



PADNELL GRANGE, COWPLAIN

TRANSPORT ASSESSMENT

January 2019

Bellway Homes Ltd (Wessex)
& The Borrow Foundation Ltd.

**RESIDENTIAL DEVELOPMENT
PADNELL GRANGE
COWPLAIN**

TRANSPORT ASSESSMENT

CONTROLLED DOCUMENT

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COWPLAIN**

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1. INTRODUCTION

- 1.1 This Transport Assessment (TA) has been prepared by Paul Basham Associates (PBA) on behalf of Bellway Homes and The Borrow Foundation to support a full planning application for a residential development comprising 86 units at Padnell Grange, Cowplain.
- 1.2 The application site covers approximately 2.64ha in total and is located approximately 2.9km north-east of Waterlooville Town Centre. The application site is identified within **Figure 1**.

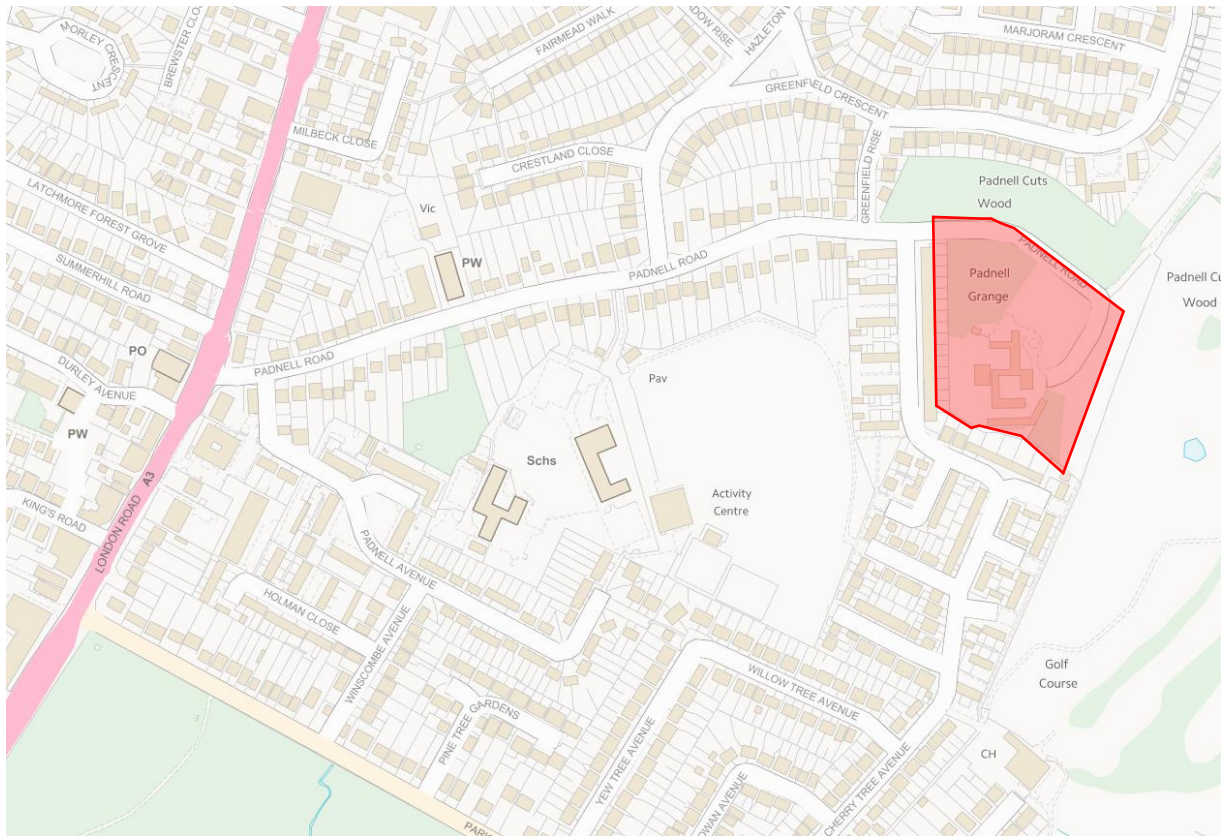


Figure 1: Application Site Location

- 1.3 The site is identified within the Draft Havant Local Plan 2036 (January 2018) as a brownfield site allocated for the development of 85 residential dwellings (policy H46)
- 1.4 A Transport Scoping Note (TSN) was submitted to Havant Borough Council as part of the pre-application process for this scheme. This TA therefore proposes to cover the following elements:
- Planning Policy Background
 - Existing Conditions
 - Accessibility
 - Development Proposals
 - Development Traffic Impact

- 1.5 PBA have prepared a full Travel Plan (TP) in conjunction with this application, which seeks to facilitate and promote the use of sustainable transport modes by providing a package of soft measures, supported by investment in infrastructure. The TP should be considered concurrently with this TA.

2. PLANNING POLICY BACKGROUND

National Planning Policy

- 2.1 The revised National Planning Policy Framework (NPPF) was adopted in July 2018 and acts as the central guidance for development planning, replacing all national planning policy guidance. The following NPPF paragraphs are relevant to this TA:

Planning policies and decisions should recognise that sites to meet local business and community needs in rural areas may have to be found adjacent to or beyond existing settlements, and in locations that are not well served by public transport. In these circumstances it will be important to ensure that development is sensitive to its surroundings, does not have an unacceptable impact on local roads and exploits any opportunities to make a location more sustainable (for example by improving the scope for access on foot, by cycling or by public transport). The use of previously developed land, and sites that are physically well-related to existing settlements, should be encouraged where suitable opportunities exist.

(NPPF Para. 84)

Transport issues should be considered from the earliest stages of plan-making and development proposals, so that:

- a) The potential impacts of development on transport networks can be addressed;
- b) Opportunities from existing or proposed transport infrastructure, and changing transport technology and usage, are realised.
- c) Opportunities to promote walking, cycling and public transport use are identified and pursued;
- d) The environmental impacts of traffic and transport infrastructure can be identified, assessed and taken into account – including appropriate opportunities for avoiding and mitigating any adverse effects, and for net environmental gains; and
- e) Patterns of movement, streets, parking and other transport considerations are integral to the design of schemes, and contribute to making high quality places.

(NPPF Para. 102)

Significant development should be focused on locations which are or can be made sustainable, through limiting the need to travel and offering a genuine choice of transport modes. This can help to reduce congestion and emissions, and improve air quality and public health. However, opportunities to maximise sustainable transport solutions will vary between urban and rural areas, and this should be taken into account in both plan-making and decision-making.

