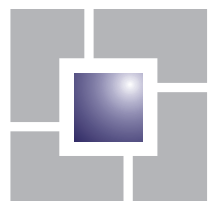


Langstone Technology Park Havant

Transport Assessment

July 2019



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Langstone Technology Park Havant

Transport Assessment

3rd July 2019
RJM/AK/20428-04c TA

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1.0 INTRODUCTION

- 1.1 The redevelopment of Langstone Technology Park in Havant is proposed. This is a long established employment site and an allocation site in the draft emerging Havant Local Plan. It is proposed to refurbish existing units, develop existing areas of car parking for new employment units, demolish part of an existing employment unit, and provide replacement car parking.

Figure 1 Site Location



- 1.2 David Tucker Associates has been commissioned to provide advice on the transport and access implications of the proposed redevelopment. This study has been informed by pre-application discussions with Highways England and Hampshire County Council, the highway authorities responsible for the Strategy Road Network and Local Transport Networks respectively, Havant Borough Council (HBC), the planning authority, and discussions at the Havant Borough Council Development Consultation Forum (21st May 2019).
- 1.3 Ultimately the appropriateness of a proposal is contingent upon compliance with prevailing development policies where these relate to transport. These include policies set out in the National Planning Policy Framework (NPPF) 2018, from which

the principle tests in transport planning terms are at paragraph 108 and 109 relating to sustainable travel, access and transport impact.

- 1.4 The sustainable transport credentials of the site are very good in particular the pedestrian and cycle connection to the town centre and residential areas within Havant and the availability and relevance of the public transport services. Overall the transport implications of the development are not significant. The site is well located to contribute to the development of sustainable travel patterns within Havant.
- 1.5 The existing site configuration is provided at **Appendix A**. The proposed development masterplan is attached at **Appendix B**. The traffic generation, distribution, vehicle access, and parking associated with proposals.
- 1.6 The traffic generated by the proposals is less than could be generated by the existing layout at full occupancy hence the proposals will not have a material impact on the operation of the local or strategic road networks.

2.0 TRANSPORT POLICY CONTEXT

2.1 National Transport Policy

National Planning Policy Framework

- 2.1.1 In February 2019, the government published a revised National Planning Policy Framework (NPPF). This report should therefore be read in the context of the NPPF.
- 2.1.2 Paragraph 109 of the NPPF is clear that: *"Development should only be prevented or refused on highways grounds if there would be an unacceptable impact on highway safety, or the residual cumulative impacts on the road network would be severe"*.
- 2.1.3 Within this context, the NPPF identifies in Paragraph 110 that applications for development should:
- "a) give priority first to pedestrian and cycle movements, both within the scheme and with neighbouring areas; and second – so far as possible – to facilitating access to high quality public transport, with layouts that maximise the catchment area for bus or other public transport services, and appropriate facilities that encourage public transport use;*
 - b) address the needs of people with disabilities and reduced mobility in relation to all modes of transport;*
 - c) create places that are safe, secure and attractive – which minimise the scope for conflicts between pedestrians, cyclists and vehicles, avoid unnecessary street clutter, and respond to local character and design standards;*
 - d) allow for the efficient delivery of goods, and access by service and emergency vehicles; and*
 - e) be designed to enable charging of plug-in and other ultra-low emission vehicles in safe, accessible and convenient locations."*
- 2.1.4 Paragraph 111 of the NPPF goes on to state that: *"All developments that will generate significant amounts of movement should be required to provide a travel plan, and the application should be supported by a transport statement or transport assessment so that the likely impacts of the proposal can be assessed"*.
- 2.1.5 In reinforcing the principle of supporting sustainable development, paragraph 10 stipulates that at the heart of the Framework is *"...a presumption in favour of sustainable development"*.

DfT Circular 02/2013

- 2.1.6 Highways England is responsible for the operation of the strategic road network. In the context of the Site the nearest part of the SRN are the A27.
- 2.1.7 The circular sets out how Highways England will engage with the planning system. In general, as set out in para 21, *'where development proposals are consistent with an adopted Local Plan, the Highways Agency does not anticipate the need for engagement in a full assessment process at the planning applications stage'*.
- 2.1.8 At para 28, *'the preparation and implementation of a robust travel plan that promotes use of sustainable transport modes such as walking, cycling and public transport is an effective means of managing the impact of development on the road network, and reducing the need for major transport infrastructure'*.

2.2 Local Transport Policy

Hampshire Local Transport Plan (2011-2031)

- 2.2.1 The Hampshire Local Transport Plan (LTP3) sets out the Highway Authority's detailed policies and proposals for developing an integrated transport strategy from 2011 to 2031.
- 2.2.2 The LTP3 is a step towards realising the County's vision of 'safe, efficient and reliable ways to get around a prospering and sustainable Hampshire'. Hampshire has three main transport priorities over the next 20 years:
- *To support economic growth by ensuring the safety, soundness and efficiency of the transport network in Hampshire;*
 - *Provide a safe, well-maintained, and more resilient road network in Hampshire as the basic transport infrastructure of the county on which all forms of transport directly or indirectly depend, and the key to continued casualty reduction; and,*
 - *Manage traffic to maximise the efficiency of existing network capacity, improving journey time reliability and reducing emissions, thereby supporting the efficient and sustainable movement of people and goods.*
- 2.2.3 The site is located within the South Hampshire Joint Strategy area within which the strategy has been developed jointly with Portsmouth City Council and Southampton City Council. Within this area the joint vision seeks:

- *Reduced dependence on the private car through an increased number of people choosing public transport and the 'active travel' modes of walking and cycling;*
- *Improved awareness of the different travel options available to people for their journeys, enabling informed choices about whether people travel and how;*
- *Improved journey time reliability for all modes;*
- *Improved road safety within the sub-region;*
- *Improved accessibility within and beyond the sub-region;*
- *Improved air quality and environment, and reduced greenhouse gas emissions; and,*
- *Promoting a higher quality of life.*

2.2.4 To achieve this vision there are a number of policies which primarily relate to network management but within which the role of development is highlighted:

- *Policy A: To develop transport improvements that support sustainable economic growth and development within South Hampshire*
- *Policy E: To deliver improvements in air quality*
- *Policy F: To develop strategic sub-regional approaches to management of parking to support sustainable travel and promote economic development*
- *Policy G: To improve road safety across the sub-region*
- *Policy H: To promote active travel modes and develop supporting infrastructure*
- *Policy L: To work with Local Planning Authorities to integrate planning and transport*

2.2.5 In addition to the above overarching long term strategy each district or borough has a Transport Statement comprising a transport strategy and schedule of potential improvements. The HBC Transport Statement was published in December 2013 however a more recent Transport Assessment has been produced in support of the emerging Local Plan

2.2.6 HCC also has a walking strategy and cycling strategy to deliver the respective aspirations for these modes.

Havant Local Plan 2036

2.2.7 Havant Local Plan 2036 includes the site for employment uses. The wording of the allocation within the document is as follows:

"KS10: Langstone Technology Park

Langstone Technology Park is allocated for further development of employment floorspace together with supporting uses and infrastructure to create and maintain it as a dynamic and successful business complex. Complementary uses such as educational facilities for the needs of the emerging 4IR digital technology would also be supported.

3.135 The site would benefit from sustainable improvement of its supporting infrastructure to better connect it to Havant Town Centre and its public transport hubs.

3.136 The site presents opportunities for development through refurbishment and redevelopment of the existing buildings, and rationalisation and consolidation of the existing car parking provision, to free surface parking areas for development.

3.137 The site would benefit from the creation of twenty-first century commercial floor-space in order to attract emerging tenancy opportunities and associated uses...

3.138 It is critically important that development of the site creates a digital technology related complex containing all of the necessary services and facilities needed to drive its continuing success. Given the proximity to Havant Town Centre development of the park has the potential to substantially improve the vitality of the town centre. However, improvements in the links through the town centre and Havant railway and bus stations would be needed. The Council is preparing a Paramics Microsimulation model of the A3023 corridor and this will be used to model impact of any new development on the highway network, and specify necessary infrastructure improvements.

3.139 The council is committed to the continued success of the Park and considers that further development is necessary to achieve this. Nonetheless, the site also faces challenges in terms of on-site and off-site infrastructure which need to be fully considered. The council will work collaboratively with owners and managers of the site, their tenants and local communities to facilitate needed further investment and development of the site."

2.3 Guidance

2.3.1 The following guidance is referenced as appropriate:

- Planning Practice Guidance:
 - Travel Plans, Transport Assessments and Statements (2014).
 - Transport evidence bases in plan making and decision taking (2015).

Provide current guidance on transport appraisals.

- Guidance on Transport Assessment (DfT2007) provides detailed guidance on the methodology that should be used for the development of transport appraisals. Whilst withdrawn this document contains detailed advice on a number of areas which are not covered in the PPG.
- Planning for Public Transport in Developments (IHT 1999).
- Providing for Journeys on Foot (IHT 2000).

3.0 EXISTING CONDITIONS

3.1 Local Road Network

- 3.1.1 The A27 is part of the strategic road network. In the vicinity of the site it is a high standard (class 7) dual two lane carriageway road (D2AP) with limited access via full grade separated junctions. The A27 bounds the site to the north.
- 3.1.2 The A3023 runs north – south and in the vicinity of the site it is called Langstone Road. The A27 – A3023 junction is grade separated with the A27 elevated above the gyratory with the local road access. On the southern approach to this junction, Langstone Road widens to dual three lanes separated by a narrow physical central reservation with a physical barrier to prevent pedestrians from crossing. In practice there are only two exit lanes from the gyratory and so the outside lane is initially hatched before becoming right turn storage for the site access. The first junction to the south of the A27 is the site access. Beyond this junction the A3023 narrows to a single lane in each direction. The A3023 continues south to Hayling Island and hence serves a finite catchment area (this is the only road link into Hayling Island). Pedestrian and cycle improvements have recently been carried out within this corridor including improved surfacing and junction crossings.
- 3.1.3 B2149 is called Park Road South and runs North from the A27 junction. This is an urban section of road with a mix of dual two lane carriageway and single four lane standard with large signal controlled junctions including additional flaring.
- 3.1.4 The first major junction is with Solent Road. Solent Road runs parallel to the north of A27 and also provides access to retail and employment areas. Solent Road is a single carriageway road which ends at a roundabout junction with Brockhampton Road.
- 3.1.5 Brockhampton Road runs north – south and has an overbridge across A27. On the southern side of A27, Brockhampton Road ends at a roundabout junction with Harts Farm Way, Brookside Road (the western site access) and Southmoor Lane (a cul-de-sac serving an employment area).
- 3.1.6 Harts Farm Way runs westwards parallel to A27 up to a complex junction where the A3(M) merges with the A27.

3.2 Existing Site

3.2.1 Langstone Technology Park was developed by the IBM in the 1960's and has since evolved into a technology park which offers *'flexible space for offices, innovative manufacturing research and development'*.

3.2.2 It comprises 58,412m² of building floor space which has been occupied by forty enterprises with provision for 1,854 cars. These elements make the Park the largest current concentration of commercial floor-space throughout the Borough. The current site plan is attached at **Appendix A**.

3.2.3 The existing buildings currently comprise floor space relevant to the following uses:

- B1a Offices 41,155m²
- B1b Labs 3,647m²
- B1c/B2 Industrial 5,868m²
- Data centre/B8 5,568m²
- Gym 335m²
- Nursery/Creche 288m²
- Plant 1,551m²

3.2.4 The site is not fully occupied hence the need to provide more appropriate employment space to more readily attract occupiers to the Park. Occupancy has fallen way over the last 3 years, such that around 70% of the employment space is currently occupied. Therefore the current observed travel patterns are not representative of the full generation of the site.

3.3 Premier Inn & Langbrook Farm Dining & Carvery

3.3.1 There is a Premier Inn and public house which are located to the east of the Park and take access from the site access road onto Langstone Road. The traffic generation of these premises was surveyed and summarised in **Table 1**.

Table 1 Premier Inn & Langbrook Farm Dining & Carvery

		inbound	outbound
AM peak	07:00 – 08:00	11	22
	08:00 – 09:00	24	22
	09:00 – 10:00	26	16
PM peak	16:00 – 17:00	31	26
	17:00 – 18:00	48	30
	18:00 – 19:00	39	34

- 3.3.2 The hotel and public house generated around 30-40vph in the AM peak period and 70-80vph in the PM peak period. Circa 10% of movements from the hotel and public house were into or out of the Park. Full details of the survey are attached at **Appendix C**.

3.4 Existing Traffic Patterns

- 3.4.1 To establish the pattern of traffic on the local road network surveys were commissioned.
- 3.4.2 Automatic traffic counters were installed for a 7-day period across the site accesses within the site. This data therefore excludes movements related to the public house and hotel at the Langstone Road access. These were installed from 3rd June 2019 to 9th June 2019 inclusive.
- 3.4.3 Manual classified turning counts were undertaken at the main junctions (Langstone Road – Site Access & Hart Farm Way – Brockhampton Road – Brookside (Site Access)) on the local road network for the extended peak periods (07:00 – 10:00 & 16:00 – 19:00). Vehicles were classified by type and queues were recorded. These surveys were undertaken on 6th June 2019.
- 3.4.4 U-turning movements were surveyed at Woodbury Avenue and Langbrook Close. These surveys were undertaken on 29th April 2019, 30th April 2019, and 6th June 2019.
- 3.4.5 Full details of the surveys are attached at **Appendix C**.

