# **Appendix 1**

# 18/02171/FUL

# Land adjacent to Oakhurst Rise Highways Comments



## **Highways Development Management**

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Please ask for: Lucas Arinze

Our Ref: B/2018/041670 Your Ref: 18/02171/OUT Date: 13 December 2018

Dear Michelle Payne,

# TOWN AND COUNTRY PLANNING ACT 1990 HIGHWAY RECOMMENDATION

LOCATION: <u>Land Adjacent To Oakhurst Rise Cheltenham Gloucestershire</u>
PROPOSED: <u>Outline application for residential development of up to 69 dwellings including access, layout and scale, with all other matters reserved for future consideration (revised scheme following refusal of application ref. 17/00710/OUT)</u>

I refer to the above planning outline planning application with access and layout to be considered received on the 5<sup>th</sup> November 2018 2018, submitted with application form, Design & Access Statement, Transport Assessment, Technical Note, Travel Plan, NMU Context Report, Stage 1 RSA report & Mobility Audit, Designers Response and Auditors Letter and drawing refs. PL005 Rev A, SP03 Revision: C, SP04 Revision: C, SP05, SP06 Revision: A, SK20 Revision: E, SK21 Revision: C, SK22 Revision: C, SK23, SK24 and SK25 Revision: A.

#### **History**

A recent planning application for 90 residential dwellings at the same site (ref. 17/00710/OUT) was refused planning permission in July 2018; however the Highway Authority recommended that no highway objection be raised subject to conditions.

#### **Local Transport Network**

The site is located to the east of Cheltenham town centre within Charlton Kings. The site is bound to the north, east and west by existing residential development and to the south by St. Edward's Preparatory

School. The proposed development site will be accessed directly from Oakhurst Rise. Oakhurst Rise is a publicly maintainable historic cul-de-sac that has safely served some 30+ residential dwellings for a number of years, connecting to Ewens Road and Beaufort Road at its southern extent in the form of a simple priority junction. Oakhurst Rise and all of the other roads in the locality have pedestrian footways to both sides of the highway and feature street lighting.

#### **Existing & Proposed Land Uses**

The site is currently 4.29 hectares of pasture. The proposed land use will change to occupy 69 residential dwellings comprising of:

- 6 1 bedroomed apartments;
- 14 2 bedroomed apartments;
- 4 3 bedroomed apartments;
- 4 2 bedroomed houses;
- 10 3 bedroomed houses;
- 24 4 bedroomed houses;
- 6 5 bedroomed houses; and
- 1 6 bedroomed house.

#### Accessibility - Public Transport, Walking & Cycling

The site is sustainably located and is deemed to be within acceptable walking distance of local amenities. In addition the site is also accessible to high quality public transport facilities located nearby with the nearest bus stops located on Beaufort Road to the south-west and slightly further afield on the A40 to the south. The bus serving the stop on the A40 London Road operates regularly at peak hours with services connecting to centre of Cheltenham Town.

#### <u>Access</u>

Vehicular access to the site will be provided from Oakhurst Rise, via a continuation of the existing cul-de-sac. Oakhurst Rise is a class 4 highway with a carriageway width of approximately 5.5m and is subject to the sign posted 20mph speed limit. The continuation of carriageway into the site will remain at a width of 5.5m with 2m wide footways on both sides of the carriageway.

#### <u>Layout</u>

The proposed internal layout will primarily be 5.5m wide carriageways with 2m footways on either side throughout the layout which is sufficient width to accommodate the passing of two private estate vehicles and ensures that conflict with vulnerable users is minimised in accordance with Paragraph 110 of the NPPF. The remaining areas within the site will be shared surface and vary in width between 6.8m

- 7.5m; full height kerbed footways are tapered transitioning pedestrians into these shared areas with transitional rumble strips / ramps indicating drivers that they are entering a change in highway.

As two private estate cars can pass one another simultaneously throughout the site forward visibility is only required for larger vehicles (such as a refuse vehicle) and a car where they cannot safely pass simultaneously. As drivers of larger vehicles typically sit further forward than in a car due to the bonnet length being reduced this provides them with enhanced forward visibility. Therefore with the aforementioned and the infrequency of two such vehicles meeting it is deemed that speeds and the required visibility in this location will be low.

Refuse vehicle tracking as shown on drawing refs. SK23, SP03 Revision: C and SP06 Revision: A demonstrates that an 11.2m 3-axle refuse vehicle can enter, manoeuvre through and egress the site in forward gear without conflict. The tracking has demonstrated that where a car is unable to pass a refuse vehicle adequate levels of driver to driver inter-visibility can be achieved to allow one another to give way. The refuse vehicle can also get within 25m of all refuse storage points and would have not come any closer than 500mm from any vertical kerb-line structure, tree or formal car parking space.

Forward visibility of 25m commensurate with the design speed of 20mph has been provided (drawing ref. SK22 Revision: C) around all bends throughout the main estate layout. In some locations these forward visibility splays cross over/ are within very close proximity to amenity space ant it is therefore recommended that a planning condition is attached to ensure that all planting and/or boundary features within the forward visibility splays are no greater than 600mm.

As the site has a gradient, when a planning application is submitted the developer will have to bear in mind how they propose to construct the carriageways to an acceptable gradient. There are many ways that the required gradients can be achieved through various earthwork techniques. However at planning stage technical details such as carriageway gradients are not assessed as this will take place once planning permission has been established through the technical approval process.

Gloucestershire County Council's Manual for Gloucestershire Streets guidance provides guidelines for adoptable gradients and geometries and these must be achieved if the roads are to be adopted. Even if the developer does not want the carriageways and footways within the site to be adopted they must still be constructed to an adoptable standard.

#### Parking

As there are currently no local car parking standards in Gloucestershire, the suitability of the parking provision will instead be assessed against the methodology set out in the NPPF. A further Ministerial statement published in March 2015 stated that Local Planning Authorities should only impose local parking standards for residential and non-residential development where there is a clear and compelling justification that it is necessary to manage their local road network.

Parking provision should be compliant with Paragraph 105 of the NPPF, a part of that methodology looks at local car ownership levels based upon the 2011 census data, with further consideration given to documents such as the DCLG Residential Car Parking Research Document. I have undertaken a study of the local car ownership levels for the area surrounding the proposed development site.

In total the proposed development will provide a total of 159 parking spaces for the 69 dwellings with a mix of garages, driveway car parking spaces and 17 visitor car parking spaces. This equates to an average of 2.3 parking spaces per dwelling, which is in excess of the local car ownership Census data levels. The 2011 local car ownership Census data identified an average car ownership within area E01022104:Cheltenham 012B of approximately 1.20 cars per dwelling.

Car / Van	Number	%
All categories: Car or van availability	721	100.0
No cars or vans in household	122	16.9
1 car or van in household	349	48.4
2 cars or vans in household	200	27.7
3 cars or vans in household	37	5.1
4 or more cars or vans in household	13	1.8

The DCLG's Residential Car Parking Research Document (RCPR) states that allocated spaces can generate additional parking demand. The additional parking demand can be calculated using the census data and the following equation;

 $(1x\ 0.28) + (2x\ 0.05) + (3\ x\ 0.02) = 0.44$  additional demand, creating an overall parking demand of 1.64 spaces per dwelling. The RCPR also states that those living in affordable housing often own on average 0.5 fewer vehicles than those living in similar owner occupied dwellings.