(NPPF Para. 103)

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.

(NPPF Para. 109)

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.

(NPPF Para. 111)

Regional and Local Policy

Hampshire County Council's Local Transport Plan 3 (2011-2031)

- 2.2 LTP3 sets out HCCs transport strategy and identifies a range of policy objectives, based on the three guiding principles of "Reduce, Manage and Invest". The most relevant policy objectives to this TA are summarised below:

Work with bus and coach operators to grow bus travel, seek to remove barriers that prevent some people using buses where affordable and practical, and reduce dependence on the private car for journeys on inter- and intra-urban corridors;	(Policy Objective 4)
Reduce the need to travel through encouragement of a high-speed broadband network, supporting the local delivery of services and in urban areas the application of 'Smarter Choices' initiatives;	(Policy Objective 11)
Invest in sustainable transport measures, including walking and cycling infrastructure, principally in urban areas, to provide a healthy alternative to the car for local short journeys to work, local services or schools; and work with health authorities to ensure that transport policy supports local ambitions for health and well-being.	(Policy Objective 12)

Havant Borough Council Core Strategy (2011)

- 2.3 The Core Strategy is implemented to help guide the development of the borough by outlining the long-term vision and the aims and objectives. The Core Strategy aim most relevant to this TA is *'the borough's residents expect high quality public services and the vision includes an aspiration to provide better coordinated and joined up services'*.
- 2.4 The Core Strategy also identifies a policy specific to Transport and Access to which developments within the borough follow and adhere to wherever possible. This policy (PCS20) is outlined below;

Development will be permitted that: • Is consistent with and contributes to the implementation of the HCC 'Reduce, Manage and Invest' Strategy; • Does not increase congestion and promotes better use of existing transport networks; • Improves accessibility to goods, services and employment and promotes equality in the transport system; • Provides transport management measures to ensure the safe and efficient operation of the strategic and local road network; • Ensures that highway design responds positively to the characteristics of the area and delivers a high quality public realm for all users; • Maintains or improves the range of transport modes accessible to the users of the development site with specific emphasis on public transport, especially high quality/ frequency uses and includes walking and cycling where appropriate; and • Improves highway, cycling and pedestrian's links	(Policy CS20)
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Site Status

- 2.5 The site (reference: H46) is identified in Havant's Draft Local Plan (January 2018) as being allocated for a residential development of 85 dwellings. Within the Local Plan it is highlighted that the footpath link to Cherry Tree Avenue should be retained along with a Transport Assessment and Travel Plan being required to support a planning application.
- 2.6 The site was also previously allocated in the adopted Local Plan (July 2014), allocated for 84 residential dwellings (site reference: W126).

3. EXISTING CONDITIONS

- 3.1 The site is approximately 2.55ha and currently consists of a single residential unit, disused farm buildings and 140 sqm of office used by the Borrow Foundation. The site is bounded by Padnell Cuts Wood to the north and east, and residential homes to the south and west. The site has good access to local facilities and is within 800m of a number of amenities on London Road (A3).
- 3.2 The existing site and access are demonstrated within **Photographs 1 and 2**.



Photograph 1: Existing Site Access



Photograph 2: Existing Site

- 3.3 The existing site is accessed as a continuation of Padnell Road, with a gated entry that narrows beyond the existing highway boundary. Pedestrians can also access the site via this vehicular access, although due to the informal nature of the access road, no footways are currently provided within the red line boundary.
- 3.4 Padnell Road runs west to east from the junction with London Road (A3) to the proposed development site and has a largely straight road alignment. Padnell Road is predominantly residential in nature and also provides access to a primary school and is therefore subject to a 30mph speed limit. The road measures approximately 6m in width, with some sections narrowing to c. 5.5m.
- 3.5 Build outs are present along Padnell Road in association with the nearby primary school and act as traffic calming features and pedestrian crossings, with reflective bollards as illustrated in **Photograph 3**.



Photograph 3: Build-outs along Padnell Road

- 3.6 Parking restrictions are implemented at the western extent of Padnell Road in the form of double yellow lines and time-limited restrictions between 0800-0900 and 1500-1630 (in association with the school access) on weekdays only.

Local Road Network

- 3.7 London Road (A3) forms part of the local road network connecting Portsmouth to London. More locally London Road (A3) provides access to Petersfield to the north and Bedhampton to the south.
- 3.8 Cherry Tree Avenue is residential in nature and travels south from the eastern extent of Padnell Grange towards Park Lane. Informal on-street parking is present for large sections of Cherry Tree Avenue, with some sections of double yellow lines to prevent hazardous parking. Cherry Tree Avenue also forms part of a signposted cycle route.

Personal Injury Accident Data

- 3.9 In order to assess the safety of the local highway network in the vicinity of the site, Personal Injury Accident data has been assessed for the length of Padnell Road, inclusive of the A3/Padnell Road junction for the most recent 3-year period. The incidents that occurred are demonstrated in **Figure 2**.