3.5 Existing Road Safety Performance

- 3.5.1 The personal injury accident record was obtained from Hampshire Constabulary and has been reviewed for the local road network for the most recent available 5year

period. The study area extends from the A27 – Langstone Road gyratory to the northeast, south on Langstone Road to the junction of Southbrook Road, and to the west of the site to the roundabout junction of Harts Farm Way and Brockhampton Road.

- 3.5.2 Within this area there were a total of 22 incidents reported from 01/01/14 to 31/12/18 inclusive. All the incidents were of slight severity. Six incidents involved motorcyclists and three cyclists. There were no incidents involving pedestrians. Details of the incidents are attached in **Appendix D**.
- 3.5.3 At the Langstone Road site access across the 5-year period there have been 3 reported collisions in the general vicinity of the junction all of which were classified as slight in severity. All three incidents involved motorcyclists. An incident in 2014 involved a motorcyclist colliding with the rear of a vehicle waiting to right turn into Woodbury Avenue. An incident in 2017 occurred when a right turning vehicle into the Site collided with a motorcyclist travelling northbound during the AM peak period. A further incident in 2017 occurred when a vehicle turning right out of Woodbury Avenue collided with a motorcyclist travelling southbound during the PM peak period. A similar incident also occurred at Southbrook Avenue where a vehicle turning right out of Southbrook Avenue collided with a motorcyclist travelling southbound during the PM peak period. In this instance the motorcyclist was filtering up the middle of the road.
- 3.5.4 Between the site access and Southbrook Avenue there were two further incidents both of which were three vehicle shunts and both of which occurred in 2014.
- 3.5.5 At the Brockhampton Road – Harts Farm Way – Southmoor Lane – Brookside Road roundabout there have been 3 reported collisions all of which were classified as slight in severity. Two of the incidents involve cyclists: one on Brockhampton Road where a vehicle hit the rear of a cyclist; and the other at the Southmoor Lane entry where a vehicle collided with a cyclist on the circulatory carriageway.
- 3.5.6 This junction has recently been remodelled by the highway authority and therefore the past performance of the junction does not provide an indication of future performance at this location.
- 3.5.7 At the A27 – Langstone Road gyratory there have been 10 reported collisions all of

which were classified as slight in severity. Three of these incidents occurred at the Langstone Road entry all of which were slight in severity. A further incident beyond the entry involved single vehicle loss of control incident by a motorcyclist.

- 3.5.8 Each of the parts of the network display a good overall safety record bearing in mind the volumes of traffic observed. There are no consequential clear design deficiencies in the local highway network.

3.6 Future Year Scenarios

- 3.6.1 The Local Plan is still being developed however Havant Borough Council have prepared a Transport Assessment to consider the cumulative impact of planned development. This Transport Assessment has been reviewed to understand future development and infrastructure proposals. The Borough Transport Assessment is heavily reliant on a traffic assignment model; the Sub Regional Transport Model (covering Hampshire County Council, Portsmouth City Council, Southampton City Council and Isle of Wight Council). This model has been used to test the impact of development and potential improvement schemes. There are a number of road improvement schemes that are considered within the TA. These may result in a reassignment of traffic from the development site between the site accesses. As set out below this reassignment has not been presumed within this appraisal but it is not prejudiced either, i.e. the site will remain responsive to HBC/HCC network management plans. This will remain the same with and without the development.
- 3.6.2 A separate Transport Assessment has been prepared to consider planned development in Hayling Island. This study was informed by a microsimulation corridor model. The interface of these two models is the A27 – Langstone Road junction. Within the Havant TA consistency between the forecasting with the Hayling Island TA is reported although performance is reported on the whole at an aggregate level.
- 3.6.3 The Hayling Island Transport Assessment identifies prospective works to the local road network which potentially include the signalisation of the site access.
- 3.6.4 For the purposes of this assessment given the uncertainty regarding the Local Plan at this stage and reflecting the Scoping exercise undertaken with both HCC and HE, this assessment considers the following scenarios:

- Existing (as per observed traffic flows reflecting current level of reduced occupancy on the site)
- Existing (assumes 100% occupancy of the available floorspace on the site)
- Development scenarios (existing and future) where:
 - o New build floor space is fully occupied by B1c/B2 land use; and,
 - o New build floor space is fully occupied by B8 land use.

3.6.5 A future year, 2024, scenario has been estimated based on TEMPRO.

(Havant 014) 2019 BASE and 2024 FUTURE:

Weekday AM Peak (0700-0959)

- Origin: 1.0401
- Destination: 1.049

Weekday PM Peak (1600-1859)

- Origin: 1.0461
- Destination: 1.0397

4.0 SUSTAINABLE ACCESS

4.1 Bus Service Provision

- 4.1.1 The closest bus stops to the site are located along Langstone Road which runs along A3023 to the east of the site. These stops provide access to local bus services, No. 30 and No. 31, which link Hayling Island to the south with Havant town centre to the north. These services operate every 20 minutes providing access to the town and the local railway station. In the southbound direction there is a dedicated bus layby which is equipped with a flag and information panel. The northbound direction the bus stop also benefits from a shelter.
- 4.1.2 Slightly further away from the site are stops on Park Road South. These stops can be accessed via an existing pedestrian/cycleway which crosses beneath the A27 Havant Bypass and the slip roads from the adjacent junction. These stops provide access to longer distance services including the Coastliner 700 services which runs between Havant and large nearby population centres including Portsmouth, Chichester and Bognor Regis.
- 4.1.3 The service summaries are shown in **Table 2** below.

Table 2- Summary of Bus Services

		Frequency		
Service	Route	Mon-Fri	Sat	Sun
30/31	Havant - West Town - Beachlands - Eastoke - Mengham - Havant	Every 20/30mins	Every 20/30mins	Every 30mins
700 Coastliner	Portsmouth – Havant – Chichester – Bognor Regis	Every 20 mins	Every 20 mins	Every 30 mins

- 4.1.4 As demonstrated in **Table 2**, the bus services are regular providing a genuine alternative to short car trips hence sits in line with the NPPF (2018) drive towards sustainable travel to work methods.
- 4.1.5 The 2011 Census reports that circa 5% journey to work trips to Havant 014 MSOA were undertaken by bus. The site itself is well located in relation to existing bus services operating through the area. On the basis of the existing services and their proximity, no enhancements to local services are required.

4.2 Rail Service Provision

- 4.2.1 Havant train station is located approximately 1.0km walking distance to the north of

the site which translates into an approximate walking/cycling time of circa 14 minutes. As set out in Section 4.3 the route on foot or by cycle is commodious.

- 4.2.2 The station is at the junction of the West Coastway line and the Portsmouth Direct line. The station is operated by South Western Rail and provides regular services to and from local and national destinations. It has direct services to Portsmouth, London Waterloo, London Victoria via Gatwick airport, Brighton, and Southampton. Direct destinations are summarised in **Table 3** below.

Table 3- Summary of Local Train Services

Destination	Journey Time	Frequency
Brighton	1 hour 5 minutes	Every 30 minutes
London Waterloo	1 hour 20 minutes	Every 10-30minutes
London Victoria	1 hours 45 minutes	Every 10-30minutes
Littlehampton	37 minutes	Hourly
Portsmouth Harbour	16 minutes	Every 10minutes
Portsmouth and Southsea	12 minutes	Every 5-10minutes
Fratton	8 minutes	Hourly

- 4.2.3 There is also a direct service to Great Malvern operated by Great Western Railway calling at Southampton, Bath, Bristol, Gloucester and Worcester.
- 4.2.4 The 2011 Census reports that circa 4% journey to work trips to Havant 014 MSOA were undertaken by rail. The rail services offer a genuine alternative to car trips.

4.3 Walking & Cycling

- 4.3.1 Current best practice guidance suggests that walking and cycling are likely to be practical for most people for journeys of 20-30 minutes. In terms of journey distance this equates to around 2km and 5km respectively. These respective catchment areas are shown in **Figures 1** and **2** below.

Figure 2 2km catchment (walking preferred)

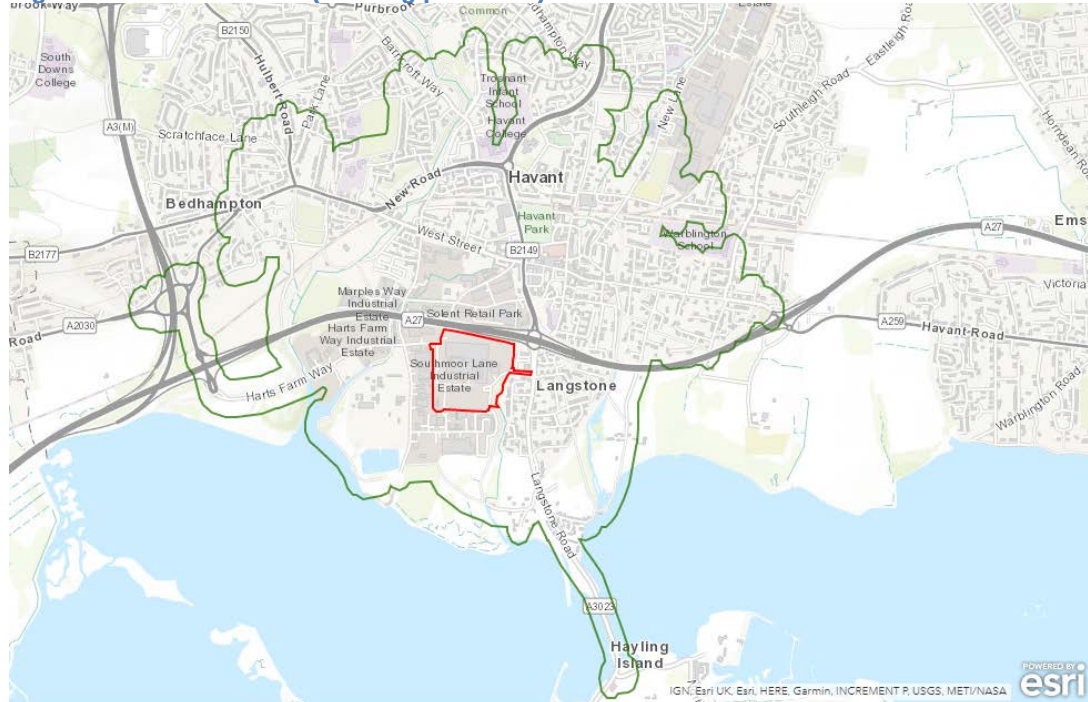
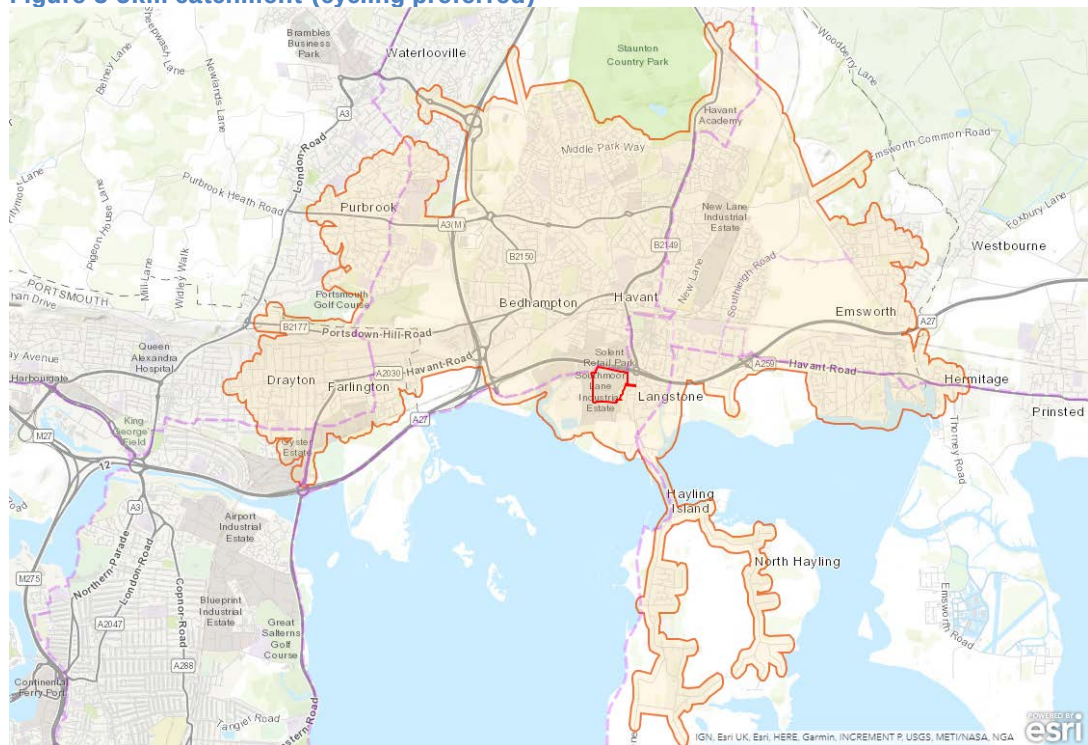


Figure 3 5km catchment (cycling preferred)



- 4.3.2 The Technology Park is served by a convenient and high quality network of footpaths, footways and cycle routes. Extracts from the Public Rights of Way Network and Sustrans Network are included in **Appendix D**.

