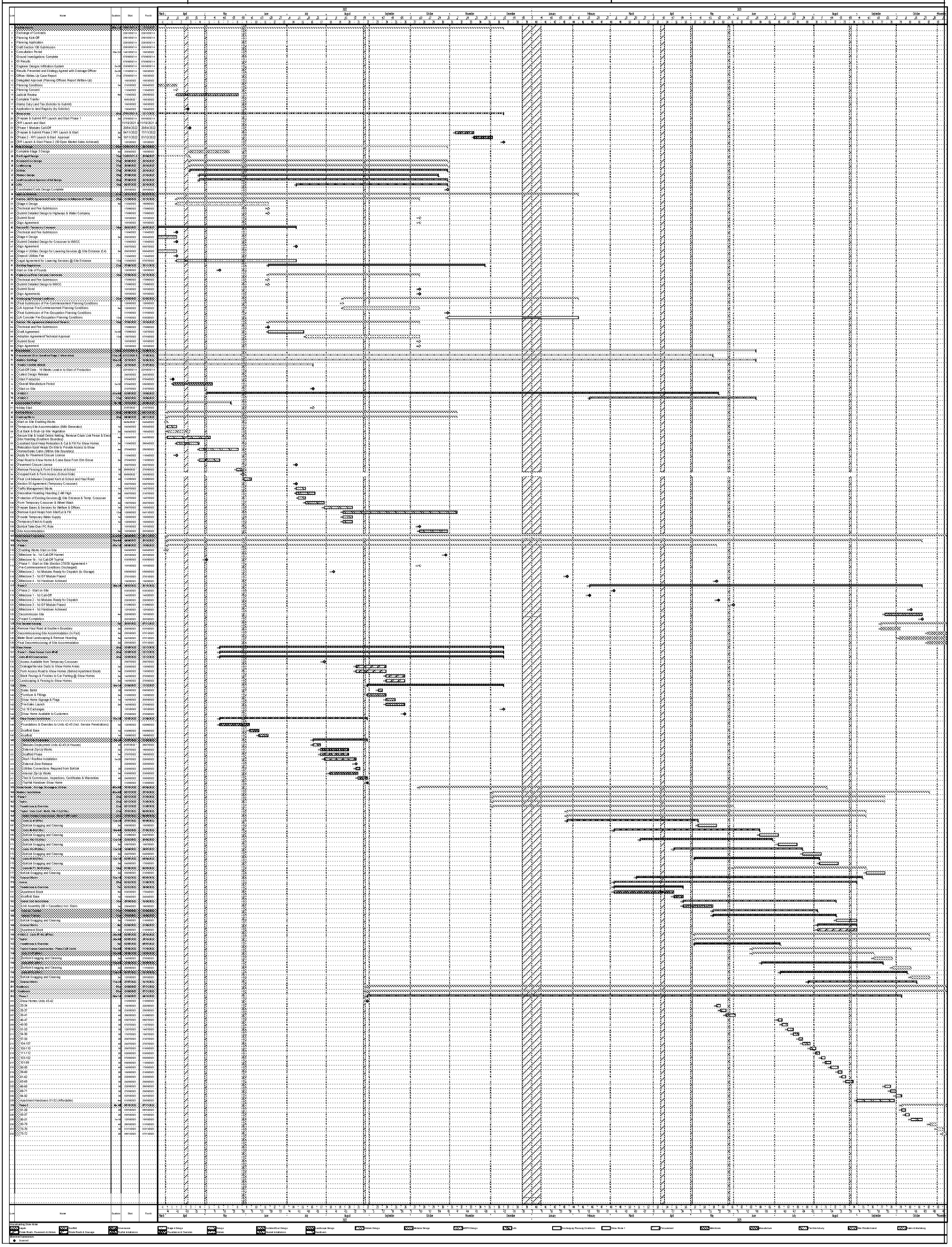
# Fitzalan Road, Littlehampton
# Build Programme - Summary

Date: 04/04/2022

Prog No.

Rev Notes: LTH-BOK-SW-XX-PR-K-XX-0100

Prepared by: BJN




C:\Users\bc963232\OneDrive - Skanska\Desktop\Boklok\Littlehampton\Stage 3 Programme\04 Apr 22 - Littlehampton Draft Stage 3 Programme (Show Home Option 1 Elm Grove + School drop on 31 May 22).pp

# APPENDIX C

**Schedule of Accommodations**

| | | | | | | |
|---|---|---|---|---|---|---|
| **Block 1** | - | **Apartments** | | - | **32** | **- 4 storey's** |
| 23 x 1bed 2person | | | | | | |
| 9 x 2bed 4person | | | | | | |
| **2bed 4p** | - | **House** | **81.9m2** | - | **24** | **- 2 storey's** |
| **2bed 4p M4(3)** | - | **House** | **81.9m2** | - | **2** | **- 2 storey's** |
| **3bed 4p** | - | **House** | **88.9m2** | - | **54** | **- 2 storey's** |

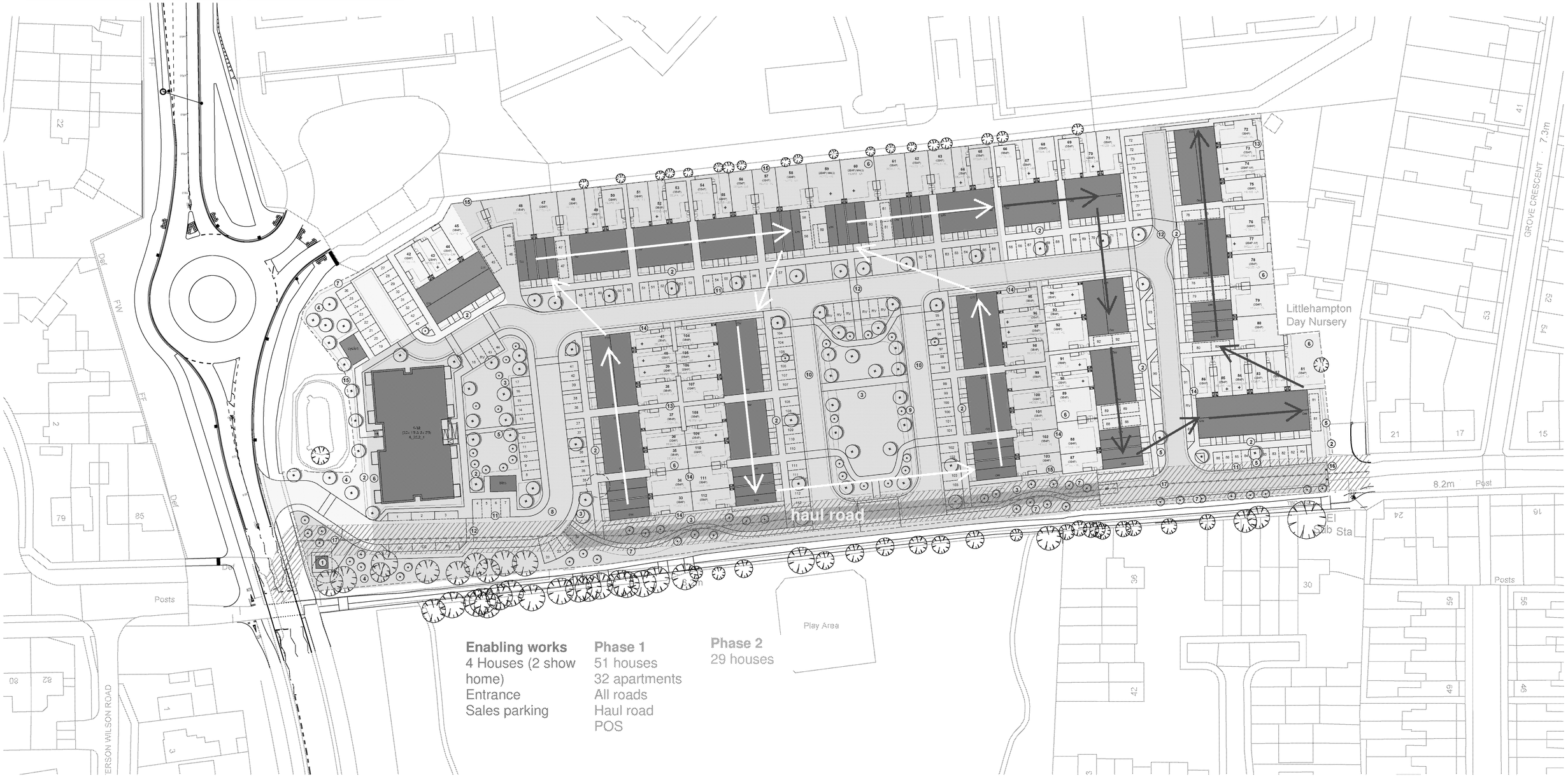
**Aff** - **Affordable units**
**CW** - **Clear window**
**OW** - **Obscured glazing / Privacy film**
**+** **Indicated 2 bed houses**

| | | | | |
|---|---|---|---|---|
| **TOTAL** | - | **112 units** | - | **80 houses and 32 Apartment** |

| | |
|---|---|
| **car parking -** | **1 space per apartment unit = 32** |
| | **1 per house 2bed = 27** |
| | **2 per house 3bed = 106** |
| | **Car Club = 2** |
| | **Residents Visitor Parking (10%) = 10** |
| **Total** | **= 177** |

## CDM 2015 Health & Safety Information

This information relates only to 'Significant Hazards' identified on this drawing and is to be read in conjunction with the Designer's Hazard Register.




**NORTH**

KEY:

1. Substation
2. Low ornamental hedging
3. Grass verges and open spaces using species rich seed mix - Flowering lawn seed mix
4. Wildflower/grass meadow seed mix
5. Low evergreen hedging clipped to table form
6. Private seeded grass garden areas. Strong lawn grass mixture
7. Linear native mixed hedging
8. Adopted main routes/roads Standard black bitumastic macadam
9. Rain garden
10. Shared surface - Concrete block paving
11. Parking bays - Concrete block paving
12. Block demarcation indicating footpath connections
13. Private Terrace/Footpaths - Concrete flag paving
14. Close boarded timber fence 1.8m height to include hedgehog size gaps beneath the fences.
15. 1.8m close boarded timber fence to northern and eastern boundaries
16. Emergency bollards - Emergency access only
17. Confirmed sewer position with easement

Confirmed sewer easement zone
Site Boundary
Existing Trees
ProposedTrees

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| Rev | Date | Revision Details | Dr | Ch |
|---|---|---|---|---|
| P04 | 10.02.22 | Amendments after comments from sales team emailed on 08.02.22 | FH | MN |
| P03 | 16.12.21 | P03 revision to replace P02 to correct BIM360 issue | FH | MN |
| P02 | 15.12.21 | Parking to plot 74 and 75 revised | FH | MN |
| P01 | 19.08.21 | 1st Issue | FH | MN |

Client's Name
BoKlok

Job Title
Land to the South of Littlehampton Academy (6920)

Drawing Title
Illustrative Site Plan

Scale
1:500 @ A1 / 1:1000 @ A3
metres 10 20 30 40

| Drawn | Checked | Date |
|---|---|---|
| FH | MN | 19.08.21 |

| Job No | Drawing No | Rev |
|---|---|---|
| LTH-ECE-XX-XX-DDR-A-SL-5012 | | P04 |