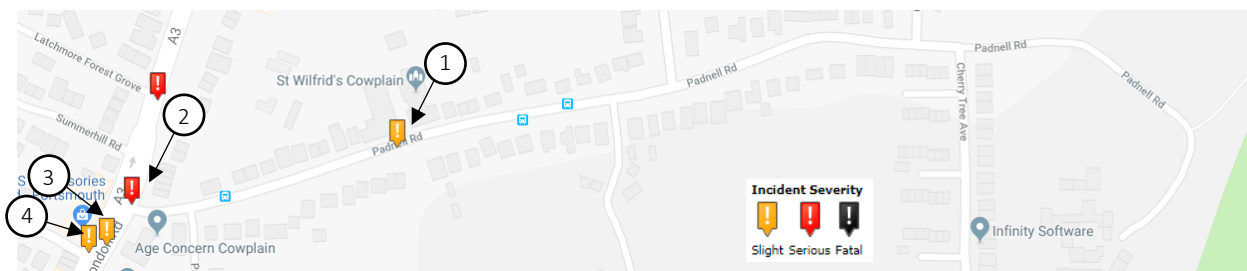


Figure 2: PIA Data - Padnell Road

- 3.10 A total of four incidents occurred within the investigation area, one of which occurred on Padnell Road, and three of which occurred at the A3/Padnell Road junction. The incidents are numbered based on their distance from the site and the circumstances of the incidents are summarised below.
- 3.11 Incident '1' occurred when a man over the age of 75 who was proceeding normally along the carriageway drove into the offside of a car parked on the carriageway.
- 3.12 Incident '2' was a serious incident between a car and pedal cycle in which the car turned left into Padnell Road and collided with a cycle proceeding normally along the carriageway.
- 3.13 Incident '3' involved 3 cars, with one waiting to turn right, another moving off, and the third vehicle proceeding normally and failing to stop, hitting the rear of the second vehicle, which in turn hit the rear of the first vehicle.
- 3.14 Incident '4' occurred between a car in the act of turning right which then collided into another vehicle.
- 3.15 It is clear from the summaries of these incidents that they occurred due to driver error and there are no patterns causing a concern from a highway safety perspective, that would be exacerbated by the proposed development.
- 3.16 Personal Injury Accident data has also been assessed for the length of Cherry Tree Avenue for the most-recent 3-year period. As seen in **Figure 3**, no incidents have been reported within the study area in this period. The absence of incidents further illustrates that there are no highway safety concerns in the vicinity of the site.

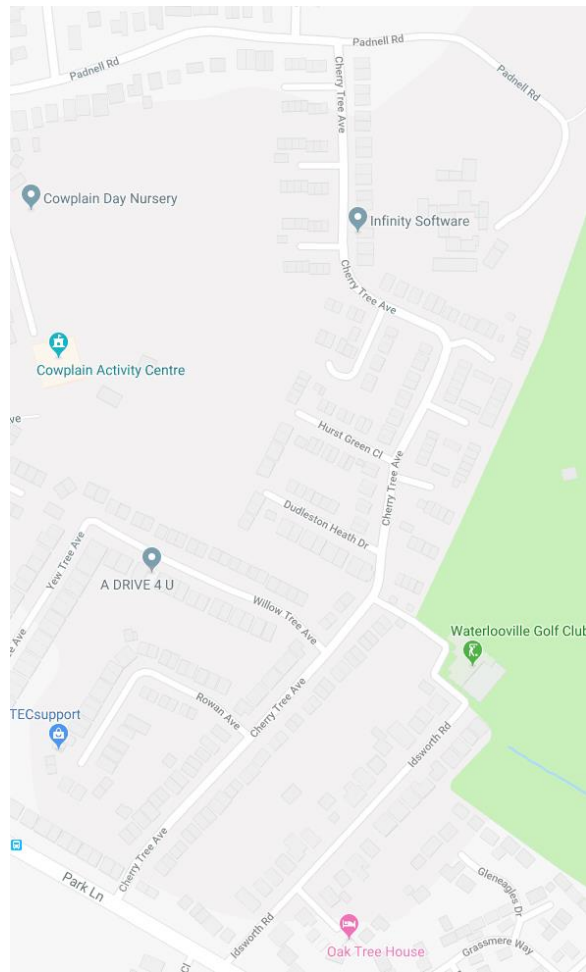


Figure 3: PIA Data - Cherry Tree Avenue

4. ACCESSIBILITY

- 4.1 The site is approximately 800m from and the services and facilities located on London Road, which includes food and non-food shops, eateries, and healthcare practices. Padnell Road also provides a nursery, infant school, junior school and recreation ground. Distances to local amenities are summarised in **Table 1**.

Amenity	Approximate Distance	Walking Time	Cycling Time
Hazleton Way Bus Stop	350m	4 minutes	1 minute
Recreation Ground	350m	4 minutes	1 minute
Padnell Junior School	350m	4 minutes	1 minute
Cowplain Day Nursery	500m	6 minutes	1 minute
Cowplain Activity Centre	500m	6 minutes	1 minute
Co-operative Convenience Shop	700m	8 minutes	2 minutes
Park Lane Dental Clinic	750m	9 minutes	2 minutes
Cowplain Family Practice	750m	9 minutes	2 minutes
Tuckers Pharmacy	750m	9 minutes	2 minutes
Padnell Infant School	950m	11 minutes	2 minutes
Lidl	1km	12 minutes	4 minutes
Cowplain Community School	1.4km	18 minutes	5 minutes

Table 1: Distances to Local Amenities

- 4.2 Further facilities are available in nearby Waterlooville which includes numerous retail facilities, banks, post office, supermarkets, dentists, eateries, public houses etc. Waterlooville Town Centre is approximately a 35-minute walk, 9-minute cycle or 19-minute public transport journey using First's 'The Star 8' service.

Pedestrian Infrastructure

- 4.3 Padnell Road to its eastern extent is provided with a 2m footway abutting the northern carriageway, as shown in **Photograph 4**. On the southern side of the carriageway a 1.5m footway is provided, separated from the carriageway by a grass verge. The footways vary in width for the length of the road, but continuous footways are provided on both the northern and southern carriageway to its eastern extent where it meets London Road (A3).



Photograph 4: Padnell Road - Northern Footway

- 4.4 The pedestrian route east towards facilities on London Road along Padnell Road is provided with dropped kerbs at crossing points ensuring safe pedestrian movements for all users in the vicinity of the site.
- 4.5 The site also leads directly onto Bridleway 22 to the north and Footpath 127 to the south as demonstrated in **Figure 4**.

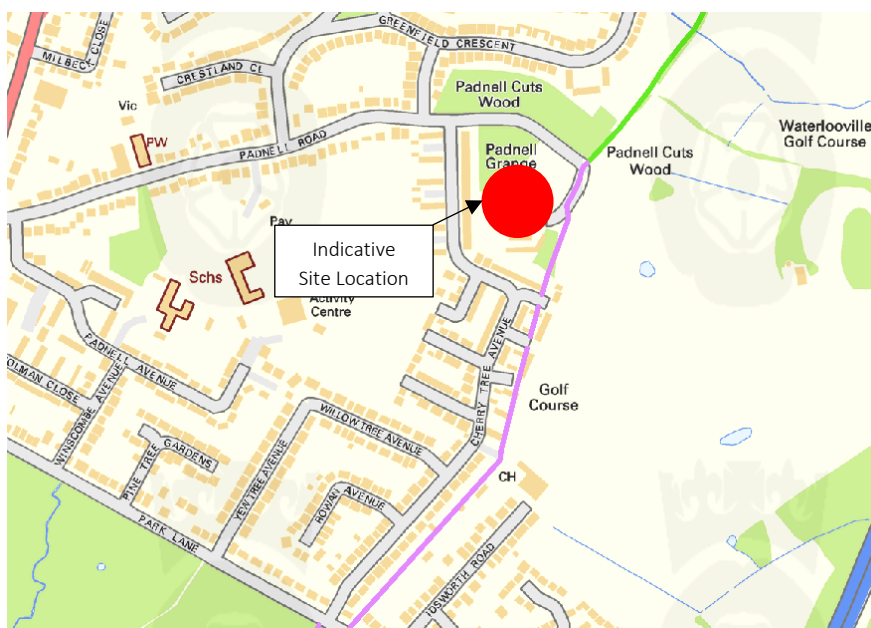


Figure 4: Public Rights of Way

- 4.6 Bridleway 22, demonstrated in green in **Figure 3**, travels north from the site and links to further bridleways and footpaths in and around Horndean. Footpath 127, shown in pink, travels south from the site, connecting to Park Lane, where a number of additional footpaths and another bridleway is accessible.