- 4.3.3 The principal desireline to and from the site is to the north into Havant town centre. Public Footpath 51 provides for these journeys, running along the north-eastern boundary of the site with connections into the north-east corner (Building 7000 car park) and the eastern site access road.
- 4.3.4 From the north-east corner, PF51 also forms part of National Cycle Network Route 22, and is a wide well maintained surface which initially runs through an equally well maintained commodious underpass before emerging alongside Tesco just over 100m from the site boundary. The route emerges onto Solent Road, where safe crossing is enabled via a wide central splitter island with tactile paving.
- 4.3.5 The PF51 and NCN22 routes continue north along an off road link leading towards Solent Retail Park before bending away to the east where NCN22 meets Park Road South. This section is shared by cyclists and pedestrians with an approximate width of 3-4m. Generous footways on Solent Road also allow connection towards Park Road South, as well as the remainder of the retail facilities in the area.
- 4.3.6 Park Road South contains wide shared footway/cycleways on both sides measuring 3.8-4.5m. Formal crossing facilities are provided at the junction with Solent Road and at the pedestrian crossing immediately to the south of West Street.
- 4.3.7 The pedestrian crossing is the clear desire line to access the retail facilities within Havant town centre via West Street, from which vehicles are prohibited. Cyclists are permitted on part but not all of West Street.
- 4.3.8 Havant Bus Station is located on Elm Lane slightly further to the north, around 800m from the edge of the site, a 10 minute walk. The entire route is therefore serviced via wide well maintained footways and safe crossings.
- 4.3.9 The same route forms the bulk of the route to Havant Rail Station, around 1.1km from the site on foot (13-14 minutes). The route between bus and rail station is again characterised by direct, convenient good quality footways.
- 4.3.10 An alternative route from Park Road South across the A27 roundabout is available by way of segregated ramps and steps, but it provides a less pleasant means of access and hence is not likely to be well used by employees at the site. This is borne out by observations during site visits, when PF51 was heavily used, whereas the routing via

the A27 roundabout was sparsely used.

- 4.3.11 To the south of the site, PF51 continues as a rural facility linking to the edge of Langstone and the Bridge Lake estuary. The route is unpaved, appropriately reflective of its primarily recreational function. During site visits, it has been lightly used. It does not form a significant commuting desire line to the site for employees.
- 4.3.12 Pedestrian and cyclist journeys to work to the south onto Hayling Island are much more likely to route via Langstone Road. Footways are wide and generally well maintained, with shared footway/cycle way facilities present to the south of Langstone Avenue.
- 4.3.13 Crossing facilities to the south of the site access on Langstone Road take the form of a pedestrian refuge with tactile paving. The crossing facility has been upgraded since May 2017.
- 4.3.14 NCN22 runs along the northern boundary of the site, the majority of which also comprises Public Footpath 50, it is wide, tarmacked and well maintained.
- 4.3.15 At the western site access, NCN22 returns to an on carriageway facility along Brookside Road, before returning to an off-carriageway shared footway/cycleway route on the southern side of Harts Way Farm and beyond towards Cosham and Portsmouth.
- 4.3.16 In terms of pedestrian movements, Brookside Road contains two footways of generally standard width, with reasonable surfacing. The north sided footway is more relevant to the site, with links to Brockhampton Road giving access to Bedhampton. The Brockhampton Road roundabout comprises tactile paving crossing facilities on the key desire lines.
- 4.3.17 The pedestrian and cyclist network pertinent to the site is of a high standard, with comprehensive coverage, with no evident deficiencies.

5.0 PROPOSED DEVELOPMENT

5.1 The Development

5.1.1 The applicant seeks full planning permission to include the following elements:

- The part demolition of building 1000, with a resulting reduction in area of 6,952m², installation of a new flank elevation and erection of a car parking area;
- A new elevation for building 4000 as a result of the above;
- Demolition of the gym building (335m²);
- The erection of new buildings, comprising a combined area of 12,575m² in flexible B1c, B2 and B8 use in the south west corner of the site with associated parking;
- Replacement car parking areas for retained/refurbished buildings.

5.1.2 Following the redevelopment the Park will therefore comprise the following areas:

- | | |
|-------------------|----------------------|
| • B1a Offices | 39,233m ² |
| • B1b Labs | 2,183m ² |
| • B1c/B2 Industry | 2,302m ² |
| • B8 | 5,568m ² |
| • New B1c, B2, B8 | 12,575m ² |
| • Nursery/Crèche | 288m ² |
| • Plant | 1,551m ² |

5.1.3 The new buildings are located within the southwestern quadrant of the site. Flexibility in terms of the use of these buildings across employment land use classes B1c, B2 and B8. This appraisal therefore considers the transport implications across this range of uses. A schedule of the units are set out in **Table 4**.

5.1.4 As can be seen from the masterplan it is envisaged that the 12 employment units would be accessed from a single point of access on the development spine road. There would be 4 buildings and each unit will have individual parking and servicing arrangements. The units would have offices at first floor level. The areas quoted

below are the combined ground and first floor areas.

Table 4 Proposed new employment units 1-12

Unit	Area m ²
Unit 1	562
Unit 2	411
Unit 3	482
Unit 4	415
Unit 5	805
Unit 6	1282
Unit 7	881
Unit 8	1068
Unit 9	1496
Unit 10	927
Unit 11	1713
Unit 12	2528
	12574

- 5.1.5 There are currently nursery/crèche and gym facilities on-site. These will be retained; the nursery/crèche within its current location, the gym relocated within the site. Both are of limited scale. These facilities are primarily targeted at employees on the Park and therefore ancillary. The proposed development masterplan is attached at **Appendix B**.

5.2 Car & Cycle Parking for Units 01-12

- 5.2.1 Havant Borough Council Parking Standards Policy Document (HBC SPD) adopts minimum cycle parking standards which are set out as follows:

- B1a Office: Long Stay: 1 stand per 150m². Short Stay: 1 stand per 500m².
- B1b/c/ B2 Industrial: Long stay: 1 stand per 250/350m². Short Stay: 1 stand per 500m².
- B8 Warehouse: Long Stay: 1 stand per 500m². Short stay: 1 stand per 1000 m².

- 5.2.2 The guidelines go on to say that long-stay cycle parking can also be based on the number of staff using the site and in this case, spaces should be provided at a ratio of 1 cycle stand per 8 staff. A schedule of the proposed cycle parking for units 1-12 is set out in **Table 5**. This has been calculated based on the B1c parking

requirements as these are the highest. As shown on the site layout drawings the long stay cycle parking will be provided within secure covered locations within the car parking areas for each unit adjacent to the pedestrian access into the respective buildings. Visitor parking will be provided in a nearby location (generally immediately adjacent). These will be Sheffield stands and each stand will be able to take two bicycles (i.e. the overall capacity in terms of cycle parking will be double the number of stands).

Table 5 Proposed Cycle Parking

Unit	Area m ²	Long stay		Short stay	
		SPD	Proposed	SPD	Proposed
Unit 1	562	2.2	3	1.1	2
Unit 2	411	1.6	2	0.8	1
Unit 3	482	1.9	2	1.0	1
Unit 4	415	1.7	2	0.8	1
Unit 5	805	3.2	3	1.6	2
Unit 6	1282	5.1	5	2.6	3
Unit 7	881	3.5	4	1.8	3
Unit 8	1068	4.3	4	2.1	2
Unit 9	1496	6.0	5	3.0	3
Unit 10	927	3.7	4	1.9	2
Unit 11	1713	6.9	7	3.4	4
Unit 12	2528	10.1	5	5.1	5
		50.2	46	25.2	29

- 5.2.3 Overall the cycle parking requirements will be met within the development.
- 5.2.4 Car parking reflects the flexibility sought in terms of the potential land uses.
- 5.2.5 Havant Borough Council Parking Standards Policy Document (HBC SPD) sets minimum standards as follows:
- B1a Office: 1 space per 30m²;
 - B1b/c/B2 Light Industry and General Industry: 1 space per 45m²;
 - B8 Warehouse/Distribution: 1 space per 90m².
- 5.2.6 A schedule of the proposed car parking spaces is set out in **Table 6** below. These have been calculated on the basis of the B1c parking requirements as these are the highest. In practice is likely that there will be a broader mixed of uses in line with the flexibility sought within the planning application.

Table 6 Proposed Car Parking

Unit	Area m ²	Car parking	
		SPD	Proposed
Unit 1	562	12	12
Unit 2	411	9	8
Unit 3	486	11	11
Unit 4	415	9	8
Unit 5	805	18	21
Unit 6	1282	28	19
Unit 7	881	20	13
Unit 8	1068	24	19
Unit 9	1496	33	26
Unit 10	927	21	20
Unit 11	1713	38	41
Unit 12	2528	56	52
Unassigned		-	32
Substation parking		-	5
	12574	279	287

- 5.2.7 There is an unassigned element within a car park immediately to the north of Unit 1. These spaces provide flexibility to meet any shortfall in capacity within the site.
- 5.2.8 There is a requirement for 5% spaces to be accessible. As shown on the site plans the location of the accessible spaces are close to the pedestrian accesses to the associated buildings.
- 5.2.9 Overall the car parking requirements for the new development will be met such that there will be no displacement of demand onto access roads (other than where designated) or into adjacent areas.
- 5.3 Car & Cycle Parking for Existing and Refurbished Units 1000-7000**
- 5.3.1 The site has been either fully or partially operational for a long period of time. The site currently contains 1,854 parking spaces serving c.58,412m² of employment floorspace at a ratio of one space per 32m².
- 5.3.2 There are currently 8 car parking spaces equipped with Tesla superchargers. These will be retained.
- 5.3.3 The new buildings will result in a loss of car parking that is currently available to users of the existing buildings. In total 941 spaces will be lost. The majority of these buildings will be retained and refurbished. To offset the spaces lost an additional

693 spaces will be provided such that there will be a total of 1,601 spaces for the 51,125m² maintaining the existing ratio of one space per 32m².

- 5.3.4 A comparison of the parking arrangement for the existing, refurbished and new units is shown in **Table 7**. Overall there will be a small change in parking on the site (circa 2% increase).

Table 7 Car Parking Summary

	Current	Proposed
Existing	1854	
Retained		913
Lost		(941)
Replacement		693
New		282
	1854	1888

- 5.3.5 There is existing long stay cycle parking within a dedicated cycle parking area which is located immediately to the north of the crèche. This is a secure covered location which is available to employees on the Park.
- 5.3.6 Additional cycle parking will be provided for Unit 1000. It is proposed to provide an additional 10 short stay stands adjacent to the new building entrance. It is proposed to provide an additional 24 long stay stands within the northwest corner of the new car parking area in front of the unit.
- 5.3.7 Additional cycle parking will be provided for Unit 4000. It is proposed to provide an additional 9 short stay stands adjacent to the new building entrances. Long stay cycle parking requirements will be allocated within the existing cycle park as existing.

5.4 Site Accesses

- 5.4.1 No changes to the site access strategy are proposed. The suitability of the proposed accesses to serve the development is considered further below.

5.5 Internal Site Layout

- 5.5.1 There will be changes to the internal site layout in response to operational issues on the site and comments received from consultees. The amended layout seeks to strike a balance between permeability of the site, i.e. allowing employees and visitors to the site to access the site, whilst discouraging rat-running through the site. As such there are no through routes proposed within the site although the car parking areas

access both ways such that it is not anticipated that there would be any material reassignment of trips between the accesses.

- 5.5.2 There will be changes to the way units on the site will be serviced. There is currently a reasonably even split in terms of HGV use of the two accesses. Following advice from the LPA, it was agreed that access to the East for HGVs would be limited. To the east only Units 6000 and 7000 will be serviced from Langstone Road. These are office buildings and therefore their demands are relatively light i.e. office and canteen supplies and refuse collection. Delivery vehicles using the wrong entrance will need to turn within the site and use the correct entrance. Vehicle tracking has been undertaken to confirm that the existing drop-off/turning area is able to accommodate a maximum legal articulated lorry. The tracking plot is attached in **Appendix E**.
- 5.5.3 The remaining buildings and the new buildings will all be serviced from the West. Vehicle tracking has been undertaken and the tracking plot is attached in **Appendix E**. The tracking showed that additional over-widening of the bend in the western access road was required to ensure that two-way movements are unhindered. The layout has been updated to reflect this.

6.0 TRANSPORT APPRAISAL

6.1 Existing Traffic Generation

- 6.1.1 The site was originally developed as a manufacturing plant for a single occupier. It is now not fully occupied. The applicant has provided data that something less than 70% of the site floor space is currently occupied. The reduction has been particularly apparent since 2017.
- 6.1.2 The mix of land use floor space across the site makes it inaccurate to provide a direct comparison between existing observed movements reflecting reduced operation, since the unoccupied floor space crosses a range of land use classes and the 70% floor space will not therefore compare accurately with 70% staff occupation.
- 6.1.3 To estimate the potential vehicular trip generation for the existing configuration of the site, therefore, trip rates have been derived using the industry standard TRICS (7.5.3) database. The site is comprised of varying land uses split between B1a (Office), B1b (Labs) and B1c/B2 (Industrial) as well as a data centre building (assume B8 as per historic use). TRICS outputs have been calculated for each of the referred B class land uses and compiled to give an overall site trip generation.
- 6.1.4 The trip rates for the different employment uses are set out in **Table 8** and **Table 9** for all vehicles and OGV (commercial vehicles) respectively.