In addition to the above 0.2 parking spaces per dwelling required by Manual for Gloucestershire Streets (MfGS) for visitor parking, a total of 17 visitor spaces for the development would also be required. When combining the expected car ownership levels and GCC's visitor space requirement (based on MfGS), the proposed site would be expected to provide at least 130 car parking spaces. Therefore based upon the local car ownership levels, the proposed parking provision being higher than the recorded average car ownership figures in the 2011 census data and the findings of the RCPR, the proposed provision would be regarded as acceptable in accordance with Paragraph 105 of the NPPF and will reduce the likelihood of parking displacement on the surrounding highway network.

Each parking space complies with the recommended design guidance of 9.13 and 9.14 Manual for Gloucestershire Streets with each space measuring 2.4m x 4.8m in length with 6.0m of drivable surface

in front of them for ease of access. The private garages also comply with the recommended design guidance of 9.22 Manual for Gloucestershire Streets with each single garage measuring a minimum of 6m x 3m, with minimum door width of 2.4m and each double garage measuring 6m x 6m, with minimum door width of 2.4m.

In addition the site will provide a minimum of 1 secure cycle storage space per dwelling. Cycle storage provision will encourage an active lifestyle and can act as a suitable substitute to the private car over short distances. A 3 mile utility cycle is a convenient distance for cyclists of all abilities whilst longer journeys of 5 miles or more according to LTN 2/08 allows experience cyclists to commute to work as well as provide scope to combine with alternative modes of sustainable transport to create longer environmentally friendly journeys. Cycling does have the ability to create a modal shift away from the private motor car.

Cycle storage for the dwelling houses can be accommodated within a rear garden shed, the shed should have a stand secured to the foundations and fixed lockable door. They should be positioned as such to allow for overlooking from a habitable room, this will allow for passive surveillance and help to reduce potential crime. The cycle storage serving the apartments can be provided by way of an appropriately positioned external store located close to pedestrian entrances and accesses. The store must be safe, secure and covered. Cycle storage facilities will be secured by way of planning condition.

#### **Road Safety Audit**

A stage 1 Road Safety Audit (RSA) was undertaken for the site layout in accordance with HD19/15. All issues raised within the audit have been agreed to within the designer's response and demonstrated on drawing refs. SK22 Revision: C, SK23 and SK24 which have addressed the road safety issues raised and have been approved by the auditor.

#### **Non-Motorised Users**

A non-motorised user's assessment was undertaken with an aim to identify any shortfalls in pedestrian facilities and whether it would be reasonable to secure off site mitigation of the routes identified within the report. The report identifies deficiencies in the surrounding walking/cycling network and routes to destinations which should be improved for non-motorised user's accessibility, safety, comfort and convenience.

Walkable neighbourhoods are typically characterised by having a range of facilities within 10 minutes (up to about 800m) walking distance of residential areas which residents may access comfortably on foot. However, this is not an upper limit and Planning Policy Statement 13 Transportation and Land Use document states that walking offers the greatest potential to replace short car trips, particularly those under 2km. Manual for Streets encourages a reduction in the need to travel by car through the creation of mixed-use neighbourhoods with interconnected street patterns, where daily needs are within walking distance of most residents.

The overall outcome identified that the existing routes were of a good standard with only a small number of pedestrian crossing improvements required. These have been secured by way of suitably worded planning condition.

#### **Vehicle Trip Generation**

During scoping discussions, the Highway Authority stated that the TRICS trip rate and trip generation data presented by the applicants transport consultant (Cotswold Transport Planning) was not comparable to the proposed development site. The Highway Authority requested a local validation survey should be undertaken to determine the forecast trip generation. It was agreed that an Automatic Traffic Count (ATC) survey could be undertaken on Charlton Court Road, as this was considered to provide a typical trip rate for the area which could be used to forecast vehicular trips at the proposed site. As Charlton Court Road is of a similar geometry it is considered to be robust for the purposes of estimating the trip generation from the proposed development.

The use of the donor site (Charlton Court Road) is considered to be robust for the purposes of estimating the trip generation from the proposed development. The daily trip generation from the local donor site is approximately 25% higher than the daily trip generation presented in the scoping report presented by the applicants transport consultant, derived from the Trip Rate Information Computer System (TRICS) database.

The donor site recorded a two-way AM peak hour trip generation of 0.44 trips per dwelling consisting of 0.11 arrivals and 0.33 departures and a two-way PM peak hour trip generation 0.48 trips consisting of 0.31 arrivals and 0.17 departures per dwelling (based on 35 dwellings). For a 69 dwelling development, based on the donor site figures, the development would generate 30 AM peak hour trips consisting of 7 arrivals and 23 departures and 33 PM peak hour trips consisting of 21 arrivals and 12 departures.

#### <u>Distribution & Traffic Impact</u>

Based on census journey to work data (2011), the proposed vehicle distribution can be determined. 51.8% of development traffic will be distributed left out of Oakhurst Rise onto Beaufort Road and Charlton Court Road, travel west along the A40 towards Cheltenham, 22.1% will be distributed right out of Oakhurst Rise, travel west along Ewens Road towards the B4075 Hales Road, 11.7% will turn left out of Oakhurst Rise onto Beaufort Road and Charlton Court Road, travel west along the A40 towards Cheltenham and turn left onto the A435 and the remainder will turn left out of Oakhurst Rise onto Beaufort Road and Charlton Court Road, travel east along the A40 towards Charlton Kings, based on the 2011 Census Journey to Work Travel data.

Four broad route choices have been identified as use of a "quickest" route choice for traffic travelling to/from the development site and each Middle Layer Super Output Area (MSOA), noting the small variations between AM and PM routes to account for one-way and banned turning movements in Cheltenham.

- 1. A40 W (London Road) and A40 S (Old Bath Road / Sandford Mill Road) to access MSOA locations to the south and west of the site including Cheltenham town centre;
- 2. Ewens Road and residential streets surrounding the site to access MSOA locations to the north;
- 3. A435 S (Cirencester Road) to access MSOAs to the south and east of the site; and
- 4. A40 E (London Road) to access MSOAs to the east of the site.

Due the development traffic passing through sensitive junctions it was requested by the Highway Authority that capacity assessments be undertaken where there will be a material impact on local keys junctions. This may be relatively low where congestion occurs on the local highway network. It was identified through the assignment and distribution of the development traffic that the following junctions required capacity assessments:

- Charlton Court Road/London Road A40;
- Sixways;
- London Road A40/Cirencester Road A435; and
- Hales Road B4075/ London Road A40/ High Street A435

On the basis that the this planning application is for 69 dwellings, and therefore 21 dwellings less than sought previously, it was not deemed necessary to revisit the off-site junction modelling assessments, which have previously been accepted by the Highway Authority (albeit subject to mitigation that is still required to make this development acceptable), which in reality would show improvements in future scenarios due to the reduction in dwelling numbers and associated traffic generation.