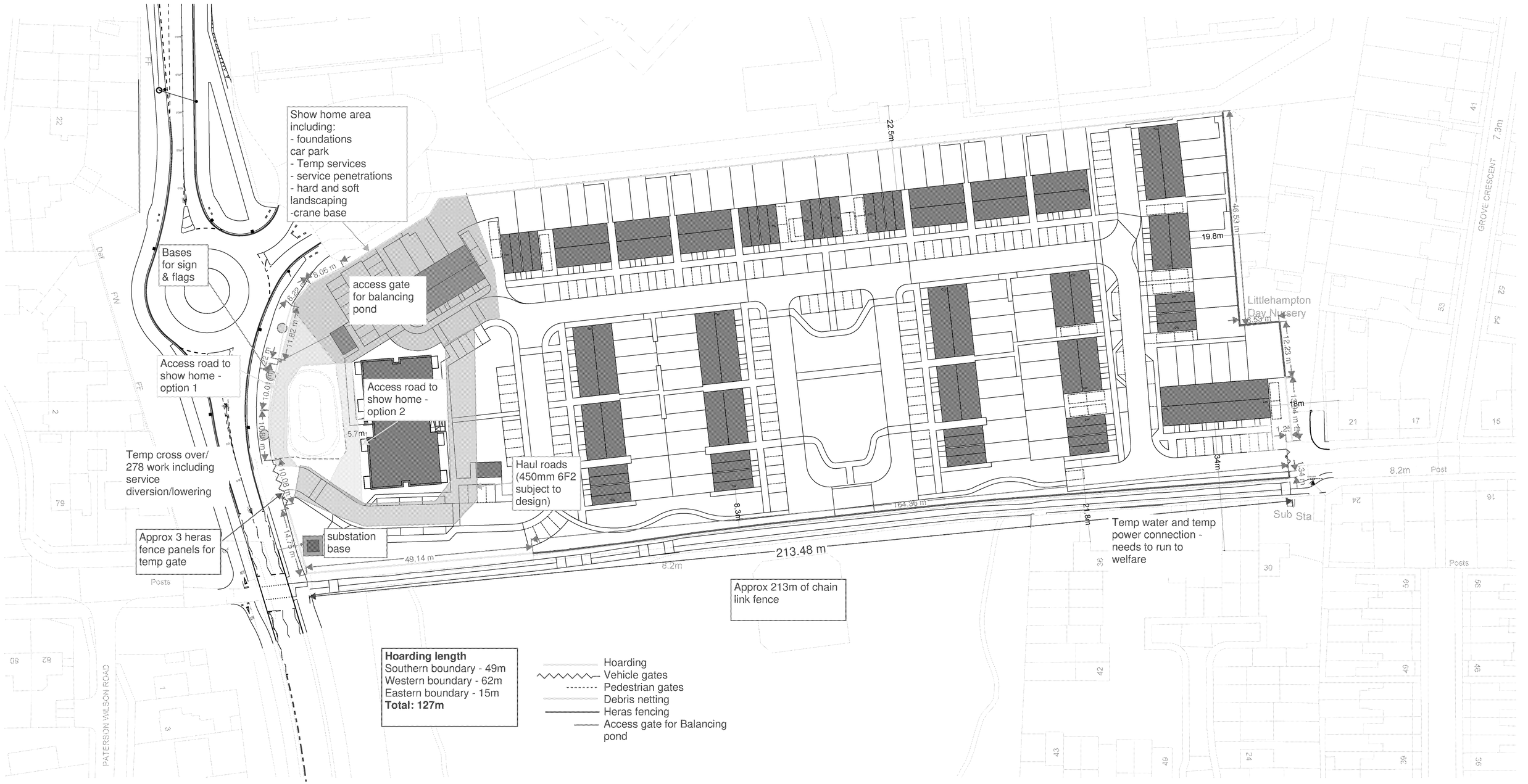
Status
S2 / PRELIMINARY

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**Sussex:** Brooklyn Chambers, 11 Goring Road, Worthing, West Sussex, BN12 4AP
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CAD Plot date: 10/02/2022 - 14:08:13 lth-ece-xx-xx-ddr-a-sl-5012 p04.dwg

## CDM 2015 Health & Safety Information

This information relates only to 'Significant Hazards' identified on this drawing and is to be read in conjunction with the Designer's Hazard Register.




## Block Plan

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ARUN DISTRICT COUNCIL LU/144/22/DOC

Client's Name: BoKlok

Job Title: Land to the South of Littlehampton Academy (6920)

Drawing Title: Block Plan

Scale: 1:500 @ A1 / 1:1000 @ A3

metres 10 20 30 40

| Drawn | Checked | Date |
|---|---|---|
| FH | MN | 21.01.21 |

Job No: LTH-ECE-XX-XX-DR-A-SL-5011 Drawing No: Rev P04

Status: S2 / APPROVAL

| Rev | Date | Revision Details | Dr | Ch |
|---|---|---|---|---|
| P04 | 22.02.18 | Post planning amendments | AX | MN |
| P03 | 22.03.21 | For Planning | FH | MN |
| P02 | 05.03.21 | Final Draft Planning Issue | FH | MN |
| P01 | 05.02.21 | DRAFT Issue | GG | FH |

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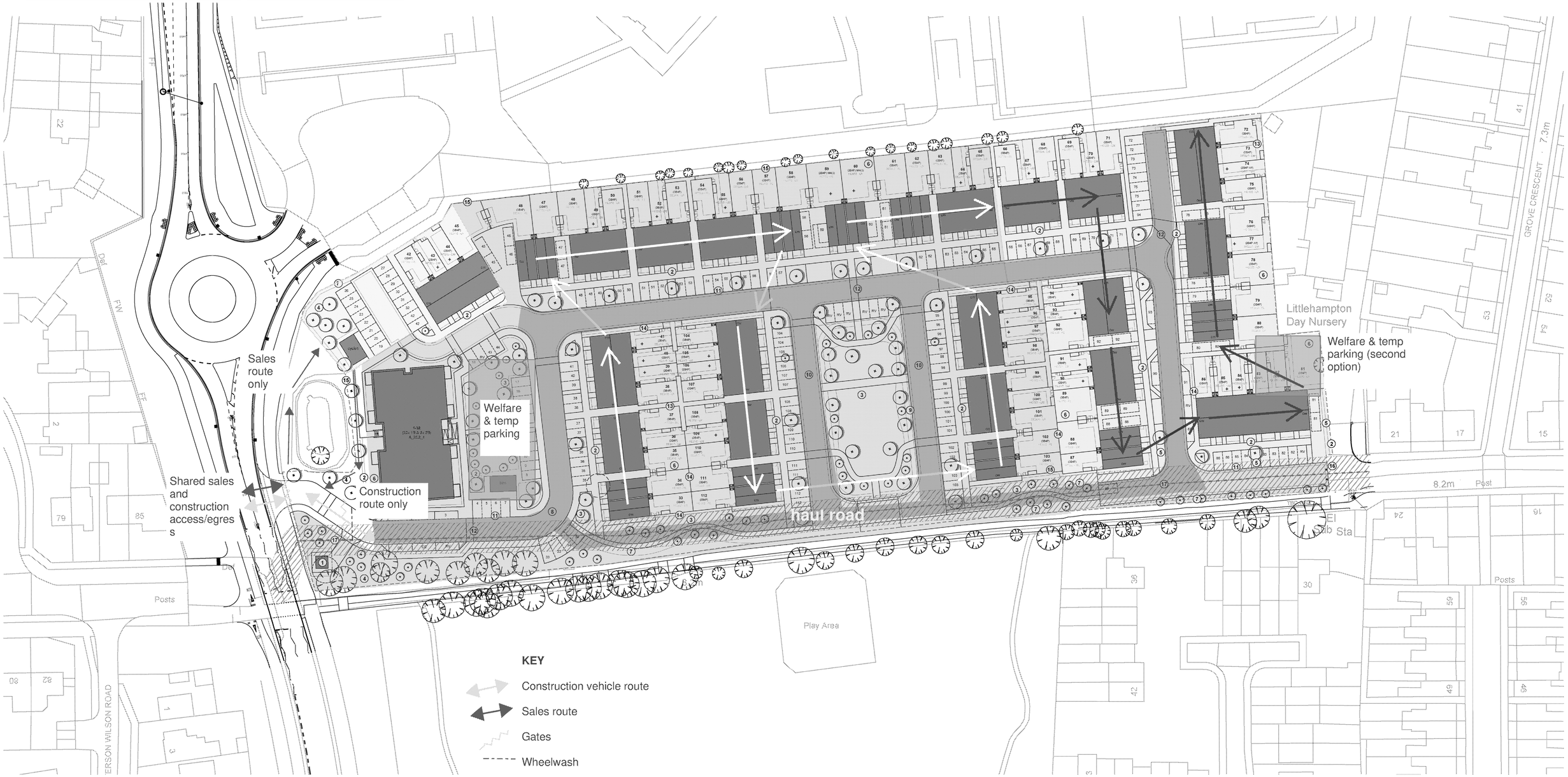
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**Schedule of Accommodations**

| | | | | | | |
|---|---|---|---|---|---|---|
| **Block 1** | - | **Apartments** | | - | **32** | **- 4 storey's** |
| 23 x 1bed 2person | | | | | | |
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| **2bed 4p** | - | **House** | **81.9m2** | - | **24** | **- 2 storey's** |
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| **3bed 4p** | - | **House** | **88.9m2** | - | **54** | **- 2 storey's** |
| **Aff** | - | **Affordable units** | | | | |
| **CW** | - | **Clear window** | | | | |
| **OW** | - | **Obscured glazing / Privacy film** | | | | |
| + | **Indicated 2 bed houses** | | | | | |
| **TOTAL** | - | **112 units** | | - | **80 houses and 32 Apartment** | |

| | | |
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| **car parking -** | **1 space per apartment unit** | **= 32** |
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| | **2 per house 3bed** | **= 106** |
| | **Car Club** | **= 2** |
| | **Residents Visitor Parking (10%)** | **= 10** |
| **Total** | | **= 177** |

# Main works site plan




## CDM 2015 Health & Safety Information

This information relates only to 'Significant Hazards' identified on this drawing and is to be read in conjunction with the Designer's Hazard Register.

## KEY:

NORTH

1. Substation
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17. Confirmed sewer position with easement

Confirmed sewer easement zone
Site Boundary
Existing Trees
ProposedTrees

© ECE Architecture Limited. No dimensions to be scaled from drawing except for the purposes of Planning Applications. The contractor should check all dimensions on site. It is the contractors responsibility to ensure compliance with Building Regulations.

Client's Name: BoKlok

Job Title: Land to the South of Littlehampton Academy (6920)

Drawing Title: Illustrative Site Plan

Scale: 1:500 @ A1 / 1:1000 @ A3

metres 10 20 30 40

| Drawn | Checked | Date |
|---|---|---|
| FH | MN | 19.08.21 |

Job No / Drawing No / Rev: LTH-ECE-XX-XX-DDR-A-SL-5012 P04

Status: S2 / PRELIMINARY

| Rev | Date | Revision Details | Dr | Ch |
|---|---|---|---|---|
| P04 | 10.02.22 | Amendments after comments from sales team emailed on 08.02.22 | FH | MN |
| P03 | 16.12.21 | P03 revision to replace P02 to correct BIM360 issue | FH | MN |
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CAD Plot date: 10/02/2022 - 14:08:13 lth-ece-xx-xx-ddr-a-sl-5012 p04.dwg

# APPENDIX D

Modular Movements
44 Newdown Road
South Park Industrial Estate
Scunthorpe
North Lincolnshire
DN17 2TX
[redacted]

# Site Survey Report

| | |
|---|---|
| **Job/Order Number:** | tba |
| **Survey Completed by:** | Andrew Skelton |
| **Date survey requested:** | 03/06/20 |
| **Date survey completed:** | Site visit completed 09.06.20 |

## Site details

| | |
|---|---|
| **Site Name/ID:** | **Fitzalan rd, Littlehampton.** |
| **Site Address:** | **As above.** |
| **Site contact 1st:** | Rick Butters. |
| **Site contact 2nd:** | |

## Unit Details

| | |
|---|---|
| **Type Size and Quantity of Unit** | **Proposed units, size 9.0m x 4.99m wide x 4.0m high.** |

## Vehicle Details

| | **Recommendations** | **Supply/Responsibility** |
|---|---|---|
| **Type of vehicle required** | STGO Cat1 tractor units | Modular Movements |
| **Type of lifting/Cranage** | Mobile Crane | Client |
| **Additional Requirements (e.g pads/banksman)** | Re-view when work starts | To agree |

## Route Details



ARUN DISTRICT COUNCIL LU/144/22/DOC

Modular Movements
44 Newdown Road
South Park Industrial Estate
Scunthorpe
North Lincolnshire
DN17 2TX
[redacted]

MODULAR MOVEMENTS

| | |
|---|---|
| **Directions to site:** | **A50-M1-M25-M3—M27-A27-A280--A259-Horsham rd-East st-Fitzalan rd.** |
| | |

## Site & Delivery Assessment

| Access/Delivery Restrictions | Yes | No | Comment |
|---|---|---|---|
| **Bridges/Height Restrictions** | | No | |
| **Road Restrictions** | | no | **East st and Horsham possible parking issues.** |
| **Waiting Restrictions** | Yes | | **Possibly, to advise once we know unload area.** |
| **Turning Restrictions** | | no | |
| **Parking Restrictions** | Yes | | **Possibly, to advise once we know unload area.** |
| **Traffic Management required** | Yes | | **Site assistance required in ensuring vehicle enters site without any problems.** |
| **Track Way Recommended** | | No | **To be decided later.** |
| **Street furniture removal** | | no | **Not seen.** |

+

| Site delivery details | Status | Enabling Works Required by Ground Works |
|---|---|---|
| **Road/Track Conditions on site** | Not known | |
| **Entrance restrictions** | Not known | |
| **Obstructions** | Not known | |
| **Vehicle room on site:** | Not known | |

| Site viewed as | Yes | No | Comment |
|---|---|---|---|
| **Existing site** | | No | |
| **Work started** | | no | |
| **Greenfield** | yes | | |
| **Under construction/complete** | yes | | Appears to be a new large development off the roundabout/new road. |
| **Plans supplied** | yes | | basic |
| **Other** | Yes | | Escort vehicles required. |



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Modular Movements
44 Newdown Road
South Park Industrial Estate
Scunthorpe
North Lincolnshire
DN17 2TX
[redacted]

MODULAR MOVEMENTS

| Permits | Yes | No | Comment |
|---|---|---|---|
| Police Permit required | YES | | Suspension of movement of the units, between the following times 06.30 to 10.00 & 1600 to 1900.<br><br>No night-time movement.<br><br>Check on police escort requirements. |

## Additional Comments

The route is wide enough to allow the modules to pass, unfortunately we cannot take the most direct route due to narrow lights on the A27 so we would need to travel via Portsmouth.