Table 8B1a, B1b, B1c/B2 and B8 Land Use Classes Vehicle Trip Generation Rates (all vehicles)

	AM Peak			PM Peak			12 Hour		
	In	Out	Total	In	Out	Total	In	Out	Total
B1a	1.69	0.23	1.92	0.16	1.48	1.64	6.39	6.35	12.74
B1b	1.51	0.20	1.71	0.13	1.17	1.30	5.43	5.45	10.88
B1c/B2	0.23	0.06	0.29	0.03	0.20	0.23	1.83	1.49	3.32
B8	0.11	0.06	0.18	0.03	0.08	0.12	1.05	1.06	2.11

Trip rates per 100sqm

Table 9B1a, B1b, B1c/B2 and B8 Land Use Classes Vehicle Trip Generation Rates (OGV)

	AM Peak			PM Peak			12 Hour		
	In	Out	Total	In	Out	Total	In	Out	Total
B1a	0.00	0.00	0.01	0.00	0.00	0.01	0.04	0.04	0.09
B1b	0.01	0.01	0.02	0.00	0.00	0.01	0.11	0.12	0.23
B1c/B2	0.02	0.02	0.04	0.00	0.00	0.00	0.20	0.19	0.39
B8	0.04	0.03	0.07	0.02	0.03	0.05	0.53	0.57	1.10

Trip rates per 100sqm

6.1.5 The site currently includes a nursery. The nursery is run by Nursery Rhymes (H.I.) Ltd. Based on the Ofsted inspection report (dated 17.04.19) the nursery has 58 places and employs 15 staff. This is not exclusively ring-fenced for employees on the site although it is anticipated that employees will generate a significant proportion of the demand for these facilities. For robustness the demand has been assumed to be all new/additional.

6.1.6 The vehicular traffic generation has been estimated from similar sites in TRICS. The resulting trips per child are summarised in **Table 10** below.

Table 10 Ancillary Uses (all vehicles)

	AM Peak			PM Peak			12 Hour		
	In	Out	Total	In	Out	Total	In	Out	Total
Nursery (per child)	0.232	0.177	0.433	0.161	0.181	0.367	0.968	0.967	1.935
Vehicle trips	13	10	25	9	10	21	56	56	112

6.1.7 The full TRICS output are provided at **Appendix E**.

6.1.8 The existing land use split which has been used within the TRICS calculations is as follows:

- B1a Offices 41,155m²
- B1b Labs 3,647m²
- B1c/B2 Industrial 5,868m²
- B8 5,568m²

6.1.9 Estimated Goods Vehicle trips, OGV trips generated by the existing site configuration have also been estimated. The TRICS data have been summarised for vehicles in **Table 11** and for OGVs in **Table 12** below.

Table 11 Estimate of Vehicle Trips Generated by the Existing Site Configuration

	AM Peak			PM Peak			12 Hour		
	In	Out	Total	In	Out	Total	In	Out	Total
B1a	696	93	789	66	608	674	2629	2614	5244
B1b	55	7	62	11	43	54	198	199	397
B1c/B2	14	4	17	2	12	14	107	87	195
B8	6	3	10	2	5	7	58	59	117
Nursery	13	10	25	9	10	21	56	56	112
Total	784	117	903	90	678	770	3048	3015	6065

Table 12 Estimate of OGV Trips Generated by the Existing Site Configuration

	AM Peak			PM Peak			12 Hour		
	In	Out	Total	In	Out	Total	In	Out	Total
B1a	2	2	3	1	1	2	18	17	35
B1b	0	0	1	0	0	0	4	4	9
B1c/B2	1	1	2	0	0	0	12	11	23
B8	2	2	4	1	2	3	26	25	51
Nursery	0	0	0	0	0	0	0	0	0
Total	5	5	10	2	3	5	60	58	118

6.1.10 The two-way average 12Hr weekday traffic into and out of the site between 03/06/19 and 07/06/19 were 3,853 vehicle movements. The observed movements are therefore around 65% of the predicted movements at full occupancy.

6.2 Traffic Generation

6.2.1 To estimate the future vehicle trip generation associated with the development proposal, the same trip rates as applied to the existing site composition are applied (i.e. **Tables 6 and 7**) extracted using TRICS (7.5.3) database. The proposed land use split which has been used within the TRICS calculations is as follows:

- B1aOffices 39,233m²
- B1b Labs 2,183m²
- B1c/B2 Industry 2,302m²
- B8 5,568m²
- New B1c, B2, B8 12,575m²

6.2.2 In the case of the proposed new B1c/B2 and B8 land use area, located at the south west of the site, two separate trip rates have been derived for each and two different scenarios have been assessed. The first assumes 100% B1c/B2 use; the second assumes 100% B8 use. This provides the two extreme outcomes for total vehicles and OGVs. The reality is liable to be a mixture of both.

6.2.3 In addition to proposed vehicular trips, OGV trips generated by the proposals have been estimated. The TRICS data for each scenario has been summarised below for all vehicles in **Table 13** (100% B1c/B2) and **Table 14** (100% B8) and the equivalent for OGVs in **Tables 15** and **Table 16**.

Table 13 Summary of Proposed Vehicle Trips Generated by the Site (new B1c/B2)

	AM Peak			PM Peak			12 Hour		
	In	Out	Total	In	Out	Total	In	Out	Total
B1a	663	89	752	63	579	643	2507	2492	4999
B1b	33	4	37	11	26	36	118	119	237
B1c/B2	5	1	7	1	5	5	42	34	76
B8	6	3	10	2	5	7	58	59	117
Nursery	13	10	25	9	10	21	56	56	112
B1c/B2 (new)	29	8	37	4	25	29	229	187	417
Total	749	115	868	90	650	741	3010	2947	5958

Table 14 Summary of Proposed Vehicle Trips Generated by the Site (new B8)

	AM Peak			PM Peak			12 Hour		
	In	Out	Total	In	Out	Total	In	Out	Total
B1a	663	89	752	63	579	643	2507	2492	4999
B1b	33	4	37	11	26	36	118	119	237
B1c/B2	5	1	7	1	5	5	42	34	76
B8	6	3	10	2	4	7	58	59	117
Nursery	13	10	25	9	10	21	56	56	112
B8 (new)	14	8	22	4	11	15	132	133	265
Total	734	115	853	90	635	727	2913	2893	5806

Table 15 Summary of Proposed OGV Trips Generated by the Site (new B1c/B2)

	AM Peak			PM Peak			12 Hour		
	In	Out	Total	In	Out	Total	In	Out	Total
B1a	2	2	3	1	1	2	17	16	34
B1b	0	0	0	0	0	0	2	3	5
B1c/B2	1	0	1	0	0	0	5	4	9
B8	2	2	4	1	2	3	26	25	51
Nursery	0	0	0	0	0	0	0	0	0
B1c/B2 (new)	3	2	5	0	0	0	25	24	49
Total	7	6	14	2	3	5	75	72	148

Table 16 Summary of Proposed OGV Trips Generated by the Site (new B8)

	AM Peak			PM Peak			12 Hour		
	In	Out	Total	In	Out	Total	In	Out	Total
B1a	2	2	4	2	2	4	16	16	36
B1b	0	0	0	0	0	0	2	3	5
B1c/B2	0	0	1	0	0	0	5	4	9
B8	2	2	4	1	2	3	30	32	61
Nursery	0	0	0	0	0	0	0	0	0
B8 (new)	4	3	7	2	3	5	54	58	113
Total	8	7	16	5	7	12	107	113	224

- 6.2.4 In terms of traffic movements, the presence of B1c/B2 gives rise to higher total flows, although the presence of B8 gives rise to higher OGV flows.
- 6.2.5 Comparing the existing site configuration traffic generation at **Tables 11** and **12** with **Tables 13** to **16** inclusive, it is evident that total traffic flows will be lower with the proposal. OGV movements across the day would increase, but the difference in movements during the peak periods would be extremely modest (i.e. less than 10 extra vehicles). This increase would be significantly outweighed by the reduction in general vehicular traffic. The net change in traffic is summarised in **Table 17** below.

Table 17 Comparison of traffic generation

All Veh	AM Peak			PM Peak		
	In	Out	2-way	In	Out	2-way
Existing layout @100% occupancy	784	117	903	90	678	770
Proposed redevelopment - B1c/B2 Scenario	749	115	868	90	650	741
Proposed redevelopment - B8 Scenario	734	115	853	90	635	727
HGVs	AM Peak			PM Peak		
	In	Out	2-way	In	Out	2-way
Existing layout @100% occupancy	5	5	10	2	3	5
Proposed redevelopment - B1c/B2 Scenario	7	6	14	2	3	5
Proposed redevelopment - B8 Scenario	8	7	16	5	7	12

6.3 Mode Share

- 6.3.1 Journey to work data from the 2011 Census has been used to estimate current mode share for employees on the Technology Park. The data for the Middle Super Output Area (MSOA) of Havant 014 has been used. This includes the Technology Park but also the adjacent employment areas including those north of the A27 and the town centre.
- 6.3.2 More detailed data is available at an Output Area (OA) level but this does not include a breakdown by mode. OA E00116635 covers the Technology Park and the

employment areas immediately to the west and the south. Applying the mode share on an MSOA level to the OA data provides an adjusted mode share. Both the MSOA mode share and the adjusted OA mode share are summarised in **Table 18** below.

Table 18 Mode Share

	Train	Bus	Taxi	M/C	Car driver	Car passenger	Bicycle	On foot	Other
E00116635	4.8%	4.5%	0.4%	1.5%	71.7%	7.8%	4.4%	4.7%	0.2%
Havant 014	4.2%	4.6%	0.5%	1.4%	69.7%	7.8%	4.8%	6.6%	0.3%

6.4 Distribution

6.4.1 Origindestination data from the 2011 Census has been used to estimate the distribution of home trip ends for commuter traffic. The data for the Middle Super Output Area (MSOA) of Havant 014 has been used. This includes the Technology Park but also the adjacent employment areas including those north of the A27 and the town centre. This data is summarised in **Table 19** for all modes of travel and for car driver travel. More detailed data is available at an Output Area (OA) level but this does not include a breakdown by mode. The comparative figures are summarised in brackets and suggests that a reduced proportion of employees will originate from within Havant. This is a consistent pattern with the mode share data.

Table 19 2011 Census Distribution

Residential Origin	% home trip ends	
	all modes	car driver
Portsmouth	24.3% (28.9%)	23.0%
Fareham	6.3% (7.8%)	7.6%
Chichester	4.6% (4.1%)	5.6%
East Hampshire	5.7% (6.0%)	7.0%
Winchester	3.1% (3.3%)	4.1%
Gosport	3.1% (3.8%)	3.4%
Havant	42.7% (33.0%)	37.2%
Havant 014	5.9%	3.7%
Havant 018	4.6%	3.6%
Havant 010	4.8%	3.1%
Havant 011	2.4%	2.5%
Havant 009	3.7%	2.4%
Havant 013	2.4%	2.3%
Havant 008	2.9%	2.2%
Havant 015 (Hayling Island)	1.7% (1.6%)	2.1%
Havant 006	2.6%	2.1%
Havant 004	1.7%	1.3%
Havant 007	1.6%	1.8%
Havant 020	1.5%	1.8%
Havant 016 (Hayling Island)	1.5% (1.4%)	1.7%
Havant 017 (Hayling Island)	1.5% (1.3%)	1.6%
Havant 003	1.3%	1.5%
Havant 019	1.4%	1.5%
Havant 005	1.1%	1.2%
Arun	1.8% (1.6%)	2.1%
Southampton	1.5% (1.9%)	1.8%
Eastleigh	1.5% (1.9%)	1.9%
Other	5.5% (7.7%)	6.3%
Total	100%	100%

** Any MSOAs with less than 3% included in 'other' category*

6.5 Traffic Assignment

6.5.1 It is evident from the surveys that the assignment of traffic onto the local road network is complex with significant differences in observed assignment over different parts of the day. Whilst over a 24 hour period the pattern of usage of the two site accesses is fairly balanced during the AM peak period it is skewed to the west but during the PM peak period it is skewed to the east.

6.5.2 An initial assignment of trips onto the adjacent highway network was been estimated based on the above distribution estimates and this has been compared with the

observed patterns at the site accesses. Of particular note was that the proportion of traffic from Langstone Road south was significantly higher than the MSOA data would suggest. Drilling down to the OA data does not explain the variance. There are two possible explanations of the observed pattern: that some of the traffic from Langstone Road north is avoiding the right turn queue into the site and instead u-turning to the south and entering the site on the un-opposed left turn in; that some traffic from Hayling Island is routeing through the site during the peak periods to access adjacent areas such as Southmoor Road. These are both considered further below.