The LPA have confirmed that there is no committed development that would need to be taken into account when assessing the junctions in question. Committed development is considered to be anything 10 houses and above. Developments include allocated or permitted sites that are likely to come forward within the next 3 years and/or developments that might affect the traffic within the site study area.

#### Charlton Court Road/London Road A40

Scenario	Modeller Comments
2017 Base	Results for current assessment show junction operating below practical
AM	capacity levels, with queues less than 1pcu.
2017 Base	Results for current assessment show junction operating below practical
PM	capacity levels, with queues less than 1pcu.
2022 Base	Results for current assessment show junction operating below practical
AM	capacity levels, with queues less than 1pcu.
2022 Base	Results for current assessment show junction operating below practical
PM	capacity levels, with queues less than 1pcu.
	Results for current assessment show junction operating below practical
2017 Base +	capacity levels, with queues less than 1pcu. The impact from the
Development	development does worsen junction performance; however this is not
AM	considered to be a significant impact and therefore is acceptable at this
	stage.
	Results for current assessment show junction operating below practical
2017 Base +	capacity levels, with queues less than 1pcu. The impact from the
Development	development does worsen junction performance; however this is not
PM	considered to be a significant impact and therefore is acceptable at this
	stage.
2022 Base +	Results for current assessment show junction operating below practical
Development	capacity levels, with queues less than 1pcu. The impact from the
AM	development does worsen junction performance; however this is not
	considered to be a significant impact and therefore is acceptable at this

	stage.
	Results for current assessment show junction operating below practical
2022 Base +	capacity levels, with queues less than 1pcu. The impact from the
Development	development does worsen junction performance; however this is not
PM	considered to be a significant impact and therefore is acceptable at this
	stage.

#### <u>Summary</u>

The results of the Charlton Court Road/London Road A40 junction assessment shows that the junction operates well below practical capacity levels in current and future year scenarios (2022) with and without development traffic.

All of the other junctions above were subject to a LINSIG assessments, these outcomes are as follows:

### <u>Sixways</u>

Results: File 1 (MOVA Set-up)	Modeller Comments
In the AM scenario, the	
	is operating well over absolute
	capacity levels with a MMQ
	length of 173.4pcus. All other
	lane are shown to exceed
	absolute capacity levels (DoS =
	~101%) with the expectation of
	the A40 EB which is shown to be
	just over practical capacity (DoS
2017 Base	= 90%). In the PM scenario, both
	A40 arms are shown to operate
	well in excess of practical
	capacity and all other arms are
	below or at practical capacity
	levels. Therefore, the junction is
	shown to operate over absolute
	capacity in the AM scenario and
	over practical capacity levels in
	the PM scenario.
2022 Base	In the AM scenario, all arms are
	shown to be operating with DoS
	values in excess of 100%, with
	the A40 WB shown to have an
	MMQ length of 245pcus. In the
	PM scenario, both A40 arms are
	again shown to be operating in
	excess of 100% DoS, as is
	Greenway Lane. All other arms
	are below practical capacity.
	Therefore, this model shows
I	that the junction is operating

	over absolute capacity limits in
	both AM and PM scenarios.
	In the AM scenario, the junction
	continues to operate well over
	capacity. The increases in DoS
	and MMQ length from the
	introduction of development
	traffic are minimal, with the A40
	EB increasing by 0.9% DoS and
	the A40 WB increasing by 0.6%
	DoS and 1.3 PCU MMQ length.
	There is a similarly minor
	worsening of performance in
	the PM, with the A40 EB shown
2017 Base + Development	to increase by 0.4% DoS and the
·	A40 WB increasing by 0.1% DoS.
	Greenway Lane, Ryeworth Road
	and Copt Elm Road do not
	deteriorate in performance in
	either the AM or PM scenario.
	Therefore whilst junction
	performance is shown to be
	poor, the introduction of
	development traffic does not
	cause a significant deterioration
	in performance from the 2017
	Baseline.
2022 Base + Development	In the AM scenario, the junction
•	continues to operate well over
	capacity. The increases in DoS
	and MMQ from the introduction
	of development traffic are
	shown to be minimal, with the
	A40 EB increasing by 0.9% DoS
	and 2.6pcu MMQ length and the
	A40 WB increasing by 0.4% Dos
	and 1.3 PCU MMQ length. There
	is a similar minor worsening of
	performance in the PM, with
	the A40 EB shown to increase by
	0.4% DoS and the A40 WB
	increasing by 0.9% DoS.
	Greenway Lane, Ryeworth Road
	and Copt Elm Road do not
	deteriorate in performance in
	either the AM or PM scenario.
	Therefore whilst junction
	performance is shown to be
	poor the introduction of

	development traffic does not
	cause a significant deterioration
	in performance from the 2022
	Baseline.
	The File 1 model is reported
	within the accompanying
	Technical Note not to be
	validated particularly well
	compared to the supplied
	queue length data. The TN
	states that this is likely to be
Other comments	due to local variation in traffic
	conditions between the survey
	and modeller observation dates.
	The Highway Authority agrees
	with this conclusion in principle,
	and accepts that the use of
	MOVA data provides a suitably
	validated base model.
Results: File 2 (as per File 1, with optimised signal	Modeller Comments
times)	
017 Base	The results of the 2017 Base
	scenario (with the optimisation
	of signal timings) show an
	improvement of A40 capacity,
	but a worsening of capacity on
	the minor arms compared to
	File 1. In the AM scenario, the
	A40 EB improves by 8.8% DoS
	and 9pcus MMQ length and the
	and 9pcus MMQ length and the A40 WB improves by 23.4% DoS
	and 9pcus MMQ length and the A40 WB improves by 23.4% DoS and 55pcu MMQ length
	and 9pcus MMQ length and the A40 WB improves by 23.4% DoS and 55pcu MMQ length compared to the File 1 2017
	and 9pcus MMQ length and the A40 WB improves by 23.4% DoS and 55pcu MMQ length compared to the File 1 2017 Base. However Greenway Lane
	and 9pcus MMQ length and the A40 WB improves by 23.4% DoS and 55pcu MMQ length compared to the File 1 2017 Base. However Greenway Lane increases in DoS (MMQ length)
	and 9pcus MMQ length and the A40 WB improves by 23.4% DoS and 55pcu MMQ length compared to the File 1 2017 Base. However Greenway Lane increases in DoS (MMQ length) by 17.2% (11.1pcus), Ryeworth
	and 9pcus MMQ length and the A40 WB improves by 23.4% DoS and 55pcu MMQ length compared to the File 1 2017 Base. However Greenway Lane increases in DoS (MMQ length) by 17.2% (11.1pcus), Ryeworth Road by 10.2% (1.2pcus) and
	and 9pcus MMQ length and the A40 WB improves by 23.4% DoS and 55pcu MMQ length compared to the File 1 2017 Base. However Greenway Lane increases in DoS (MMQ length) by 17.2% (11.1pcus), Ryeworth Road by 10.2% (1.2pcus) and Copt Elm Rd by 18.4%
	and 9pcus MMQ length and the A40 WB improves by 23.4% DoS and 55pcu MMQ length compared to the File 1 2017 Base. However Greenway Lane increases in DoS (MMQ length) by 17.2% (11.1pcus), Ryeworth Road by 10.2% (1.2pcus) and Copt Elm Rd by 18.4% (16.7pcus). There are similar
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	and 9pcus MMQ length and the A40 WB improves by 23.4% DoS and 55pcu MMQ length compared to the File 1 2017 Base. However Greenway Lane increases in DoS (MMQ length) by 17.2% (11.1pcus), Ryeworth Road by 10.2% (1.2pcus) and Copt Elm Rd by 18.4% (16.7pcus). There are similar changes in the PM scenario. Having said this, PRC values in the AM and PM scenarios
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	and 9pcus MMQ length and the A40 WB improves by 23.4% DoS and 55pcu MMQ length compared to the File 1 2017 Base. However Greenway Lane increases in DoS (MMQ length) by 17.2% (11.1pcus), Ryeworth Road by 10.2% (1.2pcus) and Copt Elm Rd by 18.4% (16.7pcus). There are similar changes in the PM scenario. Having said this, PRC values in the AM and PM scenarios indicate overall improvement in junction performance. The junction is considered to operate over absolute capacity