There is a chance the police may escort within Sussex area with charges applicable.

The final 2 miles may need a parking suspension, when I visited the route was ok and passable but there was a lot of arras more vehicles could have parked.

The site is greenfield at the moment so a new entrance will need to be created.



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Modular Movements
44 Newdown Road
South Park Industrial Estate
Scunthorpe
North Lincolnshire
DN17 2TX
[redacted]

MODULAR
MOVEMENTS




**The proposed site.**



ARUN DISTRICT COUNCIL LU/144/22/DOC

Modular Movements
44 Newdown Road
South Park Industrial Estate
Scunthorpe
North Lincolnshire
DN17 2TX
[redacted]

MODULAR
MOVEMENTS



**Delivery road.**



ARUN DISTRICT COUNCIL LU/144/22/DOC

Modular Movements
44 Newdown Road
South Park Industrial Estate
Scunthorpe
North Lincolnshire
DN17 2TX
[redacted]

MODULAR
MOVEMENTS



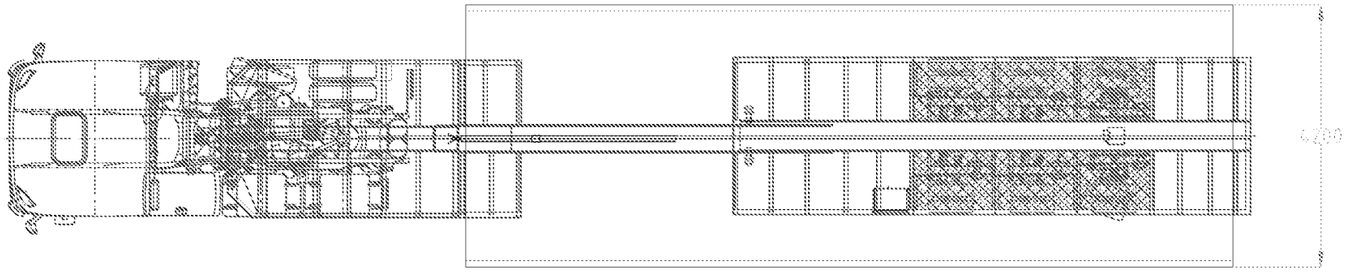

**Map showing the actual delivery road and site just above Rosemead pk.**



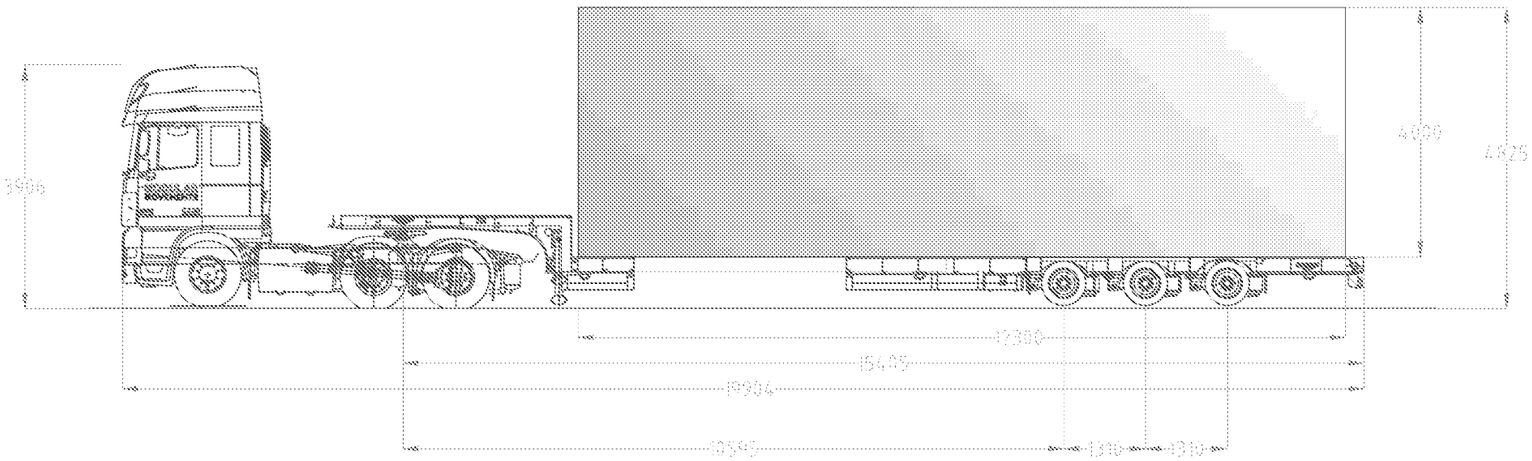
ARUN DISTRICT COUNCIL LU/144/22/DOC

DO NOT SCALE.
IF IN DOUBT ASK.

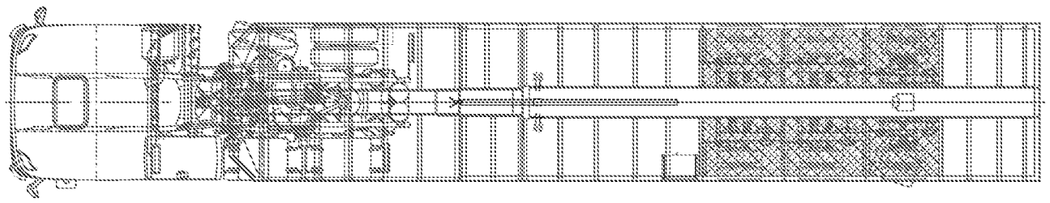
## Plan of Laden Rig (12m x 4.2m)



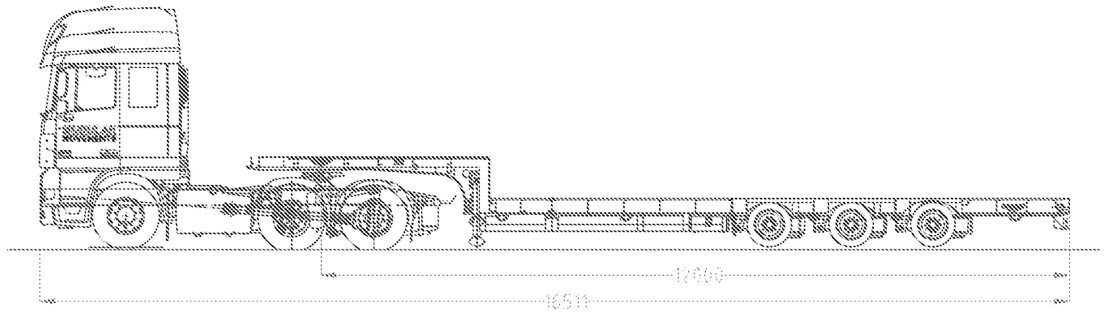

## Elevation of Laden Rig on Broshuis 3 axle trailer (12m x 4.2)




## Plan of Unladen Rig on Broshuis 3 axle Trailer



## Elevation of Unladen Rig on Broshuis 3 axle Trailer




| Key to Swept Path:- | |
|---|---|
| ..... | Wheel Track (Access) |
| ..... | Wheel Track (Egress) |
| ..... | Vehicle Centre & Travel Direction |
| ——— | Outer Path of Vehicle body |
| ▨ | Path of Cargo |
| ..... | 200mm Clearance of Cargo |

NOTES:

THIS DRAWING IS BASED ON OUR SPECIFIC VEHICLE CONFIGURATIONS WHICH IN TURN IS BASED ON INFORMATION SUPPLIED BY VEHICLE MANUFACTURERS AND HAS BEEN PRODUCED BY MSERV LTD FOR THE PURPOSE OF DEMONSTRATING FEASIBILITY OF ACCESS TO A PARTICULAR SITE.
WE HAVE MADE REASONABLE ENDEAVOURS TO ENSURE IT'S ACCURACY, HOWEVER ULTIMATE RESPONSIBILITY REMAINS WITH THE ROAD HAULIER.

RIG DETAIL

| Rev | By | Description | Date |
|---|---|---|---|
| - | - | - | - |


MODULAR MOVEMENTS

44 Newdown Rd, Southpark Industrial Estate,
Scunthorpe, DN17 2TX

Working in Partnership with...

254 Moorfield Lane, Scarisbrick, Lancs, L40 8JF
Telephone: 07486 122604



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| | |
|---|---|
| Project | Vehicle Dimensions |
| Title | Vehicle Dimensions |
| Client | Modular Movements |

| Scale (@A1) | Date | Drawn | Checked |
|---|---|---|---|
| 1:50 | 01/11/2019 | GO | AS |

Drawing Nr

Project Nr - Origin - Vol - Lev - File Type - Role -
191219-MS-ZZ-ZZ-DR-W-7000-001

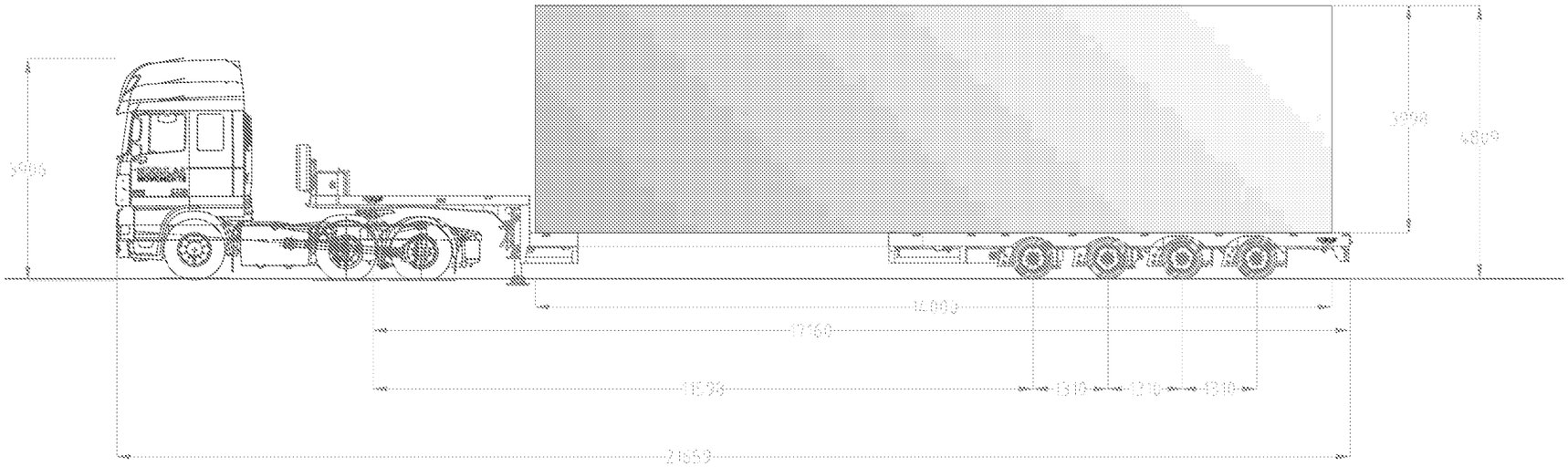
| Rev | Suitability |
|---|---|
| - | - |

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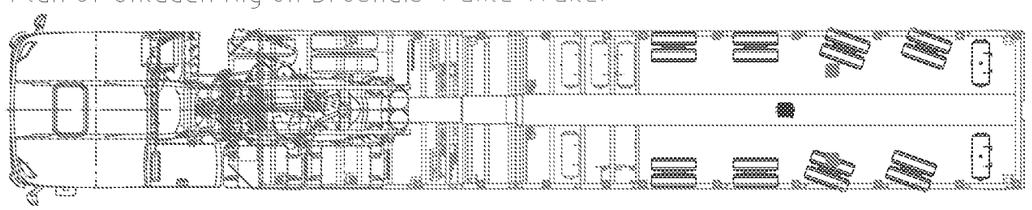
DO NOT SCALE.
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## Plan of Laden Rig (14m x 3.2m)

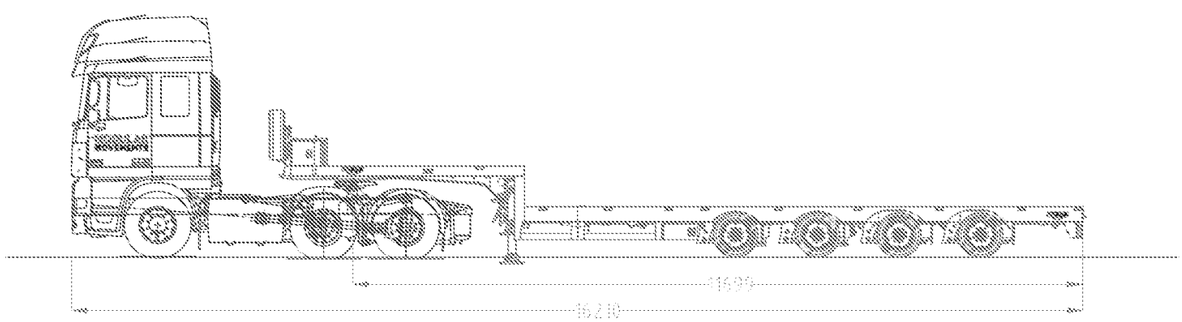





## Plan of Unladen Rig on Broshuis 4 axle Trailer



## Elevation of Unladen Rig on Broshuis 4 axle Trailer




| Key to Swept Path:- | |
|---|---|
| ..... | Wheel Track (Access) |
| ..... | Wheel Track (Egress) |
| ..... | Vehicle Centre & Travel Direction |
| ——— | Outer Path of Vehicle body |
| ▨ | Path of Cargo |
| ..... | 200mm Clearance of Cargo |

NOTES:

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WE HAVE MADE REASONABLE ENDEAVOURS TO ENSURE IT'S ACCURACY, HOWEVER ULTIMATE RESPONSIBILITY REMAINS WITH THE ROAD HAULIER.