Cycle Network

- 4.7 Padnell Road east of the Padnell Road/Hazleton Way junction also forms part of the local cycle network as a designated local route. This route travels north on Hazleton Way and south on Cherry Tree Avenue. Cycle routes within the vicinity are shown within **Figure 5**.

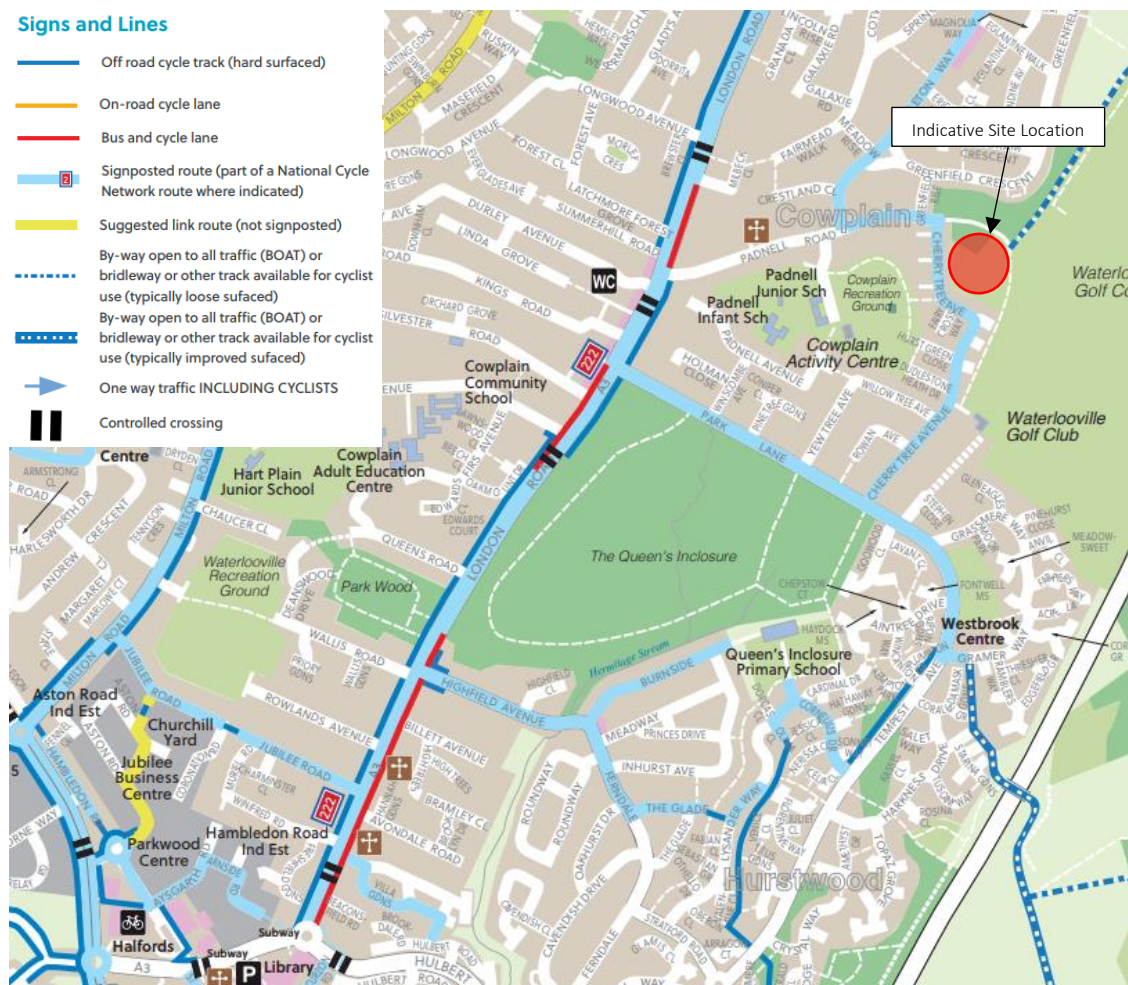


Figure 5: Local Cycle Network Routes

- 4.8 National Cycle Network (NCN) Route 222 (London Road) travels south to Portsmouth and north to Petersfield where it merges with Route 22. NCN routes in this area are demonstrated in **Figure 6**.