	performance can be achieved
	though revalidation of signal set
	up.
	As per the 2017 Base scenarios,
	the 2022 Base scenarios in File 2
	result in improvement in
	capacity on the A40 arms, but a
	deterioration in performance on
	the minor arms. In the AM
	scenario, the A40 EB improves
	by 10.1% Dos (18.2pcu MMQ
	length) and the A40 WB
	improved by 29.9% Dos
	(58.9pcu MMQ length) from the
	2022 Base, whereas the
	Greenway Lane deteriorates by
2022 Bara	19.8% DoS (14.1pcus), Ryeworth
2022 Base	Rd by 11.9% (4.0pcus) and Colt
	Elm Rd by 21.2% (20.0pcus).
	There are similar changes in the
	PM scenario. PRC values
	indicate overall improvement in
	junction performance, although
	the junction is still considered to
	operate over absolute capacity
	with the optimisation of signal
	timings. The Highway Authority
	agree that an overall benefit to
	junction performance can be
	achieved through revalidation of
	signal set up.
2017 Base + Development	In both the AM and PM
	scenarios, there are minor
	increases in DoS and MMQ
	length values across all arms
	with the introduction of
	development traffic. For
	example, at the worst
	performing arm in the AM (A40
	WB), there is an increase in DoS
	by 0.3% DoS and in MMQ length
	by 1.3pcus. For the worst
	performing arm in the PM (A40
	EB) there is an increase by 0.3%
	Dos and in MMQ length by
	1.1pcus. This is considered to be
	a minor worsening in junction
	performance from the 2017
	Base scenarios, and therefore
	base section to s, and therefore

	the development impact is not considered to be severe at this location. The Highway Authority agree that an overall benefit to junction performance can be achieved through revalidation of signal set up
2022 Base + Development	In both the AM and PM scenarios, there are minor increases in DoS and MMQ length values across all arms. For example for the worst performing arm in the AM (A40 WB), there is an increase in DoS by 0.3% DoS and in MMQ length by 1.2pcus. For the worst performing arm in the PM (A40 EB), there is an increase by 0.3% Dos and in MMQ length by 1.2pcus. This is considered to be a minor worsening in junction performance from the 2022 Base scenarios, and therefore the development impact is not considered to be severe at this location. Again, the Highway Authority agree that an overall benefit to junction performance can be achieved through revalidation of signal set up.

## <u>Summary</u>

The results of this junction assessment show that the junction is operating well over absolute capacity levels in all scenarios, however the introduction of development traffic does not result in an unacceptable or severe impact.

## London Road A40/Cirencester Road A435

Results File 1 (unconstrained saturation flow)	Modeller Comments
2016 Base	In the AM and PM scenarios, the junction operates just under practical capacity levels on all arms (DoS < 90%), with MMQ lengths not exceeding 14.5pcus in the AM Peak (MMQ length on the A40 E) and 17.9pcus in the PM peak (MMQ length on A40 W). The junction is therefore shown to be

2017 Base	operating below practical capacity levels in this scenario, without consideration for exit blocking.  In both the AM and PM scenarios, the junction continues to operate just under practical capacity levels on all arms (DoS < 90%), with MMQ lengths not exceeding 15.3 pcus across the AM or PM peak period. The junction is therefore shown to be operating below practical capacity levels, without consideration for exit blocking.
2022 Base	In the AM scenario, the junction operates just over practical capacity levels on Haywards Road, A40 E and A40 W; although with DoS values of around 95% they are still considered to operate below absolute capacity levels. Cirencester Road operates at a DoS value of 77% in the AM peak. In the PM scenario performance is slightly worse across all arms with the worst performing arm (A40 WB) operating at 97.0% DoS and 28.3pcu MMQ length. The junction is therefore shown to be operating below absolute capacity levels in both scenarios, although without consideration for exit blocking.
2022 + Development	In both the AM and PM scenarios, the junction continues to operate below absolute capacity levels, with Haywards Road, A40 E and A40 W having DoS values in excess of 94% and 11pcu MMQ lengths. PRC values are less than 0% in both scenarios indicating that the junction is very nearly at absolute capacity. Comparing these results with the 2022 Base however shows that in the AM peak, Haywards Road worsens in performance with DoS increasing by 1.4% (and MMQ length increases by less than 1pcu), for A40 E increases by 3.1% (2.9pcus), for A40 W by 0.3% (0.4pcus). There is a nominal increase in values for Cirencester Road. In the PM, there is a similar deterioration in performance. Therefore, whilst junction performance is considered to be approaching absolute capacity limits, the impact of the development is not considered severe.

File 2	Modeller Comments
2016 Base	In the AM scenario, all arms of the junction operate with DoS in excess of 90%, maximum 94%, and MMQ lengths between 10 and 19pcus. In the PM, there only the A40 is operating with DoS in excess of 90% with Haywards Road operating with 22.7%. The junction is shown to be operating below capacity limits, but with some performance issues.
2017 Base	The results for the AM and PM scenarios appear to be exactly the same. Furthermore the pattern of capacity constraints in the PM scenario is significantly different to the pattern shown in the 2016 and 2022 Base scenarios.
2022 Base	In the AM scenario, all arms of the junction operate with DoS in excess of 90%, with the A40 arms operating in excess of absolute capacity limits. MMQ lengths are between 13 and 36pcus. In the PM, there only the A40 is operating with DoS in excess of 90% with 104% DoS for the A40 E and 103% DoS for the A40 W. Haywards Road operating with a DoS of 24.6%. This junction is shown to be operating over absolute capacity on the A40 arms.
2022 + Development	In the AM scenario, all arms are operating just below or just over absolute capacity limits with the A40 W operating at 102% DoS with 36pcu MMQ lengths. In the PM scenario the A40 continues to be the main capacity constraint (with similar DoS and MMQ values) with excess capacity available on Cirencester Road and Haywards Road. Compared to the 2022 Base Scenarios, there are minor increases in DoS and MMQ. For example the AM peak period, A40 E is shown to be the most constrained increasing by 3.2% DoS and 6.3pcus MMQ length and in the PM peak period, the A40 W is shown to be the most constrained increasing by 2.7% DoS and 11.7pcu MMQ lengths. Whilst junction performance is considered to be poor in this scenario, the introduction of development traffic does not cause a significant worsening of conditions.