RIG DETAIL

| Rev | By | Description | Date |
|---|---|---|---|
| - | - | - | - |


MODULAR MOVEMENTS

44 Newdown Rd, Southpark Industrial Estate,
Scunthorpe, DN17 2TX

Working in Partnership with...

254 Moorfield Lane, Scarisbrick, Lancs, L40 8JF
Telephone: 07496 122404



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| | |
|---|---|
| Project | Vehicle Dimensions |
| Title | Vehicle Dimensions |
| Client | Modular Movements |

| Scale (@A1) | Date | Drawn | Checked |
|---|---|---|---|
| 1:50 | 01/11/2019 | GO | AS |

Drawing Nr

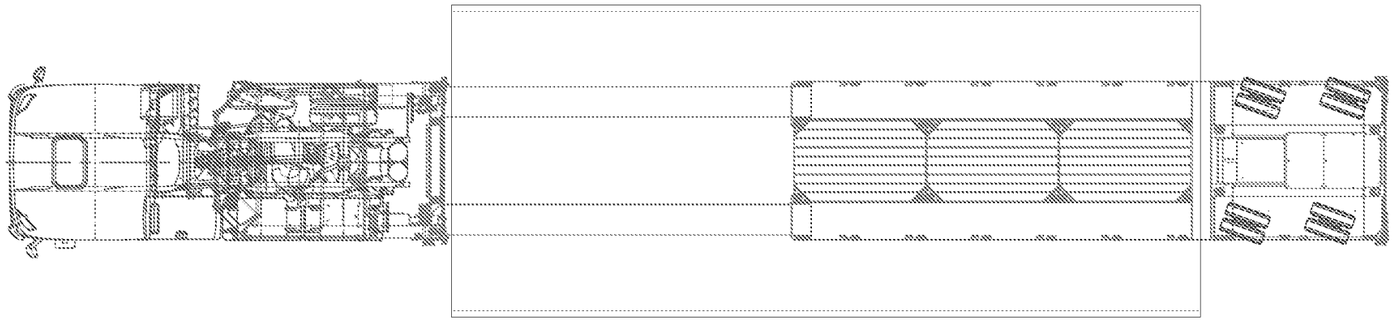
Project Nr - Origin - Vol - Lev - File Type - Role -
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| Rev | Suitability |
|---|---|
| - | - |

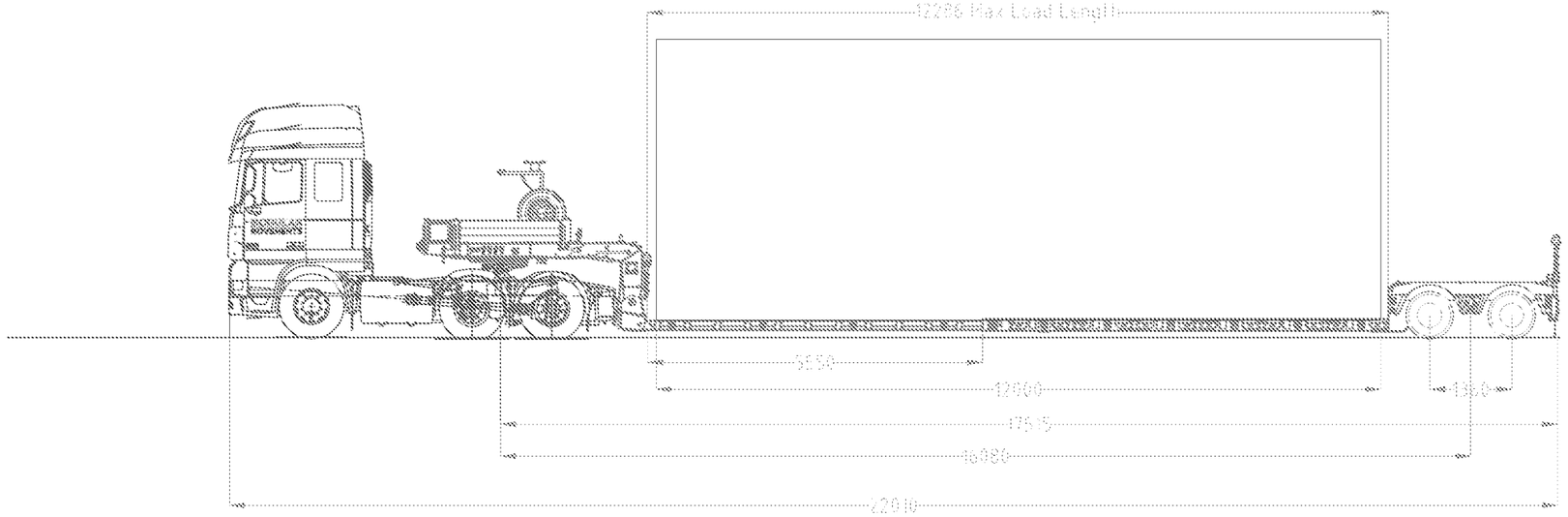
ARUN DISTRICT COUNCIL LU/144/22/DOC

DO NOT SCALE.
IF IN DOUBT ASK.

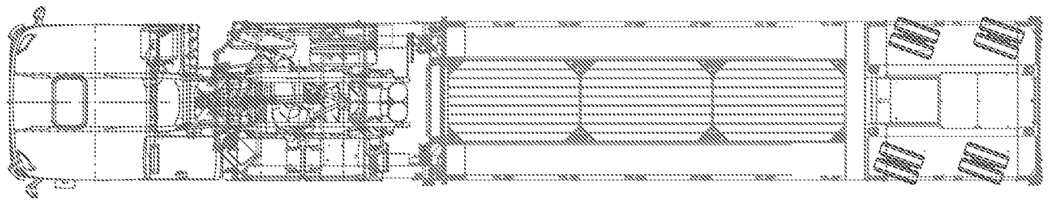
## Plan of Laden Rig Kassbohrer SLL2 Lowloader(12m x 5m)



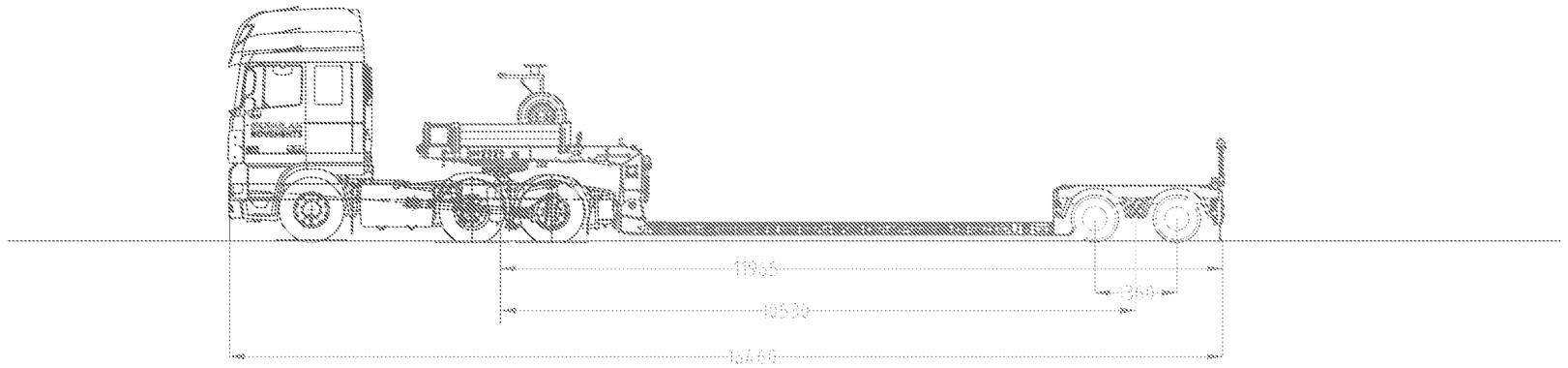
## Elevation of Laden Rig on Kassbohrer SLL2 Lowloader (W12m x H4.65)




## Plan of Unladen Rig on Kassbohrer SLL2 Lowloader



## Elevation of Unladen Rig on Kassbohrer SLL2 Lowloader




| Key to Swept Path:- | |
|---|---|
| ..... | Wheel Track (Access) |
| ..... | Wheel Track (Egress) |
| ..... | Vehicle Centre & Travel Direction |
| ——— | Outer Path of Vehicle body |
| ▨ | Path of Cargo |
| ..... | 200mm Clearance of Cargo |

NOTES:

THIS DRAWING IS BASED ON OUR SPECIFIC VEHICLE CONFIGURATIONS WHICH IN TURN IS BASED ON INFORMATION SUPPLIED BY VEHICLE MANUFACTURERS AND HAS BEEN PRODUCED BY MSERV LTD FOR THE PURPOSE OF DEMONSTRATING FEASIBILITY OF ACCESS TO A PARTICULAR SITE.
WE HAVE MADE REASONABLE ENDEAVOURS TO ENSURE IT'S ACCURACY, HOWEVER ULTIMATE RESPONSIBILITY REMAINS WITH THE ROAD HAULIER.

RIG DETAIL

| Rev | By | Description | Date |
|---|---|---|---|
| - | - | - | - |

MODULAR MOVEMENTS

44 Newdown Rd, Southpark Industrial Estate,
Scunthorpe, DN17 2TX

Working in Partnership with...

254 Moorfield Lane, Scarisbrick, Lancs, L40 8JF
Telephone: 07496 122404

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| | |
|---|---|
| Project | Vehicle Dimensions |
| Title | Vehicle Dimensions |
| Client | Modular Movements |

| Scale (@A1) | Date | Drawn | Checked |
|---|---|---|---|
| 1:50 | 01/11/2019 | GO | AS |

Drawing Nr
Project Nr - Origin - Vol - Lev - File Type - Role -
191219-MS-ZZ-ZZ-DR-W-7000-003

| Rev | Suitability |
|---|---|
| - | - |

ARUN DISTRICT COUNCIL LUI/44/22/DOC

# Site Survey Report.

# Boklok – Fitzalan Road Littlehampton Revised 2

| | |
|---|---|
| **Job/Order Number:** | n/a |
| **Survey Completed by:** | **Rodney Isherwood –** [redacted] |
| **Date survey requested:** | **21/04/22** |
| **Date survey completed:** | **23/04/22** |

## Site details

| | |
|---|---|
| **Site Name/ID:** | **Land off Fitzalan Road** |
| **Site Address:** | **Littlehampton, West Sussex, BN17 6AR** |
| **1st Contact** | **Rick butters –** [redacted] |
| **2nd Contact** | **Andrew Skelton –** [redacted] |

## Module Details

| | |
|---|---|
| **Type / Size and Quantity of Unit** | **Unit Size Based on – 10.0m Long x 5.0m wide** |

## Vehicle Details

| | Recommendations | Supply/Responsibility |
|---|---|---|
| **Type of vehicle required** | **STGO cat 1 + Flat / Step-Frame Trailers & Wafer Deck + Escort Vehicles** | MM |
| **Type of lifting/Cranage** | Mobile Crane | Client |
| **Additional Requirements (e.g pads/banksman)** | Yes | To agree |

Note surveys are provided on the information given and are based on the mapping available at the time, surveys will always need to be checked with a visit to the site and ideally a further visit near to delivery as roads and street furniture are in a constant state of update and may well change.