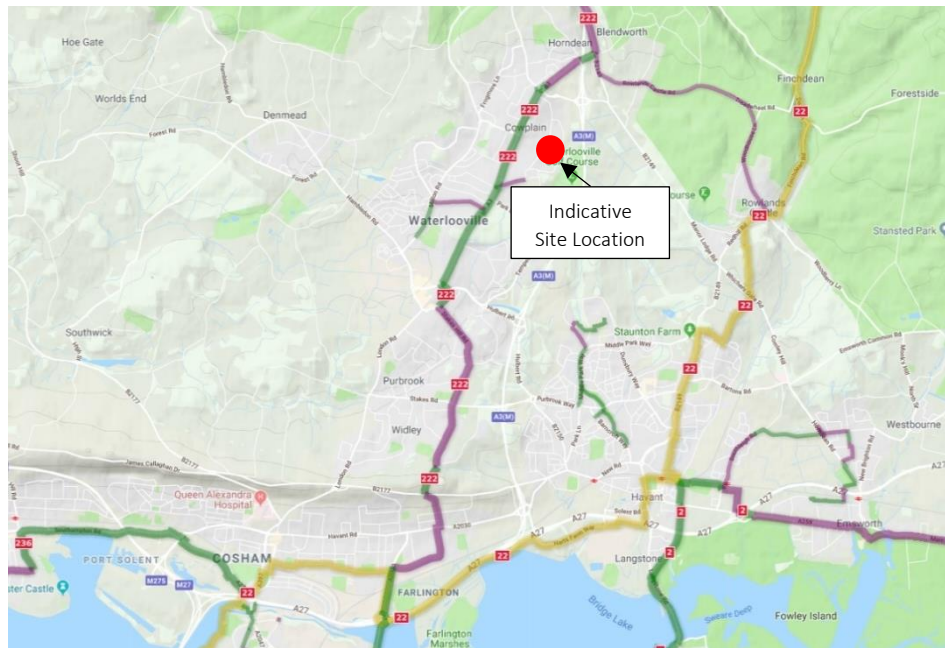


Figure 6: National Cycle Network Routes

Bus Network

- 4.9 The nearest bus stops to the site are located on Padnell Road ('Hazleton Way' and Padnell Avenue') and include a flagpole and timetable information, as demonstrated in **Photograph 5**. Further stops on London Road, approximately 800m from the site (Cowplain Shops) which include sheltered seating, flagpoles and timetable information, as demonstrated in **Photograph 6**.



Photograph 5: Hazleton Way bus stop



Photograph 6: Cowplain Shops bus stop

- 4.10 Bus services available from these stops are summarised in **Table 2**.

Service	Bus Stop	Route	Frequency		
			Monday – Friday	Saturday	Sunday
37	Hazelton Way	Havant – Petersfield	Hourly	Hourly	No Service
28A	Hazleton Way (westbound)	Southbourne – Oaklands School – Havant College	One return trip	No Service	No Service
The Star 8	Cowplain Shops	Portsmouth – Clanfield	Every 15 minutes	Every 15 minutes	Every 30 minutes
37X	Cowplain Shops	Cowplain Shops – Alton – Alton College – Eggars School	Two return trips	No Service	No Service

Table 2: Bus Services

- 4.11 Stagecoach service 37 provides a service between the hours of 06:14 and 18:41, with hourly buses between 10:00 and 18:00 and more frequent buses in the AM peak. The route has intermediary stops including Horndean Precinct, Clanfield, Waterlooville. Travelling to Petersfield on this service will take 25 minutes and to Havant will take 38 minutes.
- 4.12 Service 28A is operated by Emsworth & District and provides a service to a number of educational establishments, namely – Havant College, Causeway Horndean Community School and Stakes Oaklands School.
- 4.13 The First Star 8 service provides a regular service between Clarence Pier (Southsea) and Horndean, with a number of intermediary stops including Portsmouth City Centre, Cosham, Waterlooville and Horndean. A reduced service is provided on Sundays and Bank Holidays.
- 4.14 The 37X service is provided by Stagecoach and travels from Cowplain Shows to Holybourne, Alton College with a number of intermediary stops in Petersfield, Selborne and Alton. Two outbound trips are provided in the morning, and two return trips are provided in the afternoon, with the first and last service coinciding with the start and finish times of students at Holybourne Alton College.

Railway Network

- 4.15 The closest train station, Bedhampton, is c. 6.5km from the site accessible via a 20-minute cycle. Trains from this station are destined for Portsmouth and Southsea (15 minutes), Littlehampton (43 minutes) and London Waterloo (2hrs 36 minutes). The station provides 20 bicycle parking spaces but does not have a car park.

- 4.16 Havant Train Station is 7.8km from the site, accessible via a 25-minute cycle. This station provides services to Portsmouth Harbour (16 minutes), Southampton Central (39 minutes), Brighton (1hr 5 minutes), and London Victoria (1hr 46 minutes). This station provides 286 car parking spaces, and bicycle parking spaces. This station can also be accessed via an approximate 43-minute journey on bus service 37.

5. DEVELOPMENT PROPOSALS

- 5.1 The proposed development would consist of 86 dwellings with associated car parking. It is proposed that 29% of the dwellings would be provided as affordable housing. The proposed accommodation schedule is summarised in **Table 3**, with the site layout included in **Appendix A**.

Type of Dwelling	Number of Units
Private	
2 Bedroom House	6
3 Bedroom House	38
4 Bedroom House	17
Affordable	
1 Bedroom Flat	7
2 Bedroom Flat	6
1 Bedroom House	2
2 Bedroom House	7
3 Bedroom House	3
Total	86

Table 3: Proposed Accommodation Schedule

Car Parking

- 5.2 Car parking would be provided in accordance with Havant Borough Council's (HBC) Parking SPD (Adopted 2016). A summary of the parking standards is provided in **Table 4**.

Type of Dwelling	Minimum Car Parking Requirement (Allocated)	Minimum Car Parking Requirement (Unallocated)
1 Bedroom	1 space	0.9 spaces
2 Bedrooms	2 spaces	1.3 spaces
3 Bedrooms	2 spaces	1.9 spaces
4+ Bedrooms	3 spaces	2.4 spaces

Table 4: HBC Residential Car Parking Standards

- 5.3 An additional 20% of total parking provision is required to accommodate visitors to the site.
- 5.4 In accordance with the standards the development proposes 164 allocated resident spaces, with an additional 15 unallocated spaces to serve the flats within the development, and 18 visitor spaces.

Cycle Parking

5.5 The site would also provide cycle parking in accordance with HBC standards as outlined in **Table 5**.

Unit Type	HBC Cycle Parking Standard
	Long Stay
1 Bedroom	1
2 - 4 Bedroom	2

Table 5: HBC Residential Cycle Parking Standards

5.6 An additional 20% of total cycle parking provision is required to accommodate visitors to the site.

5.7 In accordance with these standards, the site will provide 163 long stay cycle parking spaces and 33 short stay parking spaces.

Internal Road Layout

5.8 The parameters of the site layout would be designed to create an attractive and permeable pedestrian and cycle environment. The development access road would measure 4.8m in width, after which the carriageways narrow and become more reflective of Manual for Streets (MfS) design principles. A carriageway width of 4.8m is sufficient in accommodating a car and a larger vehicle to pass simultaneously. To summarise, the design principles on which the scheme will be based:

- Access road to measure 4.8m in width, before narrowing in residential zones;
- 2m wide footways flanking either side of main roads throughout the site;
- Shared surfaces in residential cul-de-sacs adopting 'home zone' principles.

5.9 In accordance with MfS design guidance, all bends within the home zones would be designed to achieve the required inter-visibility for vehicles travelling up to 15 – 20mph within the site. Any planting provided within the visibility envelope would be maintained to below 600mm in height. The internal visibility splays are included in **Appendix B**.