Scenario	Modeller Comments
2016 Base	The junction is shown to perform below practical capacity limits in both the AM and PM scenarios. In the AM, DoS does not exceed 84.3% and MMQ lengths are no greater than 14pcus. In the PM, DoS values do not exceed 85.9% or MMQ lengths of 15pcus.
2017 Base	The junction is shown to perform below practical capacity limits in both the AM and PM scenarios. In the AM, DoS does not exceed 87.1% and MMQ lengths are no greater than 15pcus. In the PM, DoS values do not exceed 85.9% or MMQ lengths of 15.8pcus.
2022 Base	In both the AM and PM scenarios, both A40 Arms are shown to have DoS Values in excess of 90% and MMQ lengths of around 17pcus (AM) and 20pcus (PM). The junction is still shown to operate below absolute capacity limits in these scenarios.
2022 Base	In both the AM and PM scenarios, both A40 Arms are shown to have DoS Values in excess of 90% and MMQ lengths of around 17pcus (AM) and 20pcus (PM). The junction is still shown to operate below absolute capacity limits in these scenarios.
2022 + Development	In the AM scenario, the junction exceeds practical capacity limits, but continues to perform under absolute capacity, with the A40 arms showing DoS values in excess of 90% (around 92-93%) and MMQ lengths of around 10-17pcus. Compared to the 2022 Base scenario, Haywards Road experiences an increase of 7.6% DoS (and increase in MMQ lengths of 1.3pcus); A40 W experiences an increase of 0.4 DoS (0.2pcus). Cirencester Road experiences a very minor increase, and the A40 E shows a decrease in DoS by 0.5%. In the PM scenario, the junction also performs under absolute capacity, with the A40 W arms showing a DoS of 94.1% (24.0 MMQ). Compared to the 2022 Base scenario, Haywards Road experiences an increase of 1.2% DoS (and no MMQ length increase), A40 W increases by 2.6% (3.1pcus) and Cirencester Road increases by 1.8%

(0.4pcus). A40 E, as per the AM scenario, shows a decrease in DoS. These results show that the proposed development will not have a significant impact on junction performance compared to the 2022 Base.

#### Summary

In this assessment, the operation of the junction is shown to deteriote to above absolute capacity levels, the actual impact of the proposed development is shown to be minor, and therefore the results of the assessment are agreed. It has been illustrated that benefits to this junction can be achieved through downstream improvements at the A40 / Hales Road junction, which have been proposed as part of the off-site highway mitigation for the proposed development.

#### Hales Road B4075/ London Road A40/ High Street A435

File 1 (informal 2 lane arrangement with reduced sat flow)	Modeller Comments
	The AM and PM periods
	shows the London Road SE,
	Hales Rd and Old Bath Rd
	ahead and left lanes
	operating in excess of
	absolute capacity limits with
	DoS values over 100%. The
	maximum DoS value is 104.7
	in the AM and 102.0% in the
	PM which occur on London
	Road SE. MMQ lengths range
	from 30-52pcus in the AM
2017 Base	and around 30pcus in the PM.
2017 2030	Old Bath Road right turns
	operate under capacity in the
	AM period, with greater than
	90% DoS in the PM. The
	junction model therefore
	shows that when modelled
	with an informal narrow two
	lane approach to the junction
	on London Rd SE,
	performance is over absolute
	capacity limits in the AM
	period and at absolute
	capacity in the PM.
2022 Base	In the AM and PM periods
	Hales Road, London Road SE
	and Old Bath Road lanes
	operate in excess of 100%
	<b>!</b>

DoS, with London Rd SE reaching 120.7% DoS and 110.5pcu MMQ length in the AM and 116.9% (87.2pcus) in the PM. London Road NW ahead movements are in excess of 90% DoS in the PM period and is approaching absolute capacity limits. The junction model therefore shows that when modelled with an informal narrow two lane approach to the junction on London Rd SE, performance is considerably over absolute capacity limits in the AM and PM.

2017 + Development

In both the AM and PM scenarios, development traffic is not shown to have a meaningful impact. In the AM scenario, the junction is shown to be operating just over absolute capacity levels, with maximum DoS occurring on Hales Road (106.9%) and maximum queuing occurring on London Rd SE (56.2pcus). In the PM scenario, the junction is shown to be operating significantly over absolute capacity levels with all lanes (with the expectation of London Road NW) operating in excess of 100% DoS. Compared to the 2017 Base assessment, there are minor worsening and improvements to both DoS and MMQ across the junction in both the AM and PM period, resulting in maximum increases in DoS of 3% and MMQ increases of around **4pcus. London Road SE** experiences a 1% increase in DoS and 3.9pcu increase in MMQ length in the AM and experiences a minor

	improvement in the PM period (0.3% and 0.2pcus). The junction model therefore shows that when modelled with an informal narrow two lane approach to the junction on London Rd SE, performance is considerably over absolute capacity limits in the AM and PM periods, but is not significantly worsened by the introduction of development traffic.
2022 + Development	In both the AM and PM period, the junction continues to operate in excess of absolute capacity limits on all lanes with the expectation of London Road NW (in the AM period).  Comparing the results to the 2022 Base, there is a minimal worsening of junction performance. In the AM period, Hales Road experiences an increase of 3% DoS and 7pcus MMQ length. In the PM period, the impact is slightly more severe, with increases in DoS of around 10.2% and MMQ increases of 18.48pcus. The PM scenarios are therefore considered to be a material impact, especially on Hales Road. The development is therefore considered to negatively impact the operation of this junction when modelled with an informal narrow two lane approach to the junction on London Rd SE.
File 2 (single lane arrangement, with non-blocking storage)	Modeller Comments
2017 Base	The AM scenario shows Hales Road and London Road SE operating in excess of absolute capacity limits and Old Bath Road operating just

	above practical capacity limits, with MMQ lengths up to 60pcus and around 30pcus on average. The PM scenario shows that the junction is operating at around absolute capacity. London Road SE shows a DoS value of 108.8% and MMQ length of 63.8 in the AM and 98.0% DoS and 33.3pcu MMQ length in the PM. The junction model therefore shows that when modelled as a single carriageway approach to the junction on London Rd SE, performance is over absolute capacity limits in the AM and just under absolute capacity in the PM period.
2022 Base	The AM scenario shows that this junction is operating well over absolute capacity level in both the AM and PM periods. DoS values are as high as 126.9% in the AM period with maximum MMQ lengths at 130pcus. The junction model therefore shows that when modelled as a single carriageway approach to the junction on London Rd SE, performance is over absolute capacity limits in the AM and PM periods.
2017 + Development	Comparing the results of this scenario to the 2017 Base Scenario shows a minor increase in impact as a result of the development. The main increase in the AM period is experienced on Old Bath Road with a DoS increase of around 4%. The main increase in the PM period occurs on London Road SE with DoS increase of around 2%. The operation of the junction during the AM

period is considered to be well in excess of absolute capacity limits, with the actual increase as a result of the proposed development considered to be minor. The operation of the junction during the PM period is considered to remain at capacity levels, with the development making very little difference to the operation of the junction. The junction model therefore shows that when modelled as a single carriageway approach to the junction on London Rd SE, performance is over absolute capacity limits in the AM and PM periods, with the impact from the proposed development expected to be minor.