ARUN DISTRICT COUNCIL LU/144/22/DOC

## Route Details

| | |
|---|---|
| **Driver Note:**<br><br>**On entering the A259 at Chichester, just after passing the Mercedes Dealer, there's a large on the lefthand side.** | **A50-M1-M25-M3-M27-A27- until reaching the Chichester Bypass, follow A27 until reaching the 4th R/about, take 3rd exit onto A259-Bognor Rd, towards Bognor Regis, at 2nd R/about take 1st exit onto North Bersted Bypass A259 towards Bognor Regis, keeping on the A259 follow signs for Littlehampton, at next R/about take 1st exit towards Bognor onto Rowan Way, at next R/about take 1st exit A29 / A259 at next R/about take 2nd exit A259 Purley Way, follow A259 towards Littlehampton, after crossing over the river Arun, at next R/about take 1st exit onto Littlehampton Bypass, follow A259 through to the 2nd R/about take 3rd exit onto Fitzalan Road, continue to the next R/about, if delivering Show House, take 1st exit into the College, follow road around to the crane, delivering houses, take 2nd exit from the R/about, just before the next pedestrian crossing, turn left onto the haul road to site.**<br>**Driver Note:** |

## Site & Delivery Assessment

| Access/Delivery Restrictions | Yes | No | Comment |
|---|---|---|---|
| **Height / Width Restrictions** | | No | |
| **Road Restrictions** | | No | |
| **Waiting Restrictions** | Yes | | **No room off the site for waiting vehicles.** |
| **Turning Restrictions** | | No | **T/A** |
| **Parking Restrictions** | | No | |
| **Traffic Management required** | Yes | | **Escort drivers may possibly be required to control vehicles on entering and leaving the College grounds.** |
| **Track Way Recommended** | | No | |
| **Street furniture removal** | Yes | | **Recommendation the plastic bollards and sign post's at the Retail Park exit, on Rowan Way, Bognor Regis, as the width from the bollards to the kerb is 5.0m wide** |

Note surveys are provided on the information given and are based on the mapping available at the time, surveys will always need to be checked with a visit to the site and ideally a further visit near to delivery as roads and street furniture are in a constant state of update and may well change.

| Site delivery details | Status | Enabling Works Required |
|---|---|---|
| **Road/Track Conditions on site** | TA | |
| **Entrance width restrictions** | No | **New entrance required for the house's project.** |
| **Obstructions on site** | No | |
| **Any alternative route** | No | **All other routes have major road work's taking place.** |

| Site viewed as | Yes | No | Comment |
|---|---|---|---|
| **Existing site** | | No | |
| **Work started** | | No | |
| **Greenfield** | Yes | | |
| **Under construction** | | No | |
| **Plans supplied** | yes | | basic |
| **Other** | | No | |

| Permits | Yes | No | Comment |
|---|---|---|---|
| **Police Permit required Permit restrictions.** | yes | | **MM responsibility, no deliveries during rush hours or hours of darkness.** |

## Additional Comments

Disclaimer for site survey's

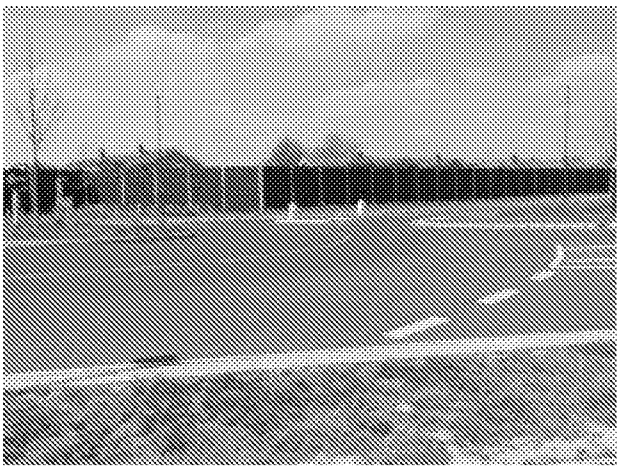
The Survey is to be used with Modular Movements and must not be distributed to any other Haulier. Modular Movements will not be held responsible for any Damage to load or property or be responcible for any Charges reculting in the failure of the site / client to carry out recommended enabling works to ensure access. Access must be suitable for road going vehicles and be clear of debris and loose materials e.g. mud/loose stone, gravel etc which will/may prevent vehicles from gaining traction particularly on any slopes or temporary surfaces.

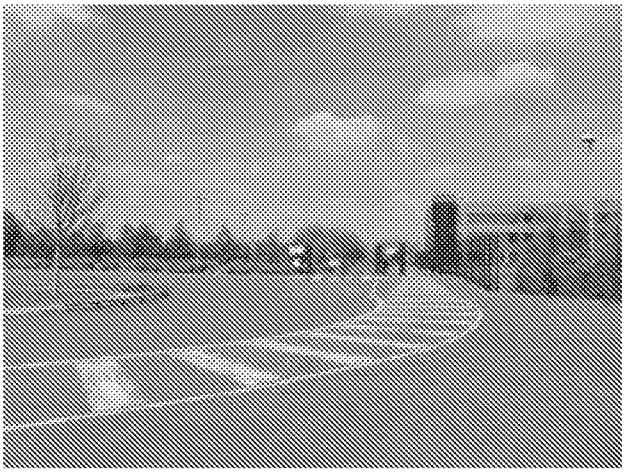
## Site Pictures





**A259 Bollards oposite Retail Park Exit Bognor Regis, width between the bollard and kerb 5m grass verge side.**





**Show House's access on the right off the island – Crane position and off loading area**

Note-surveys are provided on the information given and are based on the mapping available at the time, surveys will always need to be checked with a visit to the site and ideally a further visit near to delivery as roads and street furniture are in a constant state of update and may well change.



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**Show House's site**



**Exit route from Collage grounds**





**For the houses delivery, access to site, take second exit from R/about, just after lamp post and before the crossing turn left onto haul road, follow to the site.**

Note-surveys are provided on the information given and are based on the mapping available at the time, surveys will always need to be checked with a visit to the site and ideally a further visit near to delivery as roads and street furniture are in a constant state of update and may well change.



ARUN DISTRICT COUNCIL LU/144/22/DOC

# APPENDIX E

# APPENDIX: CLOCS Standard for construction logistics: Managing work related road risk (WRRR)

| CLOCS Requirement | Further Information |
|---|---|
| **Operations** | |
| **Quality operation** – current certification with the Fleet Operator Recognition Scheme (FORS) Bronze accreditation (or equivalent) | www.fors-online.org.uk |
| **Collision reporting** - Conduct collision reporting, investigation and analysis | **Included as part of FORS**. CLOCS Manager is a free collision reporting tool available to all operators: www.clocs-manager.org.uk<br>Free **collision reporting toolkit** available: www.clocs.org.uk/clocs-guides/ |
| **Traffic routing** – adhere to any client specified routes | Follow client instruction |
| **Vehicles** | |
| The following **vehicle safety equipment** shall be fitted to vehicles over 3.5 tonnes: | **CLOCS Guide:** Vehicle safety equipment www.clocs.org.uk/clocs-guides/ |
| **Prominent signage** warning other road users not to get too close to the vehicle<br>**Side-guards** on both sides of exempt vehicles<br>**Class V and VI ' close proximity' mirrors** to exempt vehicles<br>**Close proximity warning system and/or camera system and/or vision-aid fitted to HGVs**<br>Left turn **audible vehicle manoeuvring warnings** | Further information and discounts on stickers and other equipment available through FORS:<br>www.fors-online.org.uk/cms/contractors/fors-offers/<br>www.fors-online.org.uk/cms/discount-equipment/<br>Other services:<br>www.fors-online.org.uk/cms/discount-services/ |
| **Drivers** | |
| **Approved driver training** in vulnerable road user safety | **SUD courses** and other approved courses detailed on FORS website:<br>www.fors-online.org.uk/cms/training-discounts/ |
| **Driver licences checked** through DVLA | Free through **DVLA online check**<br>**Discounts** on DVLA license checking services available through FORS:<br>www.fors-online.org.uk/cms/discount-services/ |



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# APPENDIX F

It is the contractor's policy that wherever possible the method of travelling to and from site should have as low environmental impact as is practicably possible.

This guide has been produced to enable all staff and visitors to make the best decision regarding the most environmentally conscious method of transport.

The contractor would encourage either cycling or the use of public transport as these are the most viable and environmentally conscious ways to access the site.



**Where to find us?**
Richmond College,
Egerton Road, Twickenham TW2 7SJ

## OTHER TRAVEL METHODS

**Taxi** There are a number of companies within London offering green taxi services. These companies use hybrid vehicles and carbon off-setting to deliver an environmentally conscious option, but it should be noted that the numbers currently available are limited. Single occupant use of taxis should be avoided.

[redacted]

**Car/Car sharing** is an ideal way to reduce the environmental impact of travelling to an access point for one of the public transport methods. www.liftshare.com

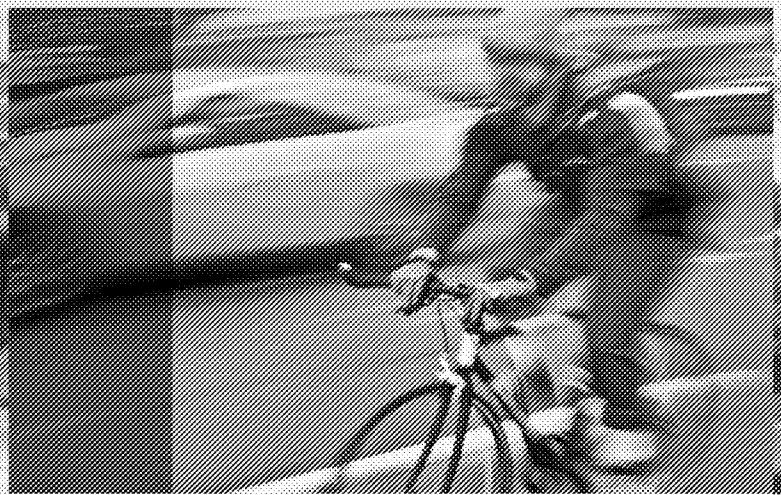
**Air** Use of air travel is not recommended unless travel by other methods given is impractical

# GREEN TRAVEL GUIDE

# Richmond College

**Egerton Road, Twickenham, TW2 7SJ**



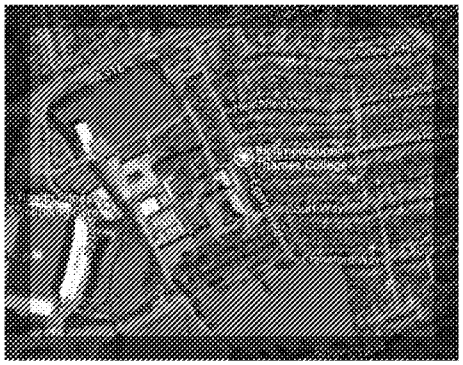




# TRAVEL OPTIONS

There is no need to drive or take a cab. Why not use one of the following options:

- **Walk**
- **Cycle**
- **Bus**
- **Underground**
- **National Rail service**



**Where to find us?**
Richmond College,
Egerton Road, Twickenham TW2 7SJ





# TRAVEL OPTIONS

**Walk**

The building is a 14 minute walk from Twickenham Station

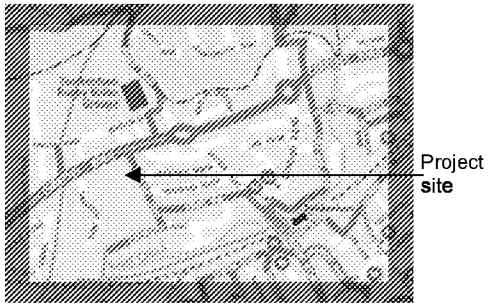
**Underground**

Closest Tube Stations:

- Richmond (District Line)

**Cycling**

There are many "main road cycle routes" (blue) and "off-road and quite cycle routes" (Brown) in the local area, meaning conditions are quite suitable for cycling to the project site.





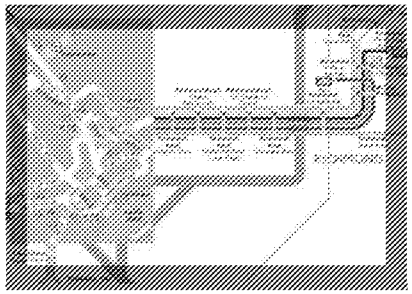





# TRAVEL OPTIONS

**Coach & Bus**

**Buses servicing the area include:**
33, 110, 267, 281, 290, 490, H22, R68 and R70



**National Rail Service**

National rail services are available at:

- Twickenham Station

Please see the National Rail website to plan your route from your start destination:

**www.nationalrail.co.uk**

For further assistance in planning your journey please visit:

**www.tfl.gov.uk**



# APPENDIX G

SJA trees
ARBORICULTURAL PLANNING CONSULTANTS

17 CROSS ROAD
TADWORTH
SURREY KT20 5ST

[redacted]

# ARBORICULTURAL METHOD STATEMENT

## For Protection of Trees

## at

## Land south of Littlehampton Academy

## Littlehampton

## Sussex



**March 2021**

SJA ams 20463-01

ARUN DISTRICT COUNCIL LU/144/22/DOC

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# 1. Statement of purpose

1.1. The purpose of this method statement is to detail what actions need to be taken to ensure the Erection of 112 residential units with access from Fitzalan Road, associated open space, hard and soft landscaping works, internal roads/footways, car and cycle parking, substation, bin store and engineering works at the land south of Littlehampton Academy does not cause any unacceptable damage to the trees to be retained within this site and in the adjacent properties.