- 6.5.3 The final assignment has been based on the existing split of traffic between the two accesses with adjustments made where appropriate to align with the expected routeing.
- 6.5.4 Whilst it is assumed that the assignment of light vehicles will be largely unchanged the assignment of HGVs will change in response to the proposed site layout where the internal linkages have been downgraded into the car parking areas. The HGV routeings have therefore been changed so that movements related to buildings 6000 and 7000 will continue to be accessed from the East (these are office buildings and therefore have relatively modest requirements). The remaining buildings and the new buildings will be accessed from the West.
- 6.5.5 In the peak hours the change in HGV routeing results in relatively small changes to the overall assignment. Over a 12 hour period as summarised in **Table 22** the changes is more evident with a reduction in movements at Langstone Road and an increase at Brookside.

Table 20 Net change in traffic AM peak

All Veh	Langstone Road				Brookside			
	Volume		Net Change (Relative to existing)		Volume		Net Change (Relative to existing)	
	In	Out	In	Out	In	Out	In	Out
Existing layout @100% occupancy	408	41	-	-	396	65	-	-
Proposed development - B1c Scenario	398	40	-10	-1	379	64	-17	-1
Proposed development - B8 Scenario	384	36	-24	-5	371	64	-25	-1
HGVs	Langstone Road				Brookside			
	Volume		Net Change (Relative to existing)		Volume		Net Change (Relative to existing)	
	In	Out	In	Out	In	Out	In	Out
Existing layout @100% occupancy	1	1	-	-	5	4	-	-
Proposed development - B1c Scenario	1	1	0	0	7	4	2	0
Proposed development - B8 Scenario	1	1	0	0	9	7	4	3

Table 21 Net change in traffic PM peak

All Veh	Langstone Road				Brookside			
	Volume		Net Change (Relative to existing)		Volume		Net Change (Relative to existing)	
	In	Out	In	Out	In	Out	In	Out
Existing layout @100% occupancy	73	477	-	-	53	224	-	-
Proposed development - B1c Scenario	72	462	-1	-15	51	215	-2	-9
Proposed development - B8 Scenario	72	452	-1	-15	51	210	-2	-14
HGVs	Langstone Road				Brookside			
	Volume		Net Change (Relative to existing)		Volume		Net Change (Relative to existing)	
	In	Out	In	Out	In	Out	In	Out
Existing layout @100% occupancy	2	2	-	-	2	4	-	-
Proposed development - B1c Scenario	2	2	0	0	2	4	0	0
Proposed development - B8 Scenario	2	2	0	0	5	4	3	0

Table 22 Net change in traffic 12hr

All Veh	Langstone Road				Brookside			
	Volume		Net Change (Relative to existing)		Volume		Net Change (Relative to existing)	
	In	Out	In	Out	In	Out	In	Out
Existing layout @100% occupancy	1709	1689	-	-	1521	1504	-	-
Proposed development - B1c Scenario	1687	1650	-22	-39	1502	1469	-19	-35
Proposed development - B8 Scenario	1631	1619	-78	-70	1453	1442	-68	-62
HGVs	Langstone Road				Brookside			
	Volume		Net Change (Relative to existing)		Volume		Net Change (Relative to existing)	
	In	Out	In	Out	In	Out	In	Out
Existing layout @100% occupancy	24	23	-	-	35	35	-	-
Proposed development - B1c Scenario	10	10	-14	-13	74	75	+39	+40
Proposed development - B8 Scenario	10	10	-14	-13	119	127	+84	+92

6.6 U-turning at Woodbury Avenue and Langbrook Close

- 6.6.1 The local highway and planning authorities both raised concerns about the u-turning of vehicles within junctions to the south of the site access. These are drivers headed to the Langstone Technology Park but who have not joined the back of the right turning queue and instead travel ahead past the site access junction and then u-turn at a junction to the south before entering the site unopposed on a left turn in.
- 6.6.2 The propensity to u-turn varies from day to day. These movements were not captured at Langbrook Close and none were evident from the footage at Woodbury Avenue during initial survey of the junction in January 2019 and therefore further monitoring was undertaken.
- 6.6.3 During the morning peak period of Monday 29th April 2019 there were 19 u-turn movements recorded, 2 at Woodbury Avenue and 17 at Langbrook Close. The peak u-turning period was 07:45-08:00 when 10 vehicles were observed to u-turn across the 15 minute period.
- 6.6.4 During the morning peak period of Tuesday 20th April 2019 there were 31 u-turn

movements recorded all at Langbrook Close. Again the peak u-turning period was 07:45-08:15 during which there were 16 vehicles observed to u-turn across the 30 minute period.

- 6.6.5 During the morning peak of Thursday 6th June 2019 there were 8 u-turn movements recorded during the AM peak, 1 at Woodbury Avenue and 7 at Langbrook Close. During the PM peak there were 6 u-turn movements recorded; 2 at Woodbridge Avenue and 4 at Langbrook Close.
- 6.6.6 It is clear that there is significant variability in the amount of u-turning that takes place. During the AM peak, the u-turning does appear to correlate to localised peaks in queue lengths within the right turn lane i.e. when the lane is effectively full. Instead therefore of blocking lane two therefore it appears that drivers instead overshoot the junction and u-turn.
- 6.6.7 During the PM peak it is likely that the causality is different as there is not significant right turn demand and the issue is more likely to be the limited signage for the Technology Park.
- 6.6.8 The proposed development will not result in an intensification of demand during the peak hour periods and hence the propensity to u-turn is unchanged. The u-turning in itself is not evidently giving rise to accidents. However this is not a desirable practice particularly for residents in Langbrook Close.
- 6.6.9 There are two measures that could be implemented to minimise the impact. These are improved signage so that drivers are correctly positioned for the site access junction upstream; and, a ban on u-turning in junctions. Both these measures would be subject to agreement with the LHA/LPA.

6.7 Rat-running to/from Southmoor Lane

- 6.7.1 The internal road network of the site is private rather than adopted highway therefore external use of the internal roads is not encouraged. Nevertheless the route through the site between Langstone Road south and Southmoor Lane is significantly more direct than routeing through the public roads to the north. With the proposed development the internal routeing through the site will change largely in response to LHA/LPA concerns about the routeing of HGVs onto the local road network. There will therefore not be a formal road through the site, with connections only available

through the car parks onto the access roads. Therefore through traffic movements will be possible, the routes are likely to discourage external use.

- 6.7.2 The overall quantum of rat-running through the site is small. In the AM peak around 30vph turn left out of the Brookside access and turn south into Southmoor Lane.

6.8 **Operational Appraisal**

- 6.8.1 The operation of individual junctions has been tested using industry standard modelling tools including TRL Junctions and JCT's LINSIG programmes.

- 6.8.2 JUNCTIONS models the performance of priority junctions and roundabouts in isolation from other junctions within the network. The arrival pattern is normally profiled using the ODTAB to replicate unconstrained demand although in practice where the individual junctions are within an urban network external constraints may make this unrealistic.

- 6.8.3 There are three key performance metrics which are output from Junctions modelling. These are the forecast queue length (in vehicles), the average delay (in seconds) and the ratio of flow to capacity (RFC). Convention is that the modelled period is subdivided into 15 minute time segments and the highest (worst) results during the modelled period are reported.

6.9 **Brockhampton Road – Harts Farm Way (Western) Site Access**

- 6.9.1 Traffic to and from the west can access the local road network via Brookside Road. Brookside Road is around 175m in length between a roundabout junction immediately to the west of Building 1000 and the roundabout junction with Brockhampton Road and Southmoor Lane.

- 6.9.2 The roundabout is small in the context of DMRB TD16/07 with an inscribed circular diameter of up to 28m (the roundabout does not have a uniform geometry). The roundabout geometry has recently been changed by Hampshire County Council with the Southmoor Lane, Harts Farm Way and Brockhampton Road approaches flared to provide dual lane entries albeit some of these lanes are relatively narrow and it is likely that very large vehicles will straddle lanes. Brookside Road is the only arm with a single lane entry.

- 6.9.3 The operation of the Brookside Road access has been assessed in Junctions

(ARCADY). The results of this appraisal are summarised in **Table 23**.

- 6.9.4 The traffic scenarios are modelled on an OD-TAB basis i.e. to synthesis an unconstrained demand profile.
- 6.9.5 The traffic survey of the junction shows that the junction works well in both peak periods with no significant queuing. These modelled queues for the existing scenario are comparable to the observed queuing.
- 6.9.6 The do-minimum scenario assumes that the existing site is at 100% occupancy based on the existing floor areas and usage. This flow scenario has also been adjusted to assume that u-turning and rat-running movements are discouraged/removed. The traffic related to the Premier Inn & Langbrook Farm Dining & Carvery have been added onto the site traffic (it is implicit within the EXISTING scenario).
- 6.9.7 The B1c and B8 scenarios assume that the redevelopment goes ahead either as a comprehensive B1c or B8. In practice it is anticipated that the eventual mix would fall between these two extremes. The results show that the redevelopment will result in a small increase relative to the site with its currently level of occupancy, but a reduction compared to the full potential of the site.

Table 23 Harts Farm Way Roundabout (2019)

	AM			PM		
	Q (PCU)	Delay (s)	RFC	Q (PCU)	Delay (s)	RFC
Existing layout @70% occupancy						
1 –Brockhampton Rd	0.7	4.79	0.42	0.3	2.83	0.24
2 – Brookside Rd	0.1	6.41	0.09	0.2	5.30	0.19
3 - Southmoor Lane	0.2	3.22	0.13	0.5	4.14	0.35
4 - Harts Farm Way	1.5	6.97	0.60	0.3	3.95	0.24
Existing layout @100% occupancy						
1 –Brockhampton Rd	0.8	5.16	0.44	0.3	2.78	0.23
2 – Brookside Rd	0.1	6.58	0.11	0.4	6.02	0.29
3 - Southmoor Lane	0.2	3.20	0.13	0.5	4.28	0.35
4 - Harts Farm Way	2.0	8.20	0.66	0.3	3.94	0.23
Proposed redevelopment - B1c Scenario						
1 –Brockhampton Rd	0.8	5.06	0.43	0.3	2.83	0.24
2 – Brookside Rd	0.1	6.76	0.11	0.4	5.91	0.28
3 - Southmoor Lane	0.2	3.20	0.13	0.6	4.34	0.36
4 - Harts Farm Way	1.9	7.94	0.65	0.3	3.98	0.23
Proposed redevelopment - B8 Scenario						
1 –Brockhampton Rd	0.8	5.03	0.43	0.3	2.83	0.24
2 – Brookside Rd	0.1	6.91	0.11	0.4	6.00	0.27
3 - Southmoor Lane	0.2	3.20	0.13	0.6	4.32	0.36
4 - Harts Farm Way	1.8	7.85	0.64	0.3	4.02	0.23

6.9.8 The above scenarios do not allow for any background growth. **Table 24** includes TEMPRO derived growth factors for the period 2019 – 2024 i.e. 5 years background growth.

Table 24 Harts Farm Way Roundabout (2024)

	AM			PM		
	Q (PCU)	Delay (s)	RFC	Q (PCU)	Delay (s)	RFC
Proposed redevelopment - B1c Scenario						
1 – Brockhampton Rd	0.5	3.63	0.31	0.3	2.77	0.23
2 – Brookside Rd	0.2	7.07	0.12	0.4	6.05	0.28
3 - Southmoor Lane	0.2	3.13	0.13	0.5	3.72	0.33
4 - Harts Farm Way	0.8	4.90	0.43	0.3	3.78	0.22
Proposed redevelopment - B8 Scenario						
1 – Brockhampton Rd	0.5	3.63	0.31	0.3	2.76	0.23
2 – Brookside Rd	0.2	7.24	0.12	0.4	6.16	0.28
3 - Southmoor Lane	0.2	3.14	0.13	0.5	3.71	0.33
4 - Harts Farm Way	0.8	4.89	0.43	0.3	3.78	0.22

6.9.9 As can be seen from these results the junction operates well within capacity in all scenarios modelled. The proposed development has negligible impact on operation with a modest improvement with the redevelopment scheme relative to the fallback position.

6.9.10 Model reports are attached at **Appendix F**.

6.10 Langstone Road (Eastern) Site Access

6.10.1 The Eastern Site Access onto Langstone Road is a priority (uncontrolled) junction. Langstone Road between the site access and A27 is a dual three lane carriageway standard. In the southbound direction the outside lane is hatched out from the A27 gyratory and then becomes a dedicated right turn lane into the site. South of Woodbury Avenue the road tapers down to a single southbound lane. In the northbound direction Langstone Road flares to two lanes just to the south of the site access junction. Right turning traffic must therefore turn across two lanes of traffic. Immediately to the north of the site access Langstone Road gains a nearside lane which runs up to the A27 junction.

6.10.2 The operation of the Langstone Road access has been assessed in Junctions (PICADY). The results of this appraisal are summarised in **Table 25**.