2022 + Development

The introduction of development traffic to the 2022 Base scenario does not result in significant impact during the AM peak period, with small increases in DoS values and the maximum increase in queue length occurring on London Road SE. During the PM period however, there is a greater increase in DoS and MMQ values across most lanes at the junction. The average increase in DoS is 5.46% (max. 7.2%) and MMQ length is 15.12 (maximum 31.7pcus). The junction model therefore shows that when modelled as a single carriageway approach to the junction on London Rd SE, performance is over absolute capacity limits in the AM and PM periods, with the impact from the proposed development expected to be

material in the PM.		
Scenario	Modeller Comments	
	In the AM peak period, the	
	junction is shown to be	
	operating above practical	
	capacity levels but below	
	absolute levels on Hales	
	Road, London Rd SE and Old	
	Bath Road. DoS is at 95.4% on	
	the London Road SE, and	
	MMQ lengths reach up to	
	32.0pcus. In the PM peak	
	period, the junction	
17 Base	continues to operate below	
<del>/ 2 _</del>	absolute capacity. The	
	London Rd SE is shown to be	
	operating at 87.2% DoS with	
	an MMQ length of around	
	24pcus. Therefore, with the	
	introduction of a formal two	
	lane approach to the junction	
	on the London Rd SE the	
	junction is shown to be	
	operating below absolute	
	capacity limits.	
22 Base	In the 2022 Base scenario, the	
22 Bu30	junction operates above	
	absolute capacity limits, but	
	with DoS values reaching	
	around 110% (10% less than	
	File 1 and File 2) in the AM	
	peak, and around 100% in the	
	PM peak. In the AM peak,	
	London Road SE is shown to	
	be operating with a DoS value	
	of 111.8% and MMQ length	
	of 92.6pcus. In the PM peak,	
	London Road SE is shown to	
	be operating with DoS values	
	of 103.3% and MMQ lengths	
	of 41.6pcus. Therefore, the	
	introduction of a formal two	
	lane approach to the junction	
	on London Road SE does	
	improve performance, but	
	the junction continues to	
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	operate over absolute capacity levels in the AM	

	peak and at absolute capacity
	levels during the PM peak.
	The introduction of
	development traffic to the
	2017 baseline shows a minor
	impact from the proposed
	development. In the AM
	peak, the maximum increase
	in DoS is 2.5% and the
	maximum increase in MMQ
	length is 1.7pcus which both
	occur on Hales Road. London
	Road SE experiences a 0.6%
	increase in DoS and a 1.4pcu
	increase in MMQ length. In
	the PM peak, the maximum
	increase in DoS is 2.7% and
2017 + Development	the maximum increase in
	MMQ length is 2.8pcus which
	both occur on London Road
	NW. London Road SE
	experiences a 1.3% increase
	in DoS and a 0.7pcu increase
	in MMQ length. Whilst the
	junction continues to operate
	above practical capacity
	levels, the introduction of
	development traffic (with the
	introduction of a formal two
	lane approach on London
	Road SE) does not constitute
	a severe impact.
2022 + Development	In this scenario, the junction
	is shown to be operating in
	excess of absolute capacity
	limits in the AM and PM
	hours, with all arms operating
	in excess of 100% DoS
	(maximum 114.6% in AM,
	116.8 in PM) with MMQ
	lengths up to 94.7pcus in the
	AM, 102.pcus in the PM with
	the exception of London Road
	NW left turn movements.
	Compared to the File 1 2022
	Base scenario (i.e. no
	development traffic or
	improvements), there is a
	benefit to the capacity

operation of the junction in both the AM and PM periods. In the AM peak the average benefit is 2.63% DoS (maximum 8.8% on London Road SE) and 3.3pcus less MMQ length (maximum reduction of 15.8 pcus). In the PM peak the average benefit is 1.6% DoS (maximum reduction of 11.2% DoS on London Road SE) and average 10pcus less MMQ length (maximum reduction 26.8 pcus MMQ). In both the AM and PM peak however, there are arms which worsen with the introduction of development traffic and mitigation. This is a similar case when compared to File 2; however the benefit is considered to be much greater as the File 2 assessment is more robust in terms of capacity assessment. This scenario (File 3 2022 + Development), when compared to the File 1 2022 + Devlopment scenario again shows that the introduction of highway mitigation has benefits to the junction. In the AM period, all arms with the exception of the London Road NW experience a decrease in DoS and MMQ lengths as a result of the improvements. The average decrease is 3.1% DoS and 5.7pcus MMQ length, with the maximum benefits shown to be on London Road SE. This is the same in the PM, again all arms experiencing a decrease in DoS and MMQ lengths as a result of the improvements. This is also the case when compared to

File 2, which experiences benefits in the AM and PM periods, an average of -15.8% DoS and 28.3pcus MMQ length in the AM and -5.8% DoS and -7.6pcus MMQ lengths in the PM. London Road SE gains the most benefit. In summary, the junction continues to operate above absolute capacity levels with the introduction of development traffic and highway improvements; however meaningful improvements in capacity are shown to be achievable.

#### **Summary**

On-site observations indicated that vehicles queue abreast in the single lane around half the time. Therefore modelling the London Road south east approach as a single lane with the potential for non-blocking storage is considered to be an acceptable approach. Using current traffic flows and this approach shows that the development is unlikely to have a significant impact in the AM peak hour, but this will be more meaningful in the PM peak hour. The assessment of a formal designation of two approach lanes shows that whilst the junction will continue to operate in excess of absolute capacity limits, there is the opportunity for a significant improvement in junction operation from the non-mitigation scenarios.

#### **Mitigation**

As the existing A40 highway network suffers from intermittent congestion investigations have taken place to identify whether any improvements could be implemented at the A40 / Hales Road signal controlled junction, which is deemed to be most critical in terms of local traffic congestion, primarily due to the exit blocking it causes to other signal junctions on the network (e.g. A40 / Cirencester Road traffic signals).

Upon assessing the investigations the Highway Authority has deemed the following improvements acceptable in terms of mitigating the impact generated by the development:

- 1. Engineering intervention to increase approach lane widths on the westbound A40 arm, and minor adjustments to the kerb radius on the southbound Hales Road entrance link.
- 2. Signal controller intervention adding a UG405 / Mova unit to the existing ST900 controller and upgrading the connection to ADSL.