1.2. This method statement has been drawn up to comply with the recommendations of British Standard BS 5837:2012, *Trees in relation to design, demolition and construction – Recommendations*.

1.3. Details of the trees can be found in the tree survey schedule at **Appendix 2** of the report to which this method statement is also appended. Their locations are shown on the tree protection plan (SJA TPP 041) at **Appendix 3** of the same report. The tree protection plan (and therefore this method statement) is based on the following drawings:

- ECE Architecture site plan (ref: LTH-ECE-ZZ-ZZ-SK-A-SL-5000 P09)
- AKS Ward drainage plan (ref: LLA-AKSW-XX-XX-DR-C-9201-P01)
- AKS Ward surface model plan (ref: LLA-AKSW-XX-XX-DR-C-9220-P02)
- Neil Tully Associates hard landscape plan (ref: LTH-NTA-XX-00-DR-L-0502/0503)



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1.4. The key words and phrases used in this statement are defined in ***Table 1*** below.

| | |
|---|---|
| Arboricultural consultant | Arboricultural expert instructed by the developer to oversee the retention and protection of trees adjacent to the development site. |
| Arboricultural monitoring | Regular inspections of retained trees by the arboricultural consultant, in order to monitor their health and condition; and to inspect the effectiveness of the tree protection measures implemented. |
| Arboricultural supervision | Pre-arranged attendance on site of appointed arboricultural consultant for the duration of specific construction activities that could otherwise result in unacceptable damage to retained trees. Whilst on site the consultant will control, supervise and where appropriate assist in the undertaking of these activities. |
| Construction Exclusion Zone ('CEZ') | Area based on the root protection area (RPA), normally surrounded with protective fencing, from which access is prohibited during development works. |
| Ground boarding | Temporary ground covering, designed to prevent compaction of soil in which significant roots of retained trees are growing. |
| Protective fencing | Temporary fencing, erected for the duration of demolition and construction activities; designed to prevent access and disturbance to the trunks and root protection areas of trees. |
| Pruning | The removal of living or dead parts of a tree, especially branches, to reduce size, to maintain shape, health, safety, or to regulate growth. |
| Root Protection Area ('RPA') | The minimum area around a tree deemed to contain sufficient roots and rooting volume to maintain the tree's viability, and where the protection of the roots and soil structure is treated as a priority. |
| Tree Protection Plan ('TPP') | Drawing based upon the finalised proposals; showing trees for retention and illustrating the tree and landscape protection measures. |

***Table 1 Key words & Phrases 1***

1.5. This statement is designed to reflect the principles of the proposed layout only insofar as these relate to the protection of trees to be retained and should **not** be read as a definitive engineering or construction method statement for this development.[1]

## 2. Planning and communication

2.1. Unless otherwise agreed with the Local Planning Authority (LPA), the following actions are to be taken, in the order specified in the Sequence of Works at ***Table 2***.

2.2. The developer will appoint an arboricultural consultant to oversee all aspects of tree care and protection for the duration of construction works.

2.3. Prior to the commencement of works, the project manager will send copies of any construction method statements that might have implications for existing trees to

[1] Reference should be made to the architect or structural engineer over any matters of construction detail, specification, engineering performance standards or regulatory requirements, relating to structures, surfaces or underground services to be constructed. As arboricultural consultants, Simon Jones Associates Ltd. can accept no liability for any matters relating to the structural integrity or engineering performance of structures, surfaces or underground services described, proposed or eventually constructed. The responsibility for satisfying any Health & Safety requirements relating to any operations described in this method statement remains with those commissioning or undertaking the operations concerned.



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the arboricultural consultant for his comments. The arboricultural consultant will liaise with the project manager to ensure that there are no conflicts between the construction method statements and this arboricultural method statement.

2.4. Prior to the start of any site clearance, ground preparation, or construction works the developer will convene a pre-commencement site meeting. This shall be attended by the developer's contract manager or site manager, the fencing/boarding contractor, the groundwork contractor(s) and the arboricultural consultant. The LPA tree officer will be invited to attend. If appropriate, the tree felling/surgery contractor should also attend. At that meeting contact numbers will be exchanged, and the methods of tree protection outlined in this statement shall be fully discussed, so that all aspects of their implementation and sequencing are made clear to all parties. Any clarifications or modifications to this statement required as a result of the meeting shall be circulated to all parties in writing.

2.5. The developer will immediately inform the arboricultural consultant if at any time during site clearance or construction the site manager or agent is replaced or transferred. The arboricultural consultant will convene a site meeting with the incoming/replacement site manager, to be held within five working days, to explain all outstanding tree protection measures detailed in this method statement.

2.6. A copy of this method statement shall be supplied to all site personnel who have control over works of any nature within the Root Protection Areas (RPAs) of trees to be retained, or within the footprints of their canopies. The contractor will provide adequate instruction on its implementation for all relevant staff. This instruction will be carried out by, or to the approval of, the arboricultural consultant.

| Order | Works | Details at Section: | Arb. supervision required: |
|---|---|---|---|
| 1 | Pre-commencement site meeting | 2 | Yes |
| 2 | Removal of trees nos. 1, 2, 3, 4, 5, G2, G6 and H1 | 3 | - |
| 3 | Erection of protective fencing | 5 | Yes |
| 4 | Construction of permanent hard surface within RPAs of trees nos. 5, 7, 9, 12, 13, 14 and 16 | 7 | Yes |
| 5 | Clearance of machinery/materials from site, reinstatement and landscaping. | 8 | - |
| 6 | Removal of protective fencing. | 8 | - |

***Table 2: Sequence of works (relevant to tree protection)***



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## 3. Site clearance

3.1. No clearance of trees or other vegetation shall be undertaken until after the pre-start meeting and after the erection of the tree protection fencing (see below).

3.2. If any vegetation clearance is required behind the line of the protection fencing this will be made clear at the pre-start meeting and arrangements will be made to **undertake this prior to the fencing's erection, under the supervision of the arboricultural consultant, who will ensure it doesn't cause any soil compaction or damage to the** roots of trees to be retained.

3.3. The five individual trees (nos. 1, 2, 3, 4 and 5), three groups of trees and one hedgerow are to be removed shall be felled and disposed of.

3.4. Stumps of those trees that are within the RPAs of trees to be retained shall either be left in place or shall be ground out.

3.5. Except within the RPAs of trees to be retained, all other vegetation to be removed may be cut down or grubbed out as appropriate. Within the RPAs of trees to be retained, vegetation will be cut by hand to ground level and stumps will be either left in place or ground out with a lightweight self-powered stump grinding machine. No excavators, tractors or other vehicles will enter the RPAs.

## 4. Ground preparation

4.1. No ground preparation or excavation of any kind, including topsoil stripping and levelling or re-profiling of soil, shall be undertaken prior to the pre-start meeting and after the erection of the tree protection fencing (see below). Thereafter there shall be no unsupervised excavation within the RPAs of trees to be retained.

## 5. Protective fencing

5.1. No site clearance, ground preparation, or construction shall commence on site, and no demolition or construction vehicles or plant will enter the site until the RPAs of the trees to be retained have been safeguarded by the erection of protective fencing



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to the specification recommended in BS 5837: 2012, Section 6.2.2, as shown in Figure 2 of that document (see ***Figure 1*** below).

5.2. The protective fencing will be located in the positions shown by the **continuous bold blue lines** on the TPP.

5.3. The fencing shall be at least 2.1m in height, comprising a scaffolding or a timber post and rail framework supporting either a minimum of 20mm exterior grade ply or other robust man-made boards, or standard anti-**climb 'Heras' welded mesh fence** panels, fixed to each other with at least two clamps, and secured with anti-lift devices to concrete or plastic bases (footings) that are pinned at least 450mm into the ground with lengths of scaffold tube.

5.4. Scaffolding construction shall be to BS EN 12811-1:2003; uprights shall be at minimum 3.5m centres and every other one shall be supported on the side closest to the trees by struts braced to the ground at an angle of 45°. If used, **'Heras' panels shall** be secured to two cross members between the uprights with heavy-duty cable ties. **Notices stating "Tree Protection Zone, Keep Out!" will be attached** to every third panel with cable ties.



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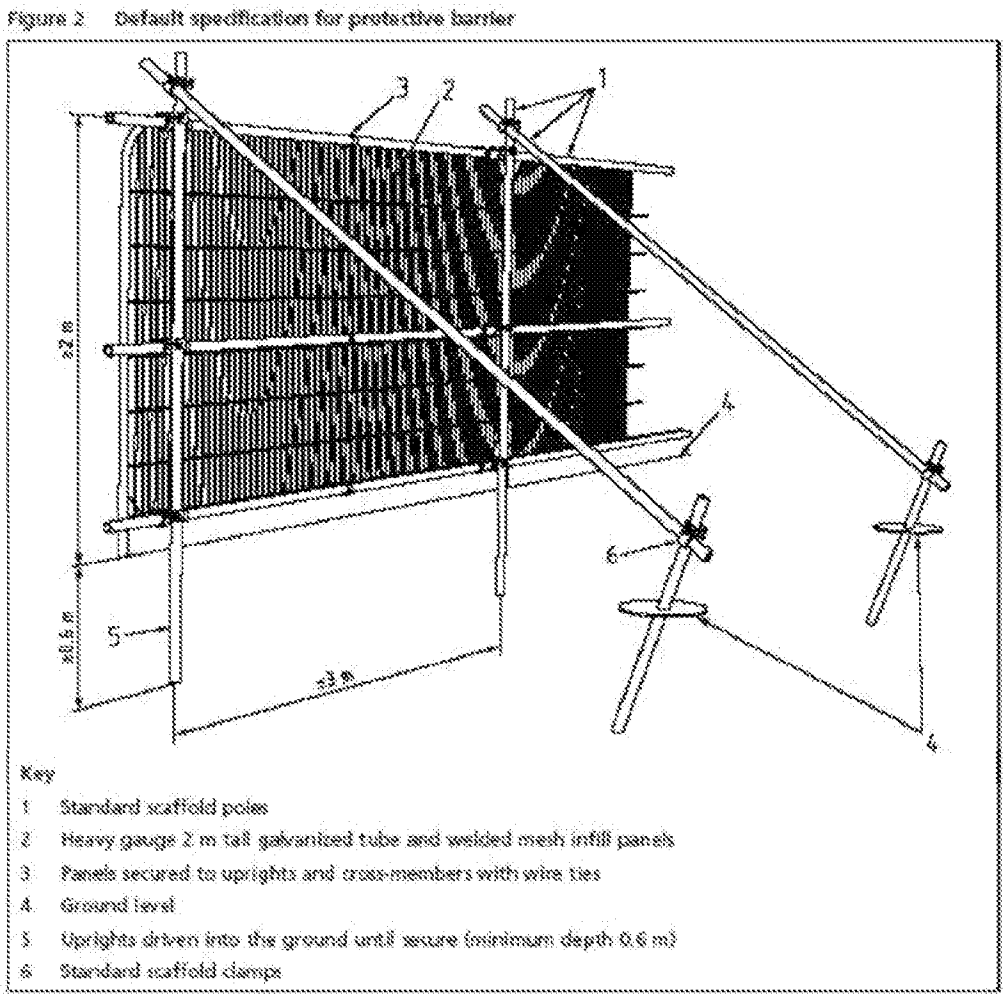



***Figure 1 Protective fencing.***
***(Based on Figure 2, BS 5837: 2012)***

5.5. **Exclusion Zones ("CEZs") behind the fencing: no** equipment or materials will be stored, and no vehicles, plant or personnel shall enter these areas. Ground levels will not be changed within them, and existing vegetation and topsoil will be left undisturbed.

5.6. Areas for the storage of materials shall be outside the CEZs. Oil, bitumen, diesel, and cement shall not be stored, mixed or discharged onto the ground within 10m of the trunks of any trees. Areas for the storage or mixing of such materials shall be agreed at the pre-commencement meeting.

5.7. No notice boards, or power or telephone cables, shall be attached to any of the trees. No fires shall be lit where their flames could extend to within 5m of any parts of trees.