- 6.10.3 The junction has been tested based on the observed traffic demand (EXISTING). The geometry of the junction is based on the existing layout albeit the model does not fully reflect the proximity of the Langstone Road funnel/flaring to the south or the lane gain to the north.
- 6.10.4 The funnel/flaring primarily affects the ahead movements through the junction. It is evident that the funnel where Hayling Island bound traffic merges into a single lane in combination with junctions to the south, can interfere with free flow of traffic (and this is implied in the queue surveys). This does not however impact on the accuracy of the performance metrics and the comparability of scenarios set out below.
- 6.10.5 The lane gain to the north of the junction is likely to increase the left turn capacity, i.e. where vehicles are able to merge more efficiently than would be the case without the lane gain. This can be represented by an intercept correction (capacity adjustment to increase the maximum theoretical throughput) although the left turn is not sufficiently saturated to accurately measure this. For robustness therefore no correction has been applied.
- 6.10.6 The traffic scenarios are modelled on an OD-TAB basis i.e. to synthesis an unconstrained demand profile. Compared to the queue survey the average queue length for stream C-AB, i.e. the right turn into the site, is relatively short at 2.1pcu compared to an average observed at 6.5 pcu. In practice the arrival profile at this location is slightly more complex due to the proximity to the signal junction to the north will compress the traffic flow into platoons. As such it would be expected that the arrival profile would be more modulated and hence longer instantaneous queues would be expected.
- 6.10.7 To model the effect of a modulated arrival profile the right turn parameters and flows for the AM 08:30 – 08:45 period were replicated in LINSIG with an indicative upstream control line which discharged platooned traffic on the equivalent of a 60 second cycle with an effective green period of 40 seconds. Platoon dispersal was assumed. The results are summarised in the PICADY summary tables but show that there is a short period of entry starvation which reduces the effective right turn capacity and results in queue lengths approximately three times longer. This replicates the average observed level of queuing at this location.

Table 25 Langstone Road Site Access (2019)

	AM			PM		
	Q (PCU)	Delay (s)	RFC	Q (PCU)	Delay (s)	RFC
Existing layout @70% occupancy						
Site Access LT	0.1	11.14	0.09	2.2	26.54	0.70
Site Access RT	0.1	43.87	0.07	0.3	23.40	0.26
Langstone Rd RT	2.1	27.73	0.67	0.1	7.43	0.11
	5.9	25.0	0.71	0.1	-	0.11
Existing layout @100% occupancy						
Site Access LT	0.1	11.69	0.11	20.1	157.27	1.04
Site Access RT	0.1	52.47	0.11	0.5	25.70	0.35
Langstone Rd RT	6.1	65.33	0.89	0.1	7.27	0.08
	9.6	50.9	0.89	0.0	-	0.08
Proposed redevelopment - B1c Scenario						
Site Access LT	0.1	11.48	0.11	16.1	132.56	1.01
Site Access RT	0.1	47.37	0.05	0.5	26.77	0.35
Langstone Rd RT	5.3	57.85	0.87	0.2	7.73	0.13
	9.0	45.9	0.87	0.2	-	0.13
Proposed redevelopment - B8 Scenario						
Site Access LT	0.1	11.82	0.12	13.1	112.90	0.99
Site Access RT	0.2	51.24	0.16	0.5	26.34	0.34
Langstone Rd RT	4.7	51.82	0.84	0.2	7.73	0.13
	8.4	41.4	0.85	0.2	-	0.13

- 6.10.8 The existing layout 100% occupancy scenario has also been adjusted to assume that u-turning and rat-running movements are discouraged/removed. This has been done to present a worst case junction assessment.
- 6.10.9 The B1c and B8 scenarios assume that the redevelopment goes ahead either as comprehensive B1c or B8. In practice it is anticipated that the eventual mix would fall between these two extremes. The results show that the redevelopment will result in a small increase relative to the site with its currently level of occupancy but a reduction compared to the full potential of the site.
- 6.10.10 The above scenarios do not allow for any background growth. **Table 26** includes TEMPRO derived growth factors for the period 2019 – 2024 i.e. 5 years background growth.

Table 26 Langstone Road Site Access (2024)

	AM			PM		
	Q (PCU)	Delay (s)	RFC	Q (PCU)	Delay (s)	RFC
2024 Proposed redevelopment - B1c Scenario						
Site Access LT	0.1	12.02	0.12	19.3	155.75	1.04
Site Access RT	0.1	62.95	0.07	0.6	30.28	0.38
Langstone Rd RT	6.5	71.28	0.90	0.2	7.88	0.13
	9.9	56.1	0.91	0.2	3.9	0.14
2024 Proposed redevelopment - B8 Scenario						
Site Access LT	0.2	12.50	0.12	15.7	132.89	1.01
Site Access RT	0.1	69.69	0.20	0.6	29.73	0.36
Langstone Rd RT	5.6	63.04	0.88	0.2	7.88	0.13
	9.1	49.4	0.88	0.2	3.9	0.14

6.10.11 The future year results show that the performances of the access in both the B1c and B8 scenario continue to operate within capacity with no significant impact due to wider growth.

6.10.12 The Junctions model reports are attached at **Appendix F**.

6.11 Construction Traffic

6.11.1 Based on similar sites the construction phase is expect to generate a maximum of 20 HGV movements per day (10 arrivals and 10 departures). Assuming that 10% trips take place in the peak hours then this is equivalent to 3 movements per hour or 1 HGV movement every 30 minutes. It is anticipated that there would be a traffic management plan used during the construction phase to route traffic to and from the site via the western access to the site.

6.11.2 Parking for construction staff will be accommodated on site.

6.11.3 It is envisaged that a construction traffic management plan (CTMP) would be prepared to inform the construction stage of the project. This could be secured by Condition if appropriate.

6.12 Framework Travel Plan

6.12.1 A framework travel plan has been prepared which will inform individual travel plans which would be prepared by individual organisations on the Park.

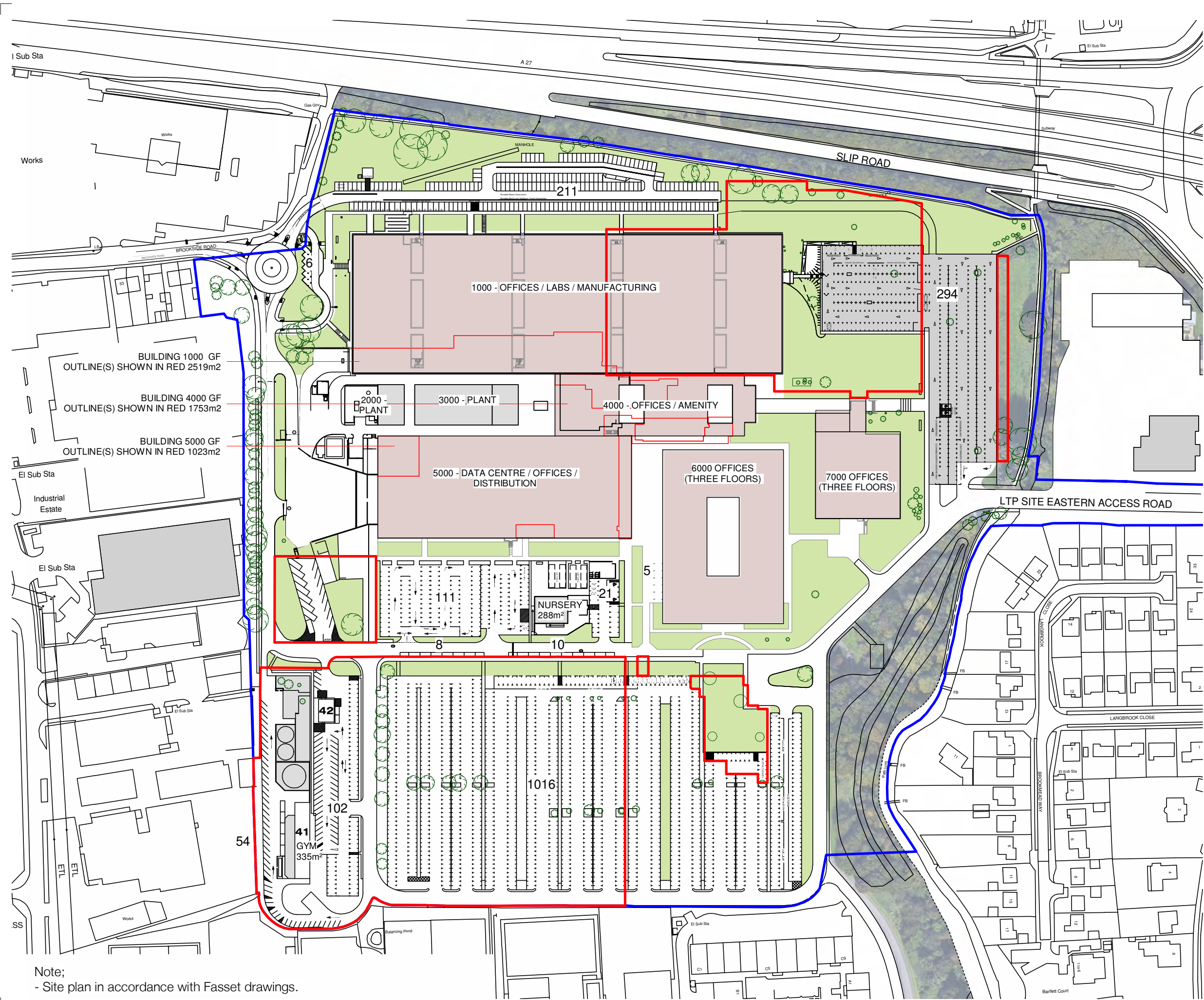
7.0 CONCLUSIONS

- 7.1 The redevelopment of the Langstone Technology Park is proposed. The sustainable transport credentials of the site are very good in particular the pedestrian and cycle connection to the town centre and residential areas within Havant and the availability and relevance of the public transport services. Existing buildings will be refurbished and where required reconfigured to better meet the requirements of businesses.
- 7.2 An area to the south of the site which is currently predominantly parking areas will be developed to provide additional modern employment buildings for B1c, B2 and B8 uses. The parking that will be displaced from this part of the site will be re-provided elsewhere within the site or is redundant due to some demolition. Overall it is proposed to maintain the current parking ratio for the existing buildings.
- 7.3 Parking for the new development will be provided in compliance with prevailing car and cycle parking standards. The overall parking stock increases by 2% and this increase reflects the employment patterns derived from the new build land uses.
- 7.4 The traffic generation resulting from the proposed development and its distribution/assignment on the local highway network has been assessed. Overall the redevelopment will generate slightly less traffic during the peak hour periods compared to the current site configuration.
- 7.5 The HGV traffic generation will increase slightly and the traffic will be biased to the western access to the site away from the residential areas around the eastern access.
- 7.6 Ultimately the appropriateness of a proposal is contingent upon compliance with prevailing development policies where these relate to transport. These include policies set out in the National Planning Policy Framework (NPPF) 2018, from which the principle tests in transport planning terms are at paragraph 108 and 109 relating to sustainable travel, access and transport impact.
- 7.7 Overall it is concluded that:
- In the context of the wider network the site traffic impact is generally limited and local; and
 - Any application submission would include a Travel Plan targeted at promoting and facilitating sustainable travel.



Appendix A

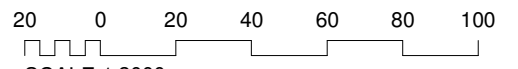
Existing Site Plan



Note;
- Site plan in accordance with Fasset drawings.

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F	27.06.19	CJ	Redline updated to coordinate with topo
E	14.05.19	CJ	Application Area Updated

Rev	Date	Init	Notes	Chkd
				
				
SCALE 1:2000				
Client				

Drawing Originator

AWW inspired environments

London - 106 Weston Street London SE1 3QB 020 7160 6000
Bristol - Rivergate House, Bristol, BS1 6LS 0117 923 2535
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Project Title
Langstone Technology Park

Drawing Title
Existing Site Plan

Scale 1 : 2000	Sheet A3	Drawn CJ	Checked IJ	Date 10.12.19
Status PLANNING	Project No. 4046			
Drawing Reference	Drawing No. 0105	Revision F		



Appendix B

Development Masterplan

Total Site Parking: 1888 (4.5% Disabled)