Whilst observations at the A40/Hales Road junction show that traffic queues side by side on the London Road south east arm approximately half the time, depending on multiple factors. It is considered that

there would be a capacity benefit in the proposal to widen the carriageway to formalise this occurrence every cycle. This capacity benefit would be sufficient to mitigate the impact of the proposed development at the A40 / Hales Road junction, and improve capacity issues at the A40 / Haywards Road junction, so that the residual cumulative impact is not severe.

#### **Personal Injury Collisions**

Personal injury collision statistics have been presented for a study area which covers the A40 London Road to the east, A435 to the south and Old Bath Road to the west.

Six collisions were recorded within the study area over the 5 year period with one recorded as serious. These collisions are considered to have occurred as a result of driver, pedestrian or cyclist error rather than being attributable to the geometry of the local highway network.

There has been no personal injury collisions recorded on Oakhurst Rise and therefore nothing to suggest that this highway is unsafe nor anything to suggest that the traffic generated by additional dwellings would make this section of highway unsafe. Overall it is reasonable to conclude that there is not an excessive amount of personal injury collisions on the wider network and those collisions that do occur are spread. Therefore it is reasonable to conclude that the additional traffic generated by the development will not have a material impact on general road safety in the area.

#### **Construction Traffic**

Concerns have been raised regarding the construction phase of the development, should planning permission be granted, construction traffic and the impacts of this are an inevitable consequence of engineering works and can not be avoided, however a condition ensuring that all construction vehicles and materials can be contained within the site during the construction phase, together with any potential planning conditions which the LPA may deem necessary in terms of works restrictions will mitigate the impact. Largely, the planning system does not consider the impact of the construction phase of a development, except for to ensure that authorities look to mitigate the impact as far as possible.

#### **Residential Travel Plan**

The NPPF Paragraph 111 states that developments that will generate significant amounts of movement should be required to provide a Travel Plan. The Travel Plan should be formulated in accordance with the GCC Travel Plan Guidance for developers.

The Department for Transport (DfT) defines a travel plan as "a long term management strategy that seeks to deliver sustainable transport objectives through positive action". Such plans could include; car sharing schemes, commitment to improving cycle facilities, dedicated bus services or restricted parking allocations. A successful Travel Plan should offer users whether they are employees, residents or visitors a choice of travel modes from sites or premises.

The submitted Travel Plan for this application aims to reduce the dependence upon single occupancy private car travel when accessing the site and in order to do so the Travel Plan aspires to;

- Reduce the percentage of residents travelling by single occupancy private car to and from the site.
- Generate increase in the percentage of residents utilising active modes (walking/cycling), public transport and car sharing.

In order for the Travel Plan to achieve these aims a number of actions and measures will need to be implemented. The applicant will appoint a Travel Plan Coordinator, whose duty it is to oversee the implementation and monitoring of the Travel Plan. The Coordinator will be appointed prior to the dwellings being occupied.

The Travel Plan will obtain the base survey data once 30% of the dwellings have been occupied, with initial targets set at a 10% reduction in single occupancy car journeys based on Census travel to work data in the interim. Targets can then be updated once the baseline travel survey has been undertaken. Once base survey data has been obtained at 30% occupancy the Travel Plan Coordinator will review the Travel Plan annually associated targets and measures adjusted accordingly. The Travel Plan aims to reduce single occupancy private car use year on year. A 5 year period is acceptable for this type and size of development. The Travel Plan can be secured by way of planning condition.

#### **Recommendation**

The National Planning Policy Framework (NPPF) states at paragraph 109 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". The Highway Authority considers that this development will not have a severe impact on the local highway network. The NPPF also states that "safe and suitable access to the site can be achieved for all users", "appropriate opportunities to promote sustainable transport modes can be – or have been – taken up, given the type of development and its location", and that "any significant impacts from the development on the transport network (in terms of capacity and congestion), or on highway safety, can be cost effectively mitigated to an acceptable degree". It is considered that the development proposals will meet these criteria. The Highway Authority recommends that no highway objection be raised subject to the following conditions being attached to any permission granted:

#### **Condition #1 Vehicle Access Location**

Means of vehicular access to the development hereby permitted shall be from Oakhurst Rise only.

<u>Reason</u>: - To minimise hazards and inconvenience for users of the development by ensuring that there is a safe, suitable and secure means of access for all people that minimises the scope for conflict between traffic and cyclists and pedestrians in accordance with paragraphs 108 and 110 of the National Planning Policy Framework.

#### **Condition #2 Junction Completion**

The development hereby permitted shall not be occupied until the first 20m of the proposed access road, including the junction with the existing public road and associated visibility splays, shall be completed to at least binder course level.

<u>Reason</u>: - To minimise hazards and inconvenience for users of the development by ensuring that there is a safe, suitable and secure means of access for all people that minimises the scope for conflict between traffic and cyclists and pedestrians in accordance with paragraphs 108 and 110 of the National Planning Policy Framework.

#### **Condition #3 Parking & Turning**

The development hereby permitted shall not be occupied until the car parking associated with each building within the development (including garages and car ports where proposed) has been provided in accordance with the submitted drawing ref. PL005 Rev A, and shall be maintained available for that purpose thereafter.

<u>Reason</u>: - To ensure that a safe, suitable and secure means of access for all people that minimises the scope for conflict between traffic and cyclists and pedestrians is provided in accordance with paragraphs 108 and 110 of the National Planning Policy Framework.

#### **Condition #4 Electric Charging Points**

Notwithstanding the submitted details, the construction of the car parking associated with each building within the development (including garages and car ports where proposed) shall be designed to enable charging of plug-in and other ultra-low emission vehicles in safe, accessible and convenient locations.

<u>Reason</u>: - To ensure that the development incorporates facilitates for charging plug-in and other ultra-low emission vehicles in accordance with paragraph 110 of the National Planning Policy Framework.

#### **Condition #5 Pedestrian Segregation**

Notwithstanding the submitted details, the development hereby permitted shall not be occupied until a delineated at grade pedestrian corridor with a minimum width of 1.2m from parking bays 16-19 and 60-69 linking to the associated dwelling entrances have been made available for use for the duration of the development.

<u>Reason</u>: - To ensure safe and suitable access to the site can be achieved for all users; to give priority to pedestrians and to address the needs of people with disabilities in accordance with paragraphs 108 and 110 of the National Planning Policy Framework.

#### **Condition #6 Cycle Storage**

The development hereby permitted shall not be occupied until a minimum of 1 no. cycle storage facility per dwelling has been provided and those facilities shall be maintained for the duration of the development.

<u>Reason</u>: - To give priority to cycle movements by ensuring that adequate cycle parking is provided, to promote cycle use and to ensure that the appropriate opportunities for sustainable transport modes have been taken up in accordance with paragraph 108 of the National Planning Policy Framework.

#### **Condition #7 Forward Visibility**

The forward visibility splays as demonstrated on drawing ref. SK22 Revision: B shall include no vertical features over 600mm. These areas shall be kept clear of vertical features over 600mm for the duration of the development.