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5.8. In the event that the protective fencing or ground boarding is accidentally damaged or knocked over, those sections will immediately be cordoned off with high visibility plastic mesh fencing. The damaged sections then will be repaired or replaced within 48 hours (2 working days). All instances of damage and re-instatement shall be recorded and immediately reported to the arboricultural consultant.

5.9. Once the protective fencing has been erected, the arboricultural consultant will visit the site and inspect it. He will record the position of the fencing and the condition of the retained trees. If it complies with this statement, the arboricultural consultant will 'sign off' the fencing to the contractor and copy this (in writing) to the developer. (See also 'Supervision and Monitoring' below.)

5.10. The protective fencing will not be moved or re-located without the prior approval of the arboricultural consultant. It will only be removed once all construction works are completed: the arboricultural consultant will be informed in advance of when it is intended to remove the fencing.

## 6. Installation of underground services

6.1. A review of the AKS Ward drainage plan demonstrates that no drainage routes are to be located so that no excavation is required within RPAs. All underground service routes shall also be located so that no excavation is required within RPAs.

6.2. In the unlikely event that the service routes cannot be located outside of the RPAs of retained trees, underground services shall be installed in one of the following two ways, in accordance with NJUG guidelines[2].

6.3. **Trenchless technique**. This involves thrust boring or directional drilling of service routes to avoid all excavation and disturbance of soil in which roots are likely to be growing. The pits for starting and receiving the boring machinery shall be located outside the RPAs of any retained trees. The bore shall be made at a minimum depth of 600mm below ground level. Lubrication of the 'mole' shall be with water, rather than with oil or other lubricants which could contaminate the soil.

[2] National Joint Utilities Group. Volume 4, GUIDELINES FOR THE PLANNING, INSTALLATION AND MAINTENANCE OF UTILITY APPARATUS IN PROXIMITY TO TREES", Issue 2: 16th November 2007.



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6.4. **Manual excavation**. This involves hand digging of a continuous trench to a depth of at least 750mm, under arboricultural supervision; with the careful retention and protection of all roots of a diameter greater than 25mm, as detailed elsewhere in this method statement. If soil conditions and/or root distribution render it appropriate, the arboricultural consultant may require hand excavation to extend to a greater depth than this.

6.5. Such an excavation will be undertaken using a pick or a hand fork to loosen the soil, which will then be cleared from roots using a compressed air soil pick and removed using shovels or trowels. All roots encountered of less than 25mm diameter will be cut cleanly with secateurs or a sharp pruning saw.

6.6. The faces of all excavations that contain exposed roots will be covered with hessian sacking and be kept moist at all times; they will not be left exposed to frost, wind or direct sunlight.

6.7. Protection of retained roots shall be carried out in the following way. A 50:50 mix of sharp sand and composted organic matter shall be prepared and packed around the root within a wrapping of Hessian (builders' sand will not be used as it has a high salt content and may be toxic to trees). The layer of sharp sand and compost shall be not less than 50mm in thickness around the full circumference of the root section. If concrete is to be poured or placed around these roots, they shall also be wrapped with an impermeable polythene membrane. Both the hessian wrapping and the polythene membrane shall be secured by degradable ties, in a manner that will not constrict future growth of the root.

6.8. Excavation beneath 750mm depth (or greater if the arboricultural consultant has deemed it appropriate) may be undertaken by an excavator working from outside the RPAs, provided that this is supervised to prevent any retained roots being damaged.

## 7. Construction of permanent hard surfaces

7.1. A review of the AKS Ward surface model and Neil Tully hard landscape plans indicates that hard surfaces are proposed within the RPAs seven trees to be retained. The encroachments can be separated into three types: the parking bays within the



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RPAs of trees nos. 13 and 16, the footpath within the RPAs of poplars nos. 12 to 14, and the kerb haunching within the RPAs of trees nos. 6, 7 and 9.

Proposed parking bays

7.2. A review of the existing and proposed levels within the RPA of poplar no. 13 show that the proposed levels are 30mm above the existing levels. The proposed permeable concrete block paving and sub-base will be located entirely within the footprint of the existing hard surface, as such, the new surface can be founded no deeper than the sub-base of the existing hard surface, consequently no root severance will occur.

7.3. The parking bay within the RPA of beech no. 16 covers 2.4m$^2$ or 1.1% of its RPA, a review of the exiting and proposed levels shows that the proposed surface will be 240mm below the existing levels, as such, excavation will be necessary.

7.4. To minimise the potential impacts, the excavation shall be undertaken manually under the direct supervision by an arboricultural consultant. If roots larger than 25mm diameter are encountered they shall be retained and protected, and the pile or pad will be relocated. Any smaller roots shall be cut cleanly by the arboricultural consultant. If roots larger than 25mm diameter are accidentally damaged, the arboricultural consultant will assess the damage and carry out any necessary remedial works. He will report to the client the extent of the damage and any long-term effect to the tree's stability or health.

7.5. Exposed roots will be covered with sand or hessian sacking and be kept moist at all times; they will not be left exposed to frost, wind or direct sunlight.

7.6. A review of the exiting levels and the proposed level of the proposed footpath within RPAs show that the proposed levels are above the existing levels in the east section by 130mm, however, the proposed levels drop to 30mm below existing levels in the western sections, however, the hard landscape plan states that within RPAs the surface will be founded above the existing levels.

Proposed footpath

7.7. The footpath is to be self-bound gravel with timber edging, there is insufficient evidence to suggest that the footpath design can be above the existing soil level, however, the degree of potential excavation is likely to be very limited (no greater than



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250mm) and given the small size of encroachment and the physiological health of the trees, there is no reason to suggest that tree will not tolerate the proposed works.

Proposed road haunching

7.8. The proposed site access from Elmgrove Road is located outside of the RPAs of the off-site trees nos. 6, 7 and 9, however, to accommodate the kerb and road haunching there is likely to be some excavation within the RPAs of these trees. The incursions are minor (no greater than 1.2m$^2$ or 0.7% of the tree RPAs) and subject to the excavation being undertaken manually under the direct supervision of an arboricultural consultant, there is no reason to suggest these specimens will not tolerate the small extent of root severance.

7.9. Construction should be undertaken in dry weather; ideally this should be between May and October when the soil is at its driest and least prone to compaction.

## 8. Fencing, landscaping and reinstatement

8.1. Care will be taken to ensure that fencing, landscaping and reinstatement do not cause any damage to the existing trees. Prior to the commencement of any landscaping works within RPAs the developer will convene a site meeting to be attended by the site manager or agent, the landscape contractor, the fencing contractor and the arboricultural consultant. The methods of tree protection outlined in this section of the arboricultural method statement shall be fully discussed, so that all aspects of their implementation and sequencing are made clear to all parties. Any clarifications or modifications to this statement shall be recorded and circulated to all parties in writing.

8.2. Within RPAs the following points shall be observed:

- Ground levels will not be changed.
- Only lightweight plant or vehicles shall enter the RPAs.
- No fuels or chemicals shall be brought into or stored within these areas.
- Digging (for fence posts etc.) shall be done by hand. Any roots of 25mm diameter and above that are encountered shall not be cut: if such sized roots are found the position of the proposed post will be re-located. Any smaller roots shall be cut



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cleanly. All roots exposed should be backfilled with sharp sand on the same day they are uncovered.

- No parts of any fencing shall be nailed or otherwise attached to any parts of the retained trees.
- Unwanted vegetation shall be removed manually or by using chemicals that cannot damage the roots of the trees.
- No irrigation or drainage pipes shall be installed within RPAs.

## 9. Supervision and monitoring

9.1. Once the protective fencing has been erected, the arboricultural consultant will visit the site and inspect these tree protection measures. In the event that the specification or location of these items does not comply with this method statement, the arboricultural consultant will inform the fencing contractor, and adjustments will be made. Once compliance is achieved, the arboricultural consultant will 'sign off' the tree protection measures to the contractor and copy this (in writing) to the client.

9.2. Throughout the construction process the arboricultural consultant will monitor the condition of the trees, and the integrity and effectiveness of the protective fencing. He will visit the site at appropriate intervals as agreed with the LPA Tree Officer at the pre-commencement meeting, to ensure that the protection measures outlined in this document are adhered to; and will contact the site manager or agent on a weekly basis whilst ground works are being undertaken, and on a fortnightly basis thereafter, to ascertain what works are planned for the coming week and whether any of these require arboricultural input or supervision. Records of all monitoring and supervisory visits will be made and will be forwarded to the client and copied to the LPA.

9.3. The arboricultural consultant shall directly supervise all works that have to be undertaken within RPAs. These include:

- location of protective fencing
- construction of hard surfacing
- (if necessary) installation of underground services



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9.4. The project or site manager will give the arboricultural consultant at least 48 hours written notice of the date of intended construction of any proposed buildings or structures, underground service runs, or areas of hard surfacing that are within the RPAs of any of the trees, so that he/she can attend.

9.5. All drawings or revised drawings issued to the site agent or to sub-contractors, that show details of any works within or abutting RPAs or beneath the crowns of trees are to be referred in advance to the arboricultural consultant to enable him to advise on any changes to the impact on trees that these drawings may cause, and to be able to provide solutions to avoid or minimise any further tree damage. All such drawings will be approved in writing by the arboricultural consultant before works within or abutting RPAs are proceeded with.

9.6. The arboricultural consultant will issue variation orders to the client in the case of any agreed changes to this method statement, and non-compliance notices in any cases of substantial deviation from the statement. These will be recorded in a final completion statement suitable for submission to the LPA if required.

**SJAtrees**

March 2021



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# APPENDIX H

| Ref | Item | Management Control |
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| A | Noise | **General Noise Issues**<br><br>Noise from construction operations and all other sources shall be kept to a minimum at all times. The following general controls are to be applied on site to minimise the effect of the construction activities on the hospital and local residents:<br><br>No shouting on site<br><br>No stereos/radios<br><br>Do not leave plant idling – switch off engines<br><br>Do not leave plant running over night without permission from BoKlok Communities<br><br>Keep plant well maintained and fit plant with silencers<br><br>Control along path of noise from source to receiver e.g. barriers, screening, location of plant;<br><br>Control at Source e.g. silencers, vibration dampers, enclosure, construction method;<br><br>Control at receiver<br>**Working Hours**<br><br>All works and ancillary operations which are audible at the site boundary, or at such other place as may be agreed with the Local Planning Authority, shall be carried out only between the following hours: 08 00 Hours and 18 00 Hours on Mondays to Fridays and 08 00 and 13 00 Hours on Saturdays and at no time on Sundays and Bank Holidays<br><br>Concerned stakeholders shall be informed of any periods of excessive or unusual noise outside operational hours.<br><br>There may be circumstances of emergency deviation from the agreed working hours, if this occurs the local authority will be informed, detailing the number of noisy hours overrun as soon as possible, preferably at the time of the overrun, if not the following working day. At the point of emergency works, the workforce will be re - briefed on noise control and mitigation, where possible, acoustic barriers will be erected to surround the noise producing activity. |



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| | | **Noise Monitoring**<br><br>Noise monitoring will be carried in a risk assessed basis and will likely be attended monitoring. The SHEQ Manager or the Project Environmental Co-ordinator shall collate and analyse the results of noise monitoring. In the event of noise levels exceeding the expected levels for a significant period of time, advice shall be sought from the Noise Consultant<br><br>Any equipment used for monitoring (including hired equipment) shall be maintained and calibrated according to the manufacturers instructions and records of this kept in the Project Environmental File. |
| B | Vibration Control | We aim to avoid and reduce vibration by:<br><br>• Evaluate the potential for vibration and thereby damage;<br>• Monitor conditions before works start;<br>• Inform neighbours;<br>• Minimise effects during works<br>• Monitor vibration levels during the works;<br>• Monitor conditions after works are completed<br>• Adequate maintenance of plant and equipment |
| C | Waste | The Project operates in line with Site Waste Management Plan.<br><br>Where possible, BoKlok are looking to reuse material. The modules arrived in the shrink-wrapped packaging. BoKlok is currently working with the supplier to re-use of recycle this packaging. BoKlok is also investigating the options of using the CL:AIRE code of practise to reuse inert excavated materials derived from site. This CEMP will be updated with further details once finalised and Material Management Plan put into place<br><br>Fulbeck Avenue aims to minimise waste being generated and disposed of by:<br><br>• Using re-usable packaging |