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Works

INDUSTRIAL AND OFFICE ACCESS

BROADWIDE ROAD

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Industrial Estate

El Sub Sta

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SOUTHWICK

ETL

Works

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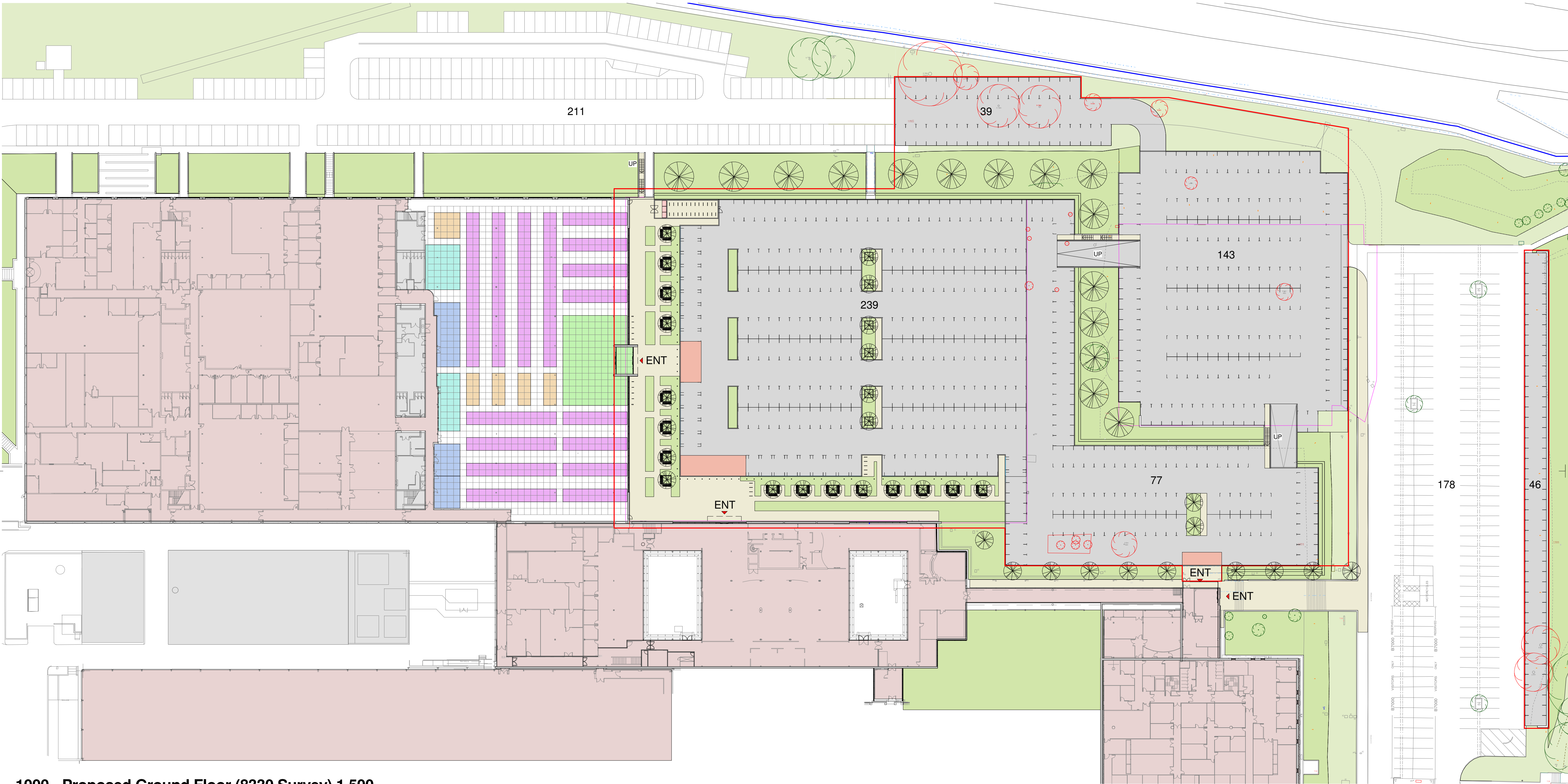
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1000 - Proposed Ground Floor (8330 Survey) 1.500
1 : 500

- APPLICATION AREA
- APPLICANT OWNERSHIP BOUNDARY
- EDGE OF EXISTING SLAB / PARKING AREA
- 1500x1500mm OFFICE GRID
- ELEMENTS REMOVED
- EXISTING GIA
- RECEPTION / ENTRANCE
- OPEN PLAN WORK STATION
- BREAKOUT / INFORMAL
- CONFERENCE / MEETING / FORMAL
- KITCHEN / WC / SERVICES
- EXISTING CORE (PLANT / WC / ST)

Rev	Date	Init	Notes	Chkd
A	01.07.19	CJ	Parking number updated from 241 to 239.	

Scale 1:500

Client

Drawing Originator

AWW inspired environments

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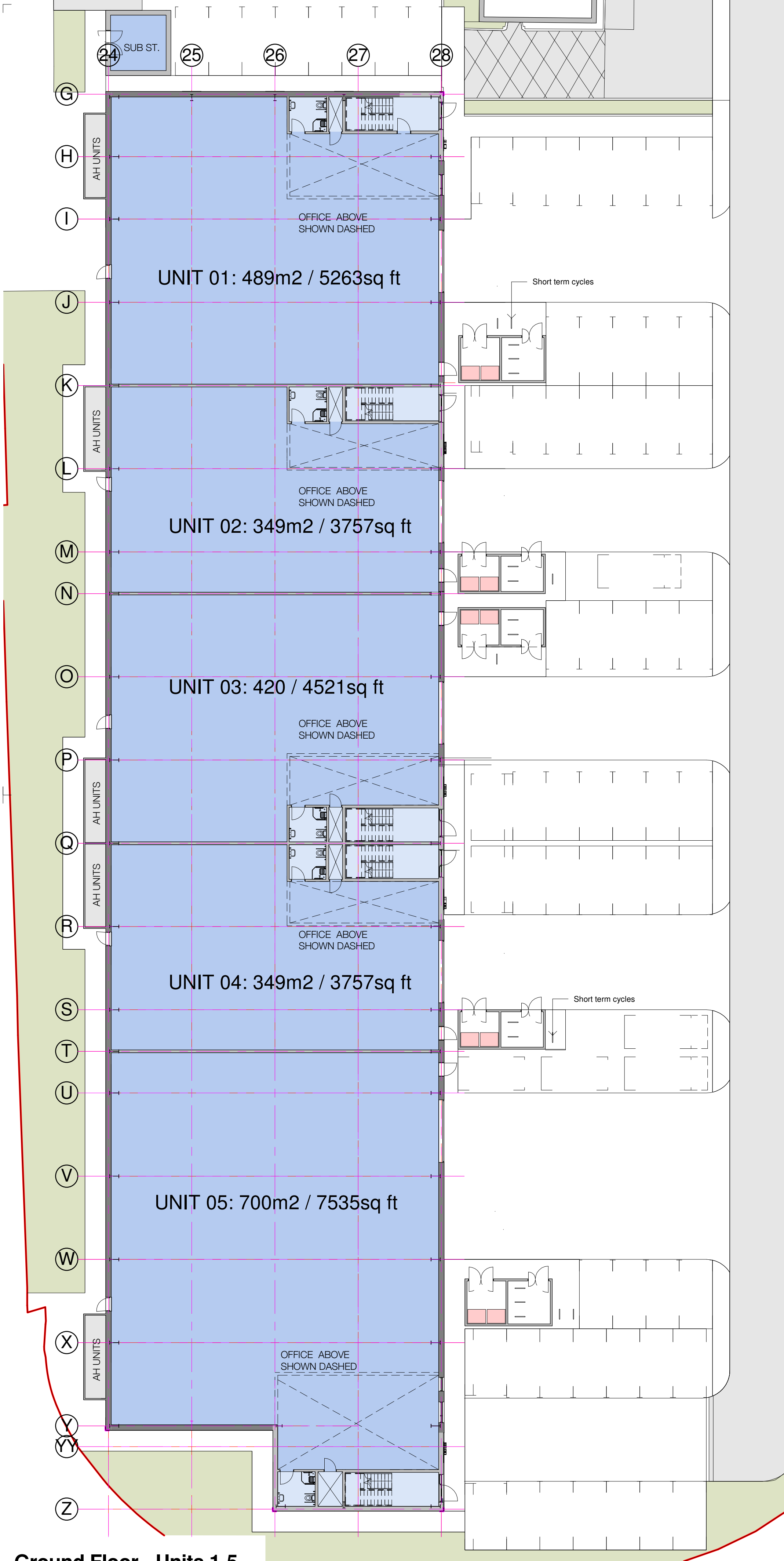
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Project Title

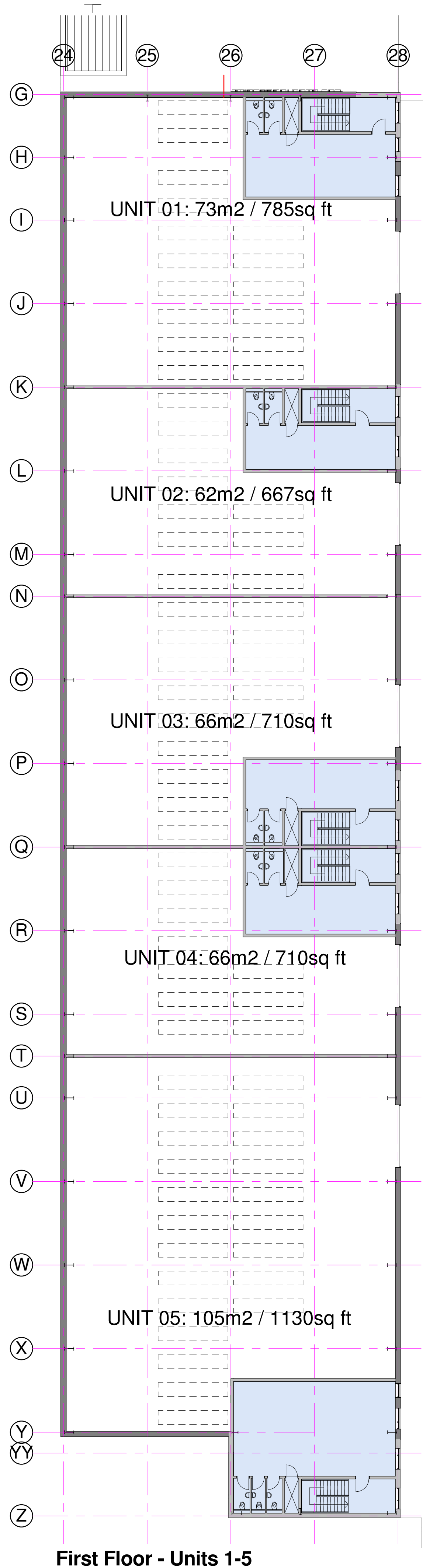
**Langstone Technology Park,
Building 1000**

Drawing Title
Proposed Ground Floor Plan

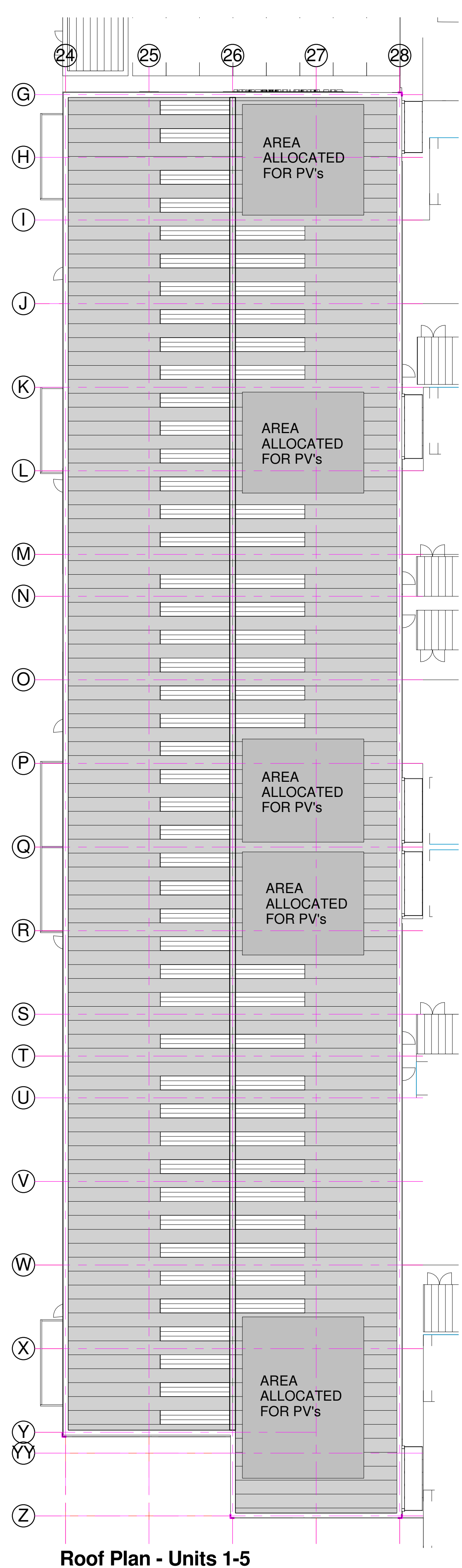
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1 : 500	A1	CJ	IJ	14.06.19
Status	Project No.			
PLANNING	4046A			
Drawing Reference	Drawing No.	Revision		
	200	A		



Ground Floor - Units 1-5
1 : 200



First Floor - Units 1-5
1 : 200



Roof Plan - Units 1-5
1 : 200

Notes
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B	29/06/19	JH	Minor updates	IJ
A	27/06/19	JH	First Issue	IJ
Rev	Date	Init	Notes	Chkd
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Client