<u>Reason</u>: - To avoid an unacceptable impact on highway safety by ensuring that adequate visibility is provided and maintained and to ensure that a safe, secure and attractive layout – which minimises the scope for conflicts between pedestrians, cyclists and vehicles, is provided in accordance with paragraphs 108 and 110 of the National Planning Policy Framework.

#### **Condition #8 Estate Roads**

The development hereby permitted shall not be occupied until the carriageway(s) (including surface water drainage/disposal, vehicular turning head(s) and street lighting) providing access from the nearest public highway to that dwelling have been completed to at least binder course level and the footway(s) to surface course level.

<u>Reason</u>: - To avoid an unacceptable impact on highway safety by ensuring that adequate visibility is provided and maintained and to ensure that a safe, secure and attractive layout — which minimises the scope for conflicts between pedestrians, cyclists and vehicles, is provided in accordance with paragraphs 108 and 110 of the National Planning Policy Framework.

#### **Condition #9 Estate Road Maintenance**

The development hereby permitted shall not be occupied until details of the proposed arrangements for future management and maintenance of the proposed streets within the development shall be submitted to and approved in writing by the local planning authority. The streets shall thereafter be maintained in accordance with the approved management and maintenance details until such time as either a dedication agreement has been entered into or a private management and maintenance company has been established.

<u>Reason</u>: - To ensure that safe, suitable and secure access is achieved and maintained for all people that minimises the scope for conflict between traffic and cyclists and pedestrians in accordance with paragraph 108 and 110 the National Planning Policy Framework and to establish and maintain a strong sense of place to create attractive and comfortable places to live, work and visit as required by paragraph 127 of the Framework.

#### **Condition #10 Fire Hydrants**

No above ground works shall commence on site until a scheme has been submitted to, and agreed in writing by the Council, for the provision of fire hydrants (served by mains water supply) and no dwelling shall be occupied until the hydrant serving that property has been provided to the satisfaction of the Council.

<u>Reason</u>: - To ensure adequate water infrastructure provision is made on site for the local fire service to access and tackle any property fire in accordance with paragraph 110 of the National Planning Policy Framework.

#### **Condition #11 Non-Motorised User Improvements**

Notwithstanding the submitted details, the development hereby permitted shall not be occupied until pedestrian improvements consisting of the installation of a connecting section of footway (2m wide) with tactile dropped crossing between Beaufort Road and Ewens Road (north side) and an extension to the footway (2m wide) and dropped kerb tactile crossing point across the Charlton Court Road cul-de-sac have been constructed and made available for public use.

<u>Reason</u>: - To ensure that safe and suitable access to the site can be achieved for all users and that the priority is first given 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, in accordance with paragraphs 108 and 110 of the National Planning Policy Framework.

#### **Condition #12 Pedestrian Crossing**

The development hereby permitted shall not be occupied until a pedestrian dropped tactile crossing to the west of plots 1 & 69 has been constructed in accordance with drawing ref. PL005 Rev A and made available for public use.

<u>Reason</u>: - To ensure that safe and suitable access to the site can be achieved for all users and that the priority is first given 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, in accordance with paragraphs 108 and 110 of the National Planning Policy Framework.

#### **Condition #13 Highway Alterations**

Notwithstanding the submitted details, the development hereby permitted shall not be occupied until signing and lining has been provided adjacent to 19 Oakhurst Rise creating a T-junction ensuring that is clear for drivers where the major flow is to/from.

<u>Reason</u>: - To avoid an unacceptable impact on highway safety by ensuring that it is clear for drivers where the major flow is to/from minimising the scope for conflicts between pedestrians, cyclists and vehicles in accordance with paragraphs 108 and 110 of the National Planning Policy Framework.

#### **Condition #14 Highway Improvements**

The development hereby permitted shall not be occupied until the widening of the approach lane widths on the westbound A40 arm, adjustments to the kerb radius on the southbound Hales Road entrance link and the signal controller intervention (adding a UG405 / Mova unit to the existing ST900 controller and upgrading the connection to ADSL) has been constructed in accordance with the approved plans.

<u>Reason</u>: - To ensure that cost effective improvements are undertaken to the transport network that mitigate the significant impacts of the development in accordance with paragraph 108 of the National Planning Policy Framework.

#### **Condition #15 Public Transport Facility Improvements**

Notwithstanding the submitted details, the development hereby permitted shall not be occupied until a bus shelter has been provided for Bus Stop ID: glodtwmt located on Beaufort Road and has been made available for public use.

<u>Reason</u>: - To ensure that appropriate opportunities to promote sustainable transport modes can be taken up in accordance with paragraph 108 of the National Planning Policy Framework.

#### **Condition #16 Construction Method Statement**

Throughout the construction period of the development hereby permitted provision shall be within the site that is sufficient to accommodate the likely demand generated for the following:

- i. parking of vehicles of site operatives and visitors;
- ii. loading and unloading of plant and materials;
- iii. storage of plant and materials used in constructing the development; and
- iv. provide for wheel washing facilities

<u>Reason</u>: - To reduce the potential impact on the public highway and accommodate the efficient delivery of goods in accordance with paragraph 110 of the National Planning Policy Framework.

#### **Condition #17 Travel Plan**

The approved Travel Plan shall be implemented in accordance with the details and timetable therein, and shall be continued thereafter, unless otherwise agreed in writing by the Local Planning Authority.

<u>Reason</u>: - The development will generate a significant amount of movement and to ensure that the appropriate opportunities to promote sustainable transport modes are taken up in accordance with paragraphs 108 and 111 of the National Planning Policy Framework.

#### <u>Informatives</u>:

<u>Note I</u>: The proposed development will require the provision of a footway/verge crossing and the Applicant/Developer is required to obtain the permission of the County Council before commencing any works on the highway.

<u>Note II</u>: The proposed development will involve works to be carried out on the public highway and the applicant/developer is required to enter into a legally binding highway works agreement (including appropriate bond) with the County Council before commencing those works.

**Note III**: You are advised to contact Amey Gloucestershire 08000 514 514 to discuss whether your development will require traffic management measures on the public highway.

**Note IV**: The developer will be expected to meet the full costs of supplying and installing the associated infrastructure.

**Note V**: The applicant is advised that to discharge condition #9 that the local planning authority requires

a copy of a completed dedication agreement between the applicant and the local highway authority or the constitution and details of a private managements and maintenance company confirming funding, management and maintenance regimes.

#### **Statement of Due Regard**

Consideration has been given as to whether any inequality and community impact will be created by the transport and highway impacts of the proposed development. It is considered that no inequality is caused to those people who had previously utilised those sections of the existing transport network that are likely to be impacted on by the proposed development.

It is considered that the following protected groups will not be affected by the transport impacts of the proposed development: age, disability, gender reassignment, marriage and civil partnership, pregnancy and maternity, race, religion or belief, sex, sexual orientation, other groups (such as long term unemployed), social-economically deprived groups, community cohesion, and human rights.

Yours sincerely,

Lucas Arinze

**Development Co-ordinator**