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| | | • Ensuring suitable storage of materials.<br>• Re-using materials both on and off site<br>• Segregating waste materials on site for recycling<br><br>BoKlok and sub-contractors working on its behalf will obtain copies of waste management license and carrier license prior to removing waste from site. All waste shall be disposed of in accordance with the Duty of Care and all other relevant environmental legislation. Periodic audits will be undertaken to ensure compliance with the Duty of Care. The waste transfer note must contain the following information:<br><br>• Name and Address of the waste producer, waste carrier and destination (transfer station or land fill site)<br>• Description of the waste including the European Waste Classification Code(s)<br>• Relevant SIC code to describe activities generating the waste<br>• Container type and quantity; size/ volume/weight<br>• Date waste removed from site<br>• Signatures of the driver and approved person from site<br>• Hazardous Waste Premises Code (hazardous waste only)<br><br>Each contractor must produce a Waste Management Plan prior to commencing work on site that contains predicted quantities of waste for each waste stream. |
| D | Dust | Where it is not possible to eliminate or reduce dust/odour/fume emissions then use the following guidelines:<br><br>• a means of containment must be put in place for example enclosing the areas where dust is created;<br>• dust suppression measures e.g. damping down,<br>• maximum 5 mph speeds on haul roads;<br>• installing a wheel wash;<br>• minimising grinding, cutting;<br>• covering waste skips if there is a likelihood of dusts etc. escaping |



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| | | • maintenance of plant and equipment with regular servicing and report any dark smoke coming from vehicle/plant exhausts. |
| E | Storage of Oils and chemicals | All chemical containers on site shall be correctly labelled, fit for purpose, protected against unauthorised use and securely stored to prevent them being damaged or accidentally spilt.<br><br>Oils and oil type substances are covered by The Control of Pollution (Oil Storage) (England) Regulations 2001.<br><br>Ensure the following:<br><br>• The bund must be sufficient to contain 110% of the maximum contents of any oil container of 200 Litres or more.<br>• Tanks, drums or other containers must be strong enough to hold the oil without leaking or bursting.<br>• The oil container must be positioned away from any vehicle traffic to avoid damage from collision.<br>• A bund or drip tray must be provided to catch any oil leaking from the container or its ancillary pipework and equipment.<br>• Where more than one container is stored, the bund should be capable of storing 110% of the largest tank or 25% of the total storage capacity, whichever is the greater.<br>• The bund base and walls must be impermeable to water and oil and checked regularly for leaks.<br>• Any valve, filter, sight gauge, vent pipe or other ancillary equipment must be kept within the bund when not in use.<br>• All valves / hoses shall be turned off and securely locked when not in use;<br>• An above ground oil store or filling location must not be located within 10 metres of a watercourse or 50 metres of a well or borehole.<br>• Drip trays must be used and spill kits and drain covers kept in close proximity<br>• Drip trays shall be protected to avoid any water entering them. If full of water, drip trays must be emptied in a suitable manner as agreed with the Project SHEQ Manager. No contaminated water can at any circumstances enter any drains.<br><br>Cement & Concrete<br><br>• Designated controlled areas shall be used for minimal cleaning of chutes only. Water from concrete or cement washing-out will not be allowed to enter any drains. |



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| | | • Cleaning and washout water disposal methods must be agreed with the SHEQ Manager or the Project Environmental Co-ordinator before concrete/cement arrives on site<br><br>**All storage of fuel and oil must a sufficient distance away from sensitive receptors** |
| F | Refuelling plant | Refuelling must only take place in a designated area where the risk of contamination to watercourses (including mains and foul sewers) can be minimised.<br><br>Drip trays must be used and spill kits and drain covers kept in close proximity<br><br>**All refuelling must a sufficient distance away from sensitive receptors** |
| G | Ecology | Ecology is of low risk at this site. Reptile surveys have been completed and with no reptiles present.<br><br>Any tree clearance works will be done outside of nesting bird season. If this is not possible an ecologists must be present during any clearance works. |

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| H | Archaeology | Archaeology is deemed low risk on this site.<br><br>**General Guidance**<br><br>An Archaeological Watching Brief and a Geological Watching Brief might be necessary for specific sites<br><br>The relevant bodies shall be advised of the programme of excavation works prior to the commencement of topsoil stripping and removal of surface coverings.<br><br>If works reveal anything that may be of possible archaeological or historic interest (such as burnt or blackened material, brick or tile fragments, coins, bones, brick or stone foundations, etc.), work must be stopped immediately, the area cordoned off and access restricted. The SHEQ Manager shall be informed, who will arrange for the appropriate University to attend the site. |
| I | Heritage (Listed Buildings etc) | Heritage is low risk at this site |



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| J | Visual Intrusion | Lighting should be designed to provide for efficient working of the site but also to prevent or minimise light spillage into the neighbouring houses and other buildings. Consideration must be given to: -<br>• the use of appropriate directional lighting;<br>• direct light downwards wherever possible;<br>• if the above is not possible, try to use lighting designed to minimise light spread above the horizontal;<br>• if up-lighting is unavoidable use baffles to keep light spill to a minimum;<br>• take particular care in positioning floodlights to avoid light spill outside the compound unless it is for lighting roads as part of the contract.<br>The site perimeter should be suitably defined by barriers to reduce any negative visual impact of the site for the site neighbours |
| K | Traffic | Traffic management will be required on this project, including the need for temporary cross overs/access – please refer to the main details of this document.<br>Deliveries to site will be during core working hours, unless agreed otherwise with the local authority.<br>Wheel wash facilities & car parking as indicated on site plan. |
| L | Site Drainage and Water Discharges | All discharges of water to either foul or surface water drains require prior authorisation from the Environmental Advisor. Methods for management and monitoring of water discharges and prevention of pollution shall be included in method statements.<br>Under no circumstances is discoloured or contaminated water allowed to enter surface water drains. All reasonable precautions shall be taken to prevent contamination of surface water drains.<br>• Contamination includes, but is not limited to:<br>• oily residues,<br>• chemicals and paints,<br>• concrete washout water,<br>• mud / silty water |



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| | | • flushing out of pipe work during commissioning<br><br>Soil stockpiles will be stored away from sensitive receptors and suitable management techniques shall be employed to prevent silty water run-off.<br><br>Wastewater from the wheel wash shall not be allowed to enter any site drains that are connected to the foul or surface water drainage systems.<br><br>Silt / sludge that may be contaminated by oil, concrete or other substances shall be disposed of through licensed waste contractors.<br><br>Where water is removed by pumping to tanker, checks shall be made to ensure the tanker has a valid waste carriers licence.<br><br>Options for de-watering are:-<br><br>• Pump to field – contact landowner and EA/SEPA;<br>• Pump to foul sewer – contact Sewage Undertaker for consent – Not in Scotland, Scottish Water advocates SUDS as preferred option<br>• Pump to surface drain – contact EA for discharge consent – Not in Scotland, Scottish Water advocates SUDSas preferred option<br>• Pump to tanker – ensure contractor has waste carrier licence |
| M | Contaminated Land | There is the possibility that areas of the site may be contaminated and not identified at the pre-construction phase. Contaminated land may be indicated by areas of: -<br><br>• Discoloured soil (e.g. chemical residues);<br>• Fibrous texture to the soil (e.g. asbestos);<br>• Presence of foreign objects (e.g. chemical/oil containers);<br>• Evidence of previously worked soil;<br>• Evidence of underground structures, tanks etc;<br>• Waste pits; |



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| | | • Old drain runs, tanks, flues, etc;<br>• Evidence of liquids or solid wastes.<br>• Odour<br><br>If any or all the above have been discovered, stop work immediately, identify the potentially contaminated area and prevent access. Contact the site environmental advisor who will carry out further investigation. Do not move the material until formally told by BoKlok.<br><br>Contaminated materials shall either be contained on site or removed from site to ensure the risk of spreading the contamination.<br><br>Excavated contaminated ground must be disposed of appropriately (either as active or hazardous waste depending on level of contamination), and relevant documents completed and retained. |
| N | Design | Throughout the procurement process following issues needs to be considered in conjunction with the Design Procedures in the IMS:<br><br>• Buildings and infrastructure shall de designed to reduce life cycle costs and environmental impact over lifetime<br>• Ecological habitat and biodiversity shall be incorporated into the design.<br>• Waste shall be minimised through the design process and allow for the segregation of operational waste<br>• Buildings and infrastructure shall where possible be designed and built using processes that limit dust, water and noise pollution, and the amount of waste produced<br>• Audit trails shall be established for all COSHH materials specified at design stage.<br>• Hazardous materials shall be designed out and avoided wherever possible<br>• Design for an energy efficient building and energy efficient services:<br>1. Heating<br>2. Cooling<br>3. Lighting<br>4. Ventilation |

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| O | Supplier issues | All site staff are responsible for the management of environmental issues under their control and ensuring that Suppliers under their direction/supervision are aware of the environmental issues relating to their work package and comply with the requirements set out in this Project Environmental Management Plan and related documents.<br><br>Suppliers shall provide an overview of their management controls for environmental issues prior to commencing work on site. Environmental issues shall be included as an agenda item in meetings with Suppliers. Suppliers shall nominate a point of contact on site for environmental issues prior to commencing work on site.<br><br>**Method Statements and Risk Assessments**<br><br>All Suppliers shall provide evidence, for example a risk assessment and associated method statement, to show how they will control any construction risks, which includes environmental risks that may arise from their works. Environmental risk assessments and method statements must be provided for any works that include any of the following activities:<br><br>• Over-pumping of water or discharge of any waste/surface water into drains/land;<br>• Working within 2 metres of any retained trees or hedges;<br>• Excavation work to a depth of 2 metres or more;<br>• Storage of fuel or oil-based substances in quantities of 200 litres or more;<br>• Use of cement or concrete.<br><br>The Environmental representative shall review and authorise relevant sections in the method statements containing any of the above activities. |
| P | Procurement of materials | All potential Suppliers and suppliers of materials shall complete an environmental questionnaire as part of the procurement process. The returned questionnaire shall be assessed to determine the environmental management performance of the trade contractor and/or the environmental risks associated with the materials supplied. All parties shall be a part of improving environmental performance.<br><br>Throughout the procurement process following issues needs to be considered:<br><br>• The procurement process must meet the required standards of BoKlok |



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| | | • Environmental performance of materials shall be evaluated to develop, find alternatives, and use materials with lower environmental impact over its lifetime<br>• Projects to procure Green Energy tariff during construction where available<br>• All timber must be certified to FSC or PEFC. Timber certificates from suppliers will be collected by BoKlok together with a letter confirming compliance prior to any appointments being made<br>• Substances that are listed on the BoKlok Restricted Substance list shall be avoided whenever possible. Buyer and designers must ensure compliance. The following substances may not be used in any element of the building or equipment: Acrylamide (containing more than 0.5%), Asbestos, CFCs, Halon, PCBs.<br>• Hazardous materials shall be designed out and avoided wherever possible<br>• Upon request Suppliers will provide BoKlok with information on recycled content in building materials and investigate the possibility of increasing the recycled content.<br>• Procure materials from sustainable sources.<br>• Vehicles, plants and forms of transportation and fuel shall be used that minimises pollution and $CO_2$ emissions<br>• Fuel consumption from deliveries and plants on site shall be monitored and reported to BoKlok monthly<br>• Suppliers shall look into the possibility of reusable packaging and use reusable packaging solutions wherever feasible.<br>• All Suppliers must comply with BoKlok Waste Management Plan, work to minimise waste |
| Q | General Material Storage | • When storing materials on site, choose a location that minimises the risk of your materials being damaged by plant or pedestrian traffic, stolen or vandalised<br>• Protect materials from being damaged by the elements i.e. cover wood and plasterboard.<br>• Ensure that there is good access to the storage area. This will aid in minimising damage caused to materials from mechanical handling equipment and people climbing over materials trying to get what they need as well as being a Health and Safety issue.<br>• Make sure the storage area is kept clear. Remove all waste packaging and redundant material etc. |
| R | Environmental Coordinator | There will be an Environmental Coordinator names on site, who will be responsible for day to day environmental management. Environment will form part of the agenda at project meetings, with the supply chain. |



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| S | Community Issues | The behaviour and language of all those on site shall reflect the sensitivity of the site and show consideration and respect for all our site neighbours. Disciplinary action will be taken against anyone found to be behaving inappropriately. The site will be registered and follow the guidance of the Considerate Constructors Scheme.<br><br>**Visual Intrusion**<br><br>• Barriers to reduce any negative visual impact of the site for the site neighbours shall be suitably placed along the site perimeter.<br>• Screening shall be regularly inspected for damage and maintained in good order.<br>• Lightings shall enable efficient and safe working conditions but also to prevent or minimise light spillage into neighbouring houses and other buildings.<br><br>**Traffic, Deliveries & Parking**<br><br>• Delivery times shall be defined and planned to reduce nuisance to the local neighbours. Suppliers and BoKlok shall ensure that site-related traffic and deliveries do not block local roads.<br>• Parking is strictly limited to designated parking areas. Disciplinary action will be taken against anyone found to be parking on local roads without prior authorisation. Car/vehicle sharing shall be encouraged wherever possible.<br><br>**Commendations & Complaints**<br><br>• A Commendations and Complaints Register is established and maintained by the SHEQ Manager.<br>• Complaints are recorded and, where applicable, actions taken to rectify the source of the complaint in accordance with the BoKlok Community Relations plan. BoKlok will aim to respond to complaints within 24 hours. |



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