Refuse and Servicing

5.10 Servicing would take place internally within the site boundary in order to reduce the impact on the local road network. It is envisaged that kerbside collection would be undertaken for the properties and where shared surfaces terminate in a cul-de-sac, the carry and/or reversing distances would be in accordance with MfS best practice guidance of 30m for residents and 25m for refuse collectors.

- 5.11 Fire tender vehicles can get within 45m of all dwellings in accordance with MfS design guidance. Swept path analysis of the site has been undertaken by RCP to ensure that refuse vehicles and fire tender vehicles can enter, turn and exit on-site and is included in **Appendix C**.

Access Arrangement

- 5.12 The site is to be served from Padnell Road in the form of an extension of this road into the site. The existing vehicular access at the site boundary currently measures 3.5m in width which is to be widened to 4.8m as part of the development proposals. A footway measuring 2m will flank the carriageway to provide pedestrian connectivity into the site.

6. TRIP GENERATION AND HIGHWAY IMPACT

Trip Generation

- 6.1 In order to establish the likely trip generation from the existing and proposed development the industry standard database TRICS (v.7.5.3) has been consulted. To understand the impact of the proposed development in comparison to the existing site uses, trip generation calculations have been calculated for both the existing and proposed site uses, using the same trip rate for residential dwellings. The criteria included sites in England and Wales (excluding Greater London) and located within 'Suburban' or 'Edge of Town' locations with no Travel Plan. Surveys were only included where undertaken on weekdays within the most recent 5-year period.

Existing Site

- 6.2 'Houses Privately Owned and 'Offices' were used to establish the existing trip generation within the above parameters. The subsequent trip rates for the existing site are summarised in **Table 6**, whilst the TRICS data outputs are attached as **Appendix D**.

TRICS	AM Peak (0800-0900)		PM Peak (1700-1800)		Total Daily Trips
	Arrivals	Departures	Arrivals	Departures	
Trip Rate (per residential dwelling)	0.127	0.368	0.330	0.153	4.648
Trip Generation (1 dwelling)	0	0	0	0	5
Office (per 100sqm)	2.522	0.192	0.204	1.870	17.019
Office (140sqm)	4	0	0	3	24
TOTAL	4		3		29

Table 6: Existing Trip Generation

- 6.3 The existing site is estimated to generate four vehicle trips in the AM peak, 3 trips in the PM peak, with a total of 29 vehicle trips over a 12-hour period.

Proposed Development

- 6.4 'Houses Privately owned' within the aforementioned parameters was used for the proposed development and thus the same trip rate has been used as above. The subsequent trip generation is summarised in **Table 7**.

TRICS	AM Peak (0800-0900)		PM Peak (1700-1800)		Total Daily Trips
	Arrivals	Departures	Arrivals	Departures	
Trip Rate (per unit)	0.127	0.368	0.330	0.153	4.648
Trip Generation (86 dwellings)	11	32	28	13	400
TOTAL	43		41		400

Table 7: Proposed Trip Generation

- 6.5 The trip rate assessment indicates that the proposed development of 86 residential units would generate 43 vehicle movements in the AM peak (0800-0900) and 41 vehicle movements in the PM peak (1700-1800) and a total of 400 vehicle movements over a 12-hour period.

Net Impact

- 6.6 When compared to the site's existing use, the proposed development is anticipated to generate an extra 39 vehicle trips in the AM peak and 38 trips in the PM peak with a total of 371 extra trips over a 12-hour period, as summarised in **Table 8**.

TRICS	AM Peak (0800-0900)		PM Peak (1700-1800)		Total Daily Trips
	Arrivals	Departures	Arrivals	Departures	
Existing Site	4	0	0	3	29
Proposed Site	11	32	28	13	400
Net Impact	+39		+38		+371

Table 8: Net Impact Trip Generation

Route Assignment

- 6.7 To understand the likely direction of travel from the site, 'Location of usual residence and place of work' 2011 Census data has been assessed for super output area (mid-layer) 'Havant 020' which includes the site. This data set indicates likely work destinations for residents within this area and thus likely routes from the site in the peak hours can be predicted. The route away from the site, along with the anticipated percentage share of development traffic is summarised in **Table 9**, whilst the full Census Data is attached as **Appendix E**.

Route Assignment	Percentage of Traffic
A3 South (via Padnell Road)	37%
Cherry Tree Avenue (South)	35%
Hazleton Way (North)	22%
A3 North (via Padnell Road)	5%
Total	100%

Table 9: Route Assignment

- 6.8 Given that 42% of traffic is anticipated to use the signalised A3/Padnell Road junction, a percentage impact assessment has been undertaken on this junction.

Baseline Traffic Flows

- 6.9 A turning count survey was undertaken on the 27th November 2018 to establish the existing traffic on the A3/Padnell Road junction. The results of the survey are demonstrated in **Figure 7**, whilst the full outputs are attached as **Appendix F**.

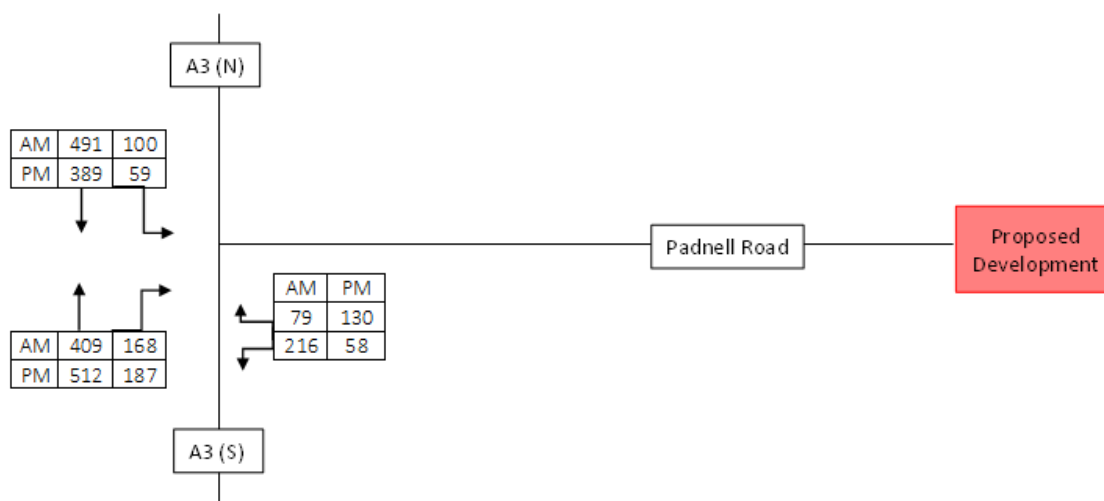


Figure 7: Baseline 2018 Traffic Flows

TEMPro

- 6.10 In order to undertake an assessment on the percentage impact of the development traffic, the baseline traffic flows (from turning count data) have been factored up to a future year of 2023 using TEMPro growth rates for the area of 'Havant 20'. The TEMPro growth rates are shown in **Table 9**, whilst the factored-up traffic flows are demonstrated in **Figure 8**.