Drawing Originator

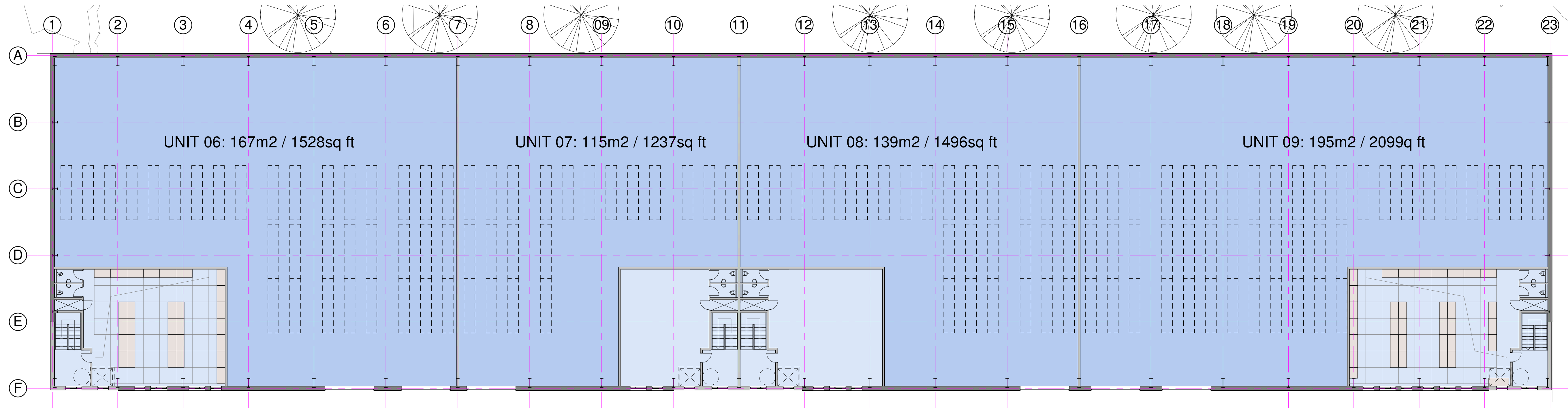
AWW inspired environments
London - 106 Weston Street London SE1 3QB 020 7160 6000
Bristol - Rivergate House, Bristol, BS1 4LS 0117 923 2535
Plymouth - East Quay House, Plymouth, PL4 0HX 01752 261 282
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Project Title
**Proposed Industrial Units
Langstone Technology Park,
Havant**

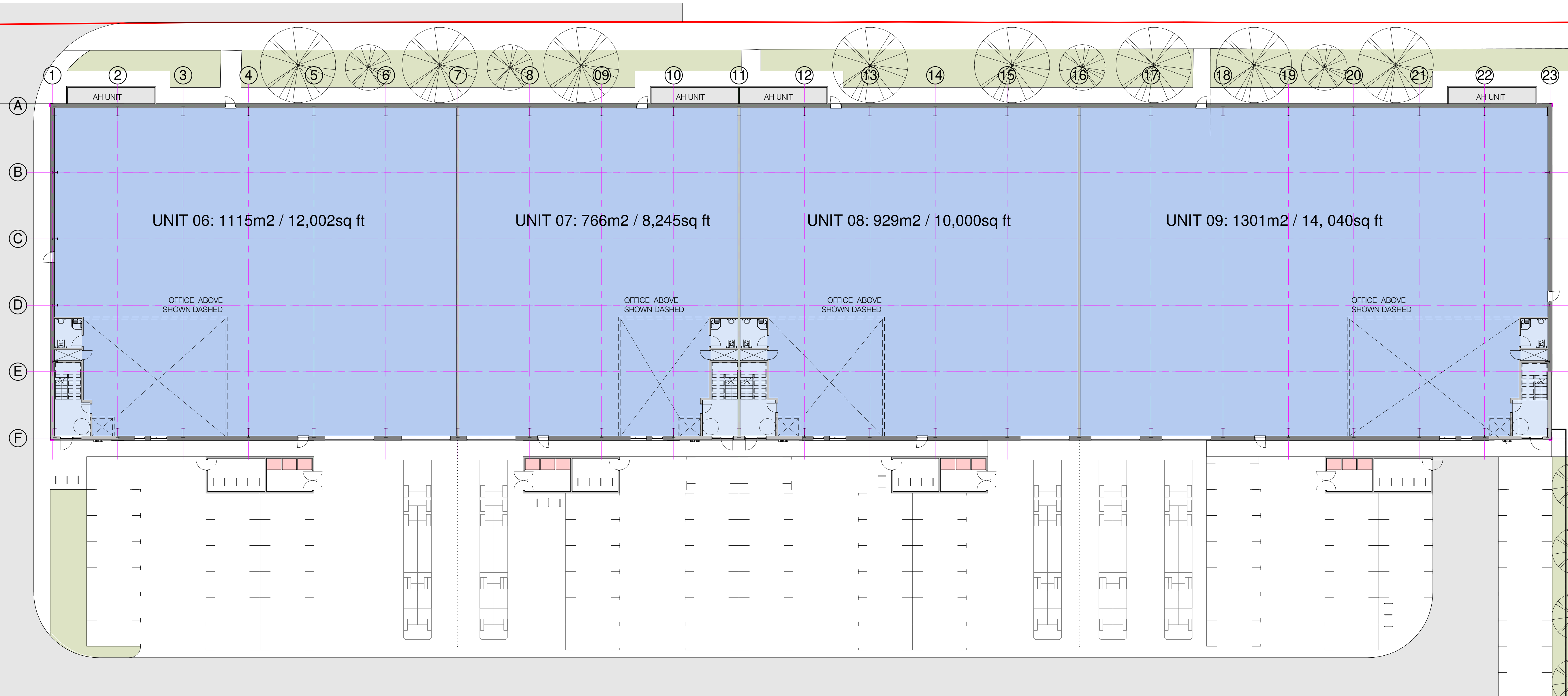
Drawing Title
Units 01 - 05 Floor Plans

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Status PLANNING	Project No. 4046C			
Drawing Reference	Drawing No. 0200	Revision B		

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First Floor - Units 6-9
1 : 200



GF - Units 6-9
1 : 200

B 29/06/19 JH Minor updates LJ
A 27/06/19 JH First Issue LJ
Rev Date Init Notes Chkd

North
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SCALE 1:200
m

Client

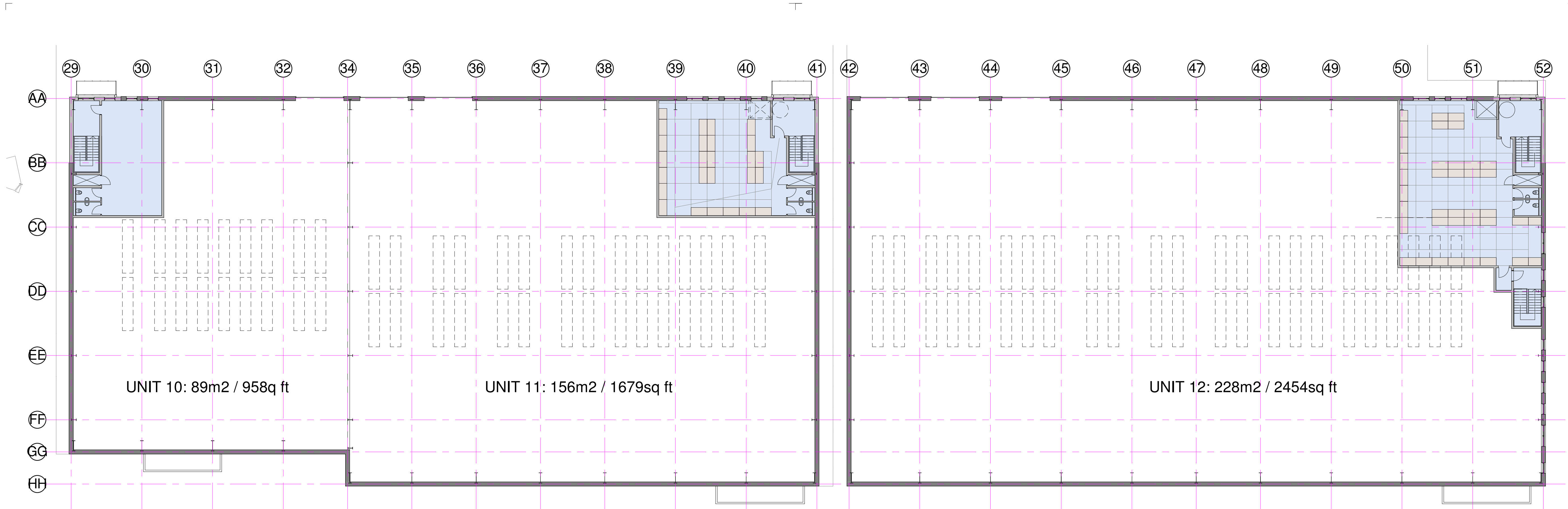
Drawing Originator

AWW inspired environments
London - 106 Weston Street London SE1 3QB 020 7160 6000
Bristol - Rivergate House, Bristol, BS1 4LS 0117 923 2535
Plymouth - East Quay House, Plymouth, PL4 0HX 01752 261 282
RIBA Chartered Practice www.aww-uk.com

Project Title
**Proposed Industrial Units
Langstone Technology Park,
Havant**

Drawing Title
Units 06 - 09 Floor Plans

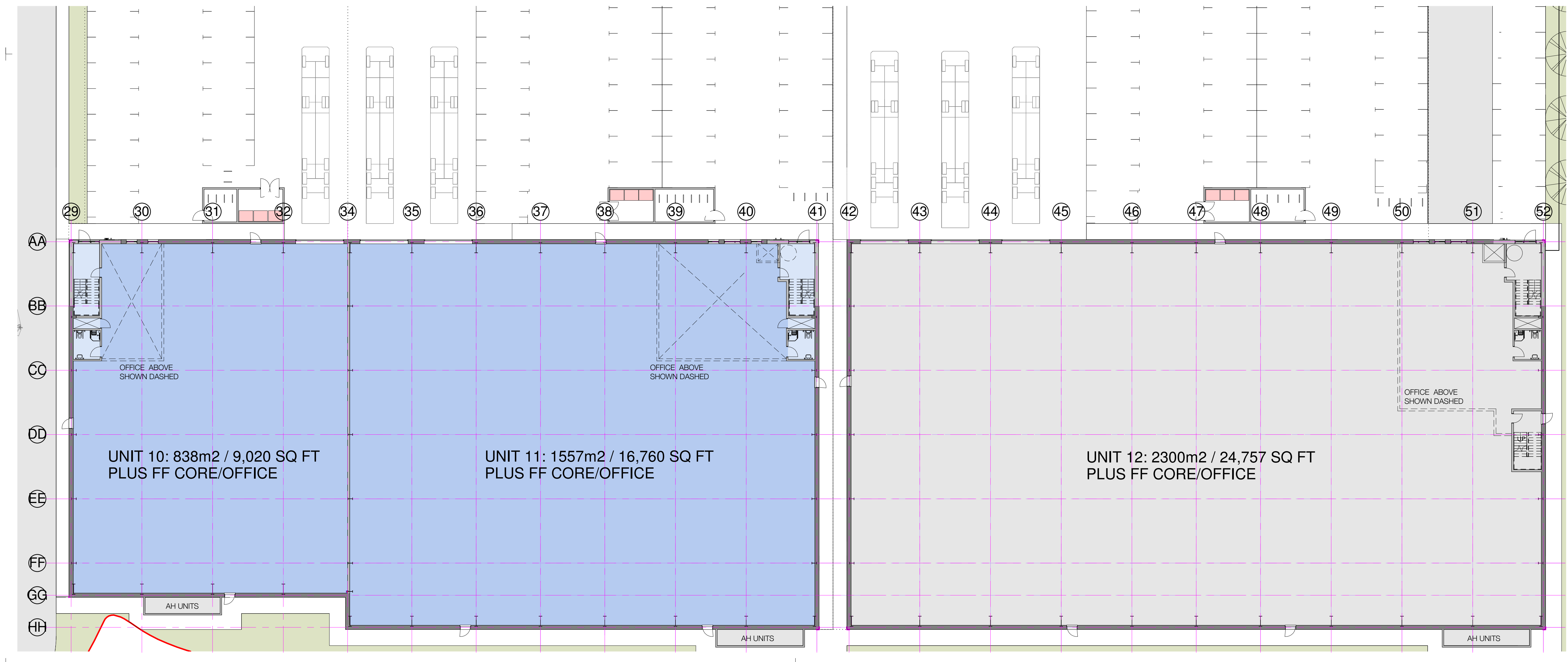
Scale 1 : 200	Sheet A1	Drawn CJ	Checked IJ	Date 30.05.19
Status PLANNING	Project No. 4046C			
Drawing Reference	Drawing No. 0210	Revision B		



Notes

This drawing may be scaled for the purposes of Planning Applications, Land Registry and for Legal plans where the scale bar is used, and where it verifies that the drawing is an original or an accurate copy. It may not be scaled for construction purposes.

Always refer to figured dimensions. All dimensions are to be checked on site. Discrepancies and/or ambiguities between this drawing and information given elsewhere must be reported immediately to this office for clarification before proceeding. All drawings are to be used in conjunction with the specification and all works to be carried out in accordance with latest British Standards / Codes of Practice.



C 01.07.19 CJ Units 11 and 12 elevations and annotations updated. IJ
B 29/06/19 JH Minor updates IJ
A 27/06/19 JH First Issue IJ

Rev	Date	Init	Notes	Chkd
C	01.07.19	CJ	Units 11 and 12 elevations and annotations updated.	IJ
B	29/06/19	JH	Minor updates	IJ
A	27/06/19	JH	First Issue	IJ

Rev Date Init Notes Chkd

North

2 0 2 4 6 8 10
SCALE 1:200 m

Client

Drawing Originator

AWW inspired environments

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Project Title

**Proposed Industrial Units
Langstone Technology Park,
Havant**

Drawing Title

Units 10 - 12 Floor Plans

Scale	Sheet	Drawn	Checked	Date
1 : 200	A1	CJ	IJ	30.05.19

Status	Project No.
PLANNING	4046C

Drawing Reference	Drawing No.	Revision
	0220	C



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