Test Valley 014	AM Peak	PM Peak
2018-2023	1.1398	PM 1.1396

Table 10: TEMPro Growth Factors

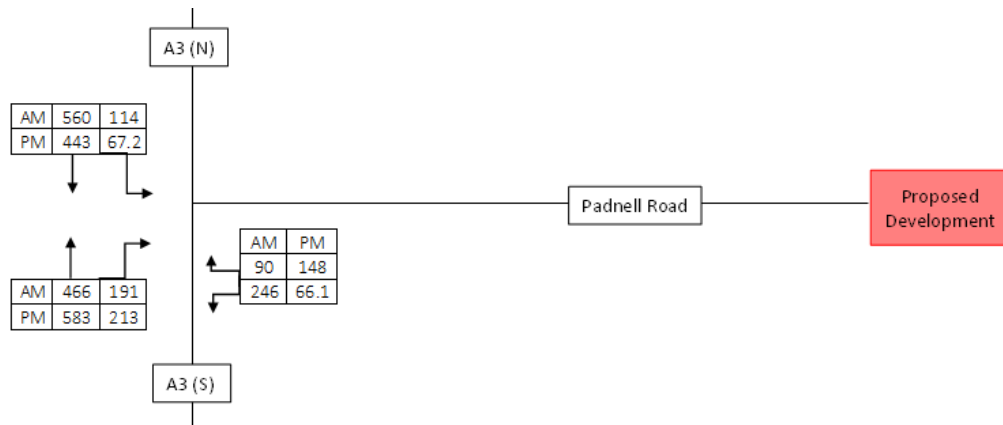


Figure 8: 2023 Baseline Traffic Flows

6.11 The route assignment assessment has anticipated that 42% of the development traffic would use the A3/Padnell Road junction with 5% then travelling north and 37% travelling south. These trips are demonstrated in **Figure 9**.

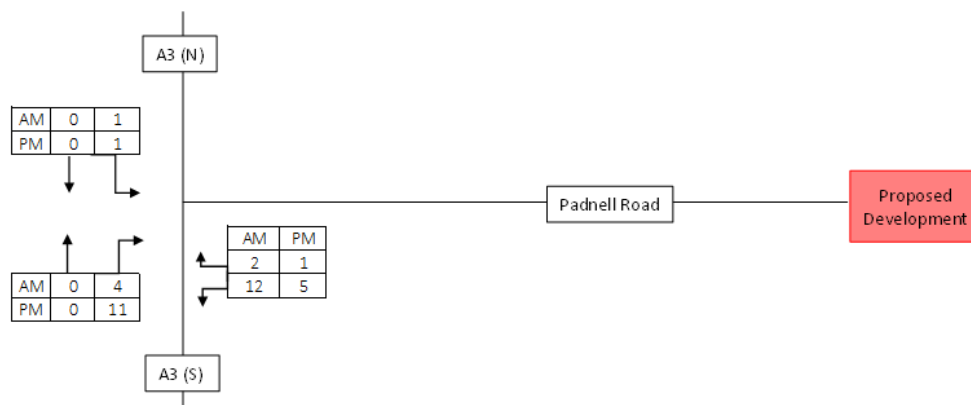


Figure 9: Development Traffic using A3/Padnell Road Junction

6.12 Using the net impact trip generation values identified in **Table 8**, the development trips are distributed onto the baseline 2023 scenario as per **Figure 10**.

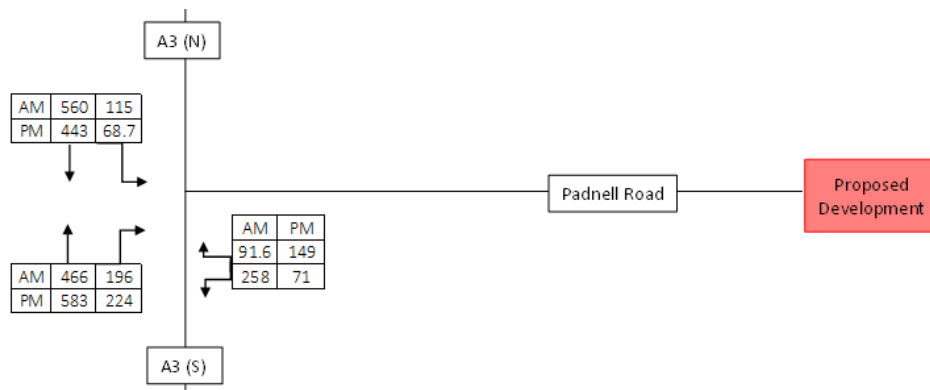


Figure 10: 2023 Baseline plus Development Traffic

- 6.13 The proposed development is anticipated to increase traffic by 4% on the Padnell Road arm of the junction in the AM peak, and a 2% increase on the same arm in the PM peak. All other arms have a <1% impact. This indicates that the proposed development would have a negligible impact on the operation of this junction.

Impact on Cherry Tree Avenue

- 6.14 Pre-application discussions raised concern regarding the impact of development traffic on Cherry Tree Avenue to the south of Padnell Road.
- 6.15 To ascertain the existing traffic volumes on Cherry Tree Avenue, a seven-day speed and volume survey of traffic movements was undertaken between 7th January 2019 and 14th January 2019. A summary of the ATC results is provided in **Table 11**, with the full outputs included in **Appendix G**.

Direction	AM Peak (0800-0900) 5-day Average	PM Peak (1600-1700) 5-day Average	Daily Flow (24 hours) 5-day Average	85 th Percentile Speeds
Northbound	82	89	907	24mph
Southbound	112	71	876	24mph
Total	194	160	1783	-

Table 11: ATC Survey Results

- 6.16 The earlier route assignment assessment anticipates 35% of development traffic would travel on Cherry Tree Avenue, equating to 14 vehicles in the AM peak and 15 vehicles in the PM peak. Given the peak hour flows in **Table 11**, an increase of one trip every 4 minutes would not result in a significant impact on the operation and safety of Cherry Tree Avenue.

7. SUMMARY AND CONCLUSIONS

- 7.1 This Transport Assessment (TA) has been prepared by Paul Basham Associates on behalf of Bellway Homes and The Borrow Foundation to support a planning application for a residential development of 86 residential dwellings at Padnell Grange, Cowplain.
- 7.2 The development site is in an accessible location, within 800m of amenities on London Road (A3) to the east of the site, including convenience stores, eateries, a doctor's surgery and pharmacy. Sections of Padnell Road, London Road and the surrounding residential roads make up signposted cycle routes providing an opportunity for active sustainable travel. Bus stops within 350m provide access to two bus routes, with another two regular services accessible at stops on London Road (c. 800m).
- 7.3 A total of four Personal Injury Accident incident reports have been assessed, one of which occurred on Padnell Road, and three which occurred at the A3/Padnell Road junction. It is clear from the summaries of these incidents that they occurred due to driver error and do not cause a concern from a highway safety perspective. No PIA incidents have occurred on Cherry Tree Avenue within the most-recent 3-year period.
- 7.4 The site would be accessed via a continuation of Padnell Road. The main access road would measure 4.8m in width flanked by a 2m. The internal layout has been designed in accordance with Manual for Streets principles. Through the alignments, road widths, and shared surfaces within residential cul-de-sacs the proposals create a low speed and attractive environment for all road users.
- 7.5 A total of 197 parking spaces are proposed, with 18 visitor spaces distributed through the site. The proposed car parking strategy for the site uses a combination of garages and driveways, laybys and parking courts. Secure and covered long stay cycle parking is provided for each property across the site in accordance with HBC standards.
- 7.6 A TRICS assessment has been undertaken, which anticipates 43 vehicular movements in the AM peak, 41 vehicular movements in the PM peak with a total of 400 vehicular movements over a 12-hour period. When compared to the existing use, this equates to an additional 371 trips on the local road network over a 12-hour period.
- 7.7 Route assignment based on Census 2011 data ('Location of usual residence and place of work') forecasts 42% of development traffic to travel west to the London Road junction, where 37% are expected to travel southbound and 5% are expected to travel southbound. 35% of development traffic is forecast to travel south on Cherry Tree Avenue, with the remaining 22% travelling north on Hazleton Way.

- 7.8 Baseline traffic flows taken from turning counts have been factored up to a base year of 2023 in order to undertake a percentage impact assessment on the London Road(A3)/Padnell Road junction. The net impact traffic on this junction is anticipated to create a 4% increase in traffic on the Padnell Road arm in the AM peak, and a 2% increase on the same arm in the PM peak.
- 7.9 An assessment has been undertaken on Cherry Tree Avenue which suggests the proposed development would not have a significant impact on the safety of this road.
- 7.10 This Transport Assessment has demonstrated that the development proposals do not have a significant impact on the operation or safety of the highway network and Paul Basham Associates therefore encourage Hampshire County Council and Havant Borough Council to look favourably on the highways aspects of this application.



NOTES

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Where applicable this drawing is to be read in conjunction with the Consultants' drawings.

REV	DESCRIPTION	DATE	AUTHOR	CHK'D
A	Affordable housing updated	04/07/2017	PM/kl	PM
B	Patch to Layout	11/09/2017	MD/ah	-
C	Patch to Layout	01/11/17	BD/ah	BD
D	Patch to Layout	07/11/17	BD/SWD	SC
E	Patch to Layout	09/11/17	BD/ah	BD
F	Updates to Layout	23/11/17	BD/kl	BD
G	Patch to Layout	05/12/17	BD/ah	BD
H	Patch to Layout	07/03/18	BD/ah	BD
J	Updated Layout	16/10/18	BD/SWD	-
K	Updated Layout	29/10/18	BD/dr	-
L	Updated Layout	07/11/18	BD/at	-
M	Updated Layout	15/11/18	BD/at	-
N	Layout Coloured	19/11/18	BD/at	-

KEY

- Site Boundary
- Plot Number
- House Type
- Affordable Housing
- Built Form
- Existing Tree
- Proposed Tree
- Back Garden
- Front Garden
- Public Open Space
- Attenuation Pond/Swale
- Road
- Shared Surface
- Private Drive

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PROJECT

Padnell Grange

Cowplain

For: Bellway Homes (Wessex)

DRAWING

Sketch Layout - 01

SCALE	DATE	AUTHOR	CHK'D
1:500 @ A1	16/03/17	PM/SWD	NC

JOB NO.	DRAWING NO.	REV
BELL170217	SKL-01	N

0 5 10 15 20 25 30 35 40 45 50m
(1:500)

Accommodation Schedule

PRIVATE							
House Type		Storey Height	No of Bedrooms	SqFt	SqM	No	Total SqFt
PO	Potter	2	2	769	71.4	6	4614
TA	Tallor	2	3	802	74.5	16	12832
TH	Thatcher	2	3	921	85.6	3	2763
CH	Chandler	2	3	951	88.3	9	8559
CA	Carver	2	3	981	91.1	3	2943
LA	Larch	2	3	1087	101.0	7	7609
SC	Scrivener	2	4	1214	112.8	1	1214
CU	Cutler	2	4	1335	124.0	7	9345
BO	Bowyer	2	4	1356	126.0	9	12204
TOTALS						61	62083

Private housing plot areas (sqft)	62083
Net developable area (acres)	4.126
Coverage sqft/acre	15047

AFFORDABLE RENTED							
House Type		Storey Height	No of Beds Bedrooms	SqFt	SqM	No	Total SqFt
1B FOG	1B2P	1	1	538	50.0	1	538
1B FLAT	1B2P	1	1	538	50.0	6	3228
2B FLAT	2B4P	1	2	754	70.0	6	4524
SO1	2B4P	2	2	842	78.2	7	5894
SO2	3B5P	2	3	985	91.5	3	2955
SO5	1B2P	2	1	585	54.3	2	1170
TOTALS						25	18309

Affordable Housing plot areas (sqft)	18309
Net developable area (acres)	0.833
Coverage sqft/acre	21982

SITE TOTALS	86	80392
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Total Housing plot areas (sqft)	80392
Total Net developable area (acres)	4.959
Total Coverage sqft/acre	16212

Appendix B

Appendix C