

OXFORDSHIRE COUNTY COUNCIL'S RESPONSE TO CONSULTATION ON THE FOLLOWING DEVELOPMENT PROPOSAL

District: Cherwell

Application No: 19/02550/F

Proposal: Redevelopment of part of golf course to provide new leisure resort (sui generis) incorporating waterpark, family entertainment centre, hotel, conferencing facilities and restaurants with associated access, parking and landscaping

Location: Land to the east of M40 and south of A4095, Chesterton, Bicester, Oxon

Response date: 10th January 2020

This report sets out the officer views of Oxfordshire County Council (OCC) on the above proposal. These are set out by individual service area/technical discipline and include details of any planning conditions or informatives that should be attached in the event that permission is granted and any obligations to be secured by way of a S106 agreement. Where considered appropriate, an overarching strategic commentary is also included. If the local County Council member has provided comments on the application these are provided as a separate attachment.

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Strategic Comments

The proposed leisure resort at Chesterton includes:

- 498 bed hotel (27,250 sq.m)
- Indoor waterpark (8,340 sq.m)
- Family entertainment centre, food and beverage, conferencing and back of house (12,350 sq.m)
- 902 new parking places

The proposal is not allocated in the Cherwell Local Plan and is not in a sustainable location in transport terms. There is no public bus service and the site is not conducive to walking or cycling, making it car dependent and therefore contrary to the NPPF, Local Plan and Local Transport Plan policies which require development to be suitably located to maximise opportunities for sustainable travel.

Transport Development Control have raised an objection for the following reason:

- Severe congestion at the Middleton Stoney signalised junction will be exacerbated by the additional trips generated by the proposed development. This is contrary to paragraphs 103, 108 and 109 of the NPPF, Cherwell Local Plan Policy SLE4 and Oxfordshire Local Transport Plan 4 Policy 17

There is an archaeology objection for the following reason:

- The results of an archaeological evaluation will need to be submitted prior to the determination of this application in order that the impact on any surviving archaeological features can be assessed.

There is also a drainage objection on the basis that further information is required.

OCC Bicester members have specific concerns about the following issues:

- Traffic impact on: the A41, the Vendee roundabout, access into Chesterton, peak traffic up to Middleton Stoney and Bucknell.
- The cumulative impact of this development and all the other planned growth in Bicester.

Detailed officer comments are provided below.

Officer's Name: Helen Whyman

Officer's Title: Planner

Date: 08/01/2020

Application no: 19/02550/F

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General Information and Advice

Recommendations for approval contrary to OCC objection:

IF within this response an OCC officer has raised an objection but the Local Planning Authority are still minded to recommend approval, OCC would be grateful for notification (via planningconsultations@oxfordshire.gov.uk) as to why material consideration outweigh OCC's objections, and given an opportunity to make further representations.

Outline applications and contributions

The number and type of dwellings and/or the floor space may be set by the developer at the time of application, or if not stated in the application, a policy compliant mix will be used for assessment of the impact and mitigation in the form of s106 contributions. These are set out on the first page of this response.

In the case of outline applications, once the unit mix/floor space is confirmed by the developer a matrix (if appropriate) will be applied to assess any increase in contributions payable. The matrix will be based on an assumed policy compliant mix as if not agreed during the s106 negotiations.

Where unit mix is established prior to commencement of development, the matrix sum can be fixed based on the supplied mix (with scope for higher contribution if there is a revised reserved matters approval).

Where a S106/Planning Obligation is required:

- **Index Linked** – in order to maintain the real value of s106 contributions, contributions will be index linked. Base values and the index to be applied are set out in the Schedules to this response.
- **Security of payment for deferred contributions** – An approved **bond** will be required to secure payments where the payment of S106 contributions (in aggregate) have been agreed to be deferred to post implementation and the total County contributions for the development exceed £1m (after indexation).
- **Administration and Monitoring Fee - TBC**
This is an estimate of the amount required to cover the extra monitoring and administration associated with the S106 agreement. The final amount will be based on the OCC's scale of fees and will adjusted to take account of the number of obligations and the complexity of the S106 agreement.
- **OCC Legal Fees** The applicant will be required to pay OCC's legal fees in relation to legal agreements. Please note the fees apply whether an s106 agreement is completed or not.

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Transport Schedule

Recommendation:

Objection for the following reason:

- Severe congestion at the Middleton Stoney signalised junction will be exacerbated by the additional trips generated by the proposed development. This is contrary to paragraphs 103, 108 and 109 of the NPPF, Cherwell Local Plan Policy SLE4 and Oxfordshire Local Transport Plan 4 Policy 17

Key points

- The development will lead to increased congestion and delay at Middleton Stoney signalised junction and the M40 Junction 10 southern roundabout
- There will be increased traffic flows through local villages, particularly Chesterton
- Traffic may take the inappropriate route through Little Chesterton, despite signage
- The site is not in a sustainable location in transport terms – there is no public bus service and an incomplete cycle route to Bicester
- The proposal goes against policies for sustainable transport
- If the permission is to be granted, a contribution towards public transport to serve the site is required
- The proposed guest shuttle bus frequency is inadequate
- The site is not allocated in the Local Plan and does not make best use of existing infrastructure

If, despite OCC's objection, permission is proposed to be granted then OCC requires prior to the issuing of planning permission a S106 agreement including an obligation to enter into a S278 agreement to mitigate the impact of the development plus planning conditions as detailed below.

S106 Contributions

Contribution	Amount £	Price base	Index	Towards (details)
Highway works	To be confirmed	To be confirmed	Baxter	The partial funding of a mitigation scheme at the Middleton Stoney signalised junction
Highway works	To be confirmed	To be confirmed	Baxter	The partial funding of a mitigation scheme at the M40 Junction 10 southern roundabout
Highway works	To be confirmed	To be confirmed	Baxter	Installation of off-site directional signage
Public transport services	£1,600,000	November 2019	RPI-x	Provision of a new bus service linking the site to Bicester town centre and railway stations
Public transport infrastructure (<i>if not dealt with under S278/S38 agreement</i>)	£2,105.60	November 2019	Baxter	Provision of two pole and flag units for Chesterton village
Travel Plan Monitoring	£2,040	November 2019	RPI-x	Monitoring of the development Travel Plan
Public Rights of Way	To be confirmed	To be confirmed	Baxter	Maintenance of the realigned PRow through the site
Total	N/A			

Comments:

Pre-application advice

Oxfordshire County Council (OCC) have given pre-application advice by reviewing several documents, principally concerning the content of the Transport Assessment (TA). Specific topics covered related to traffic surveys, junction assessments, trip generation, committed developments, traffic growth, vehicle distribution, parking and Public Rights of Way.

The OCC responses did not give any indication of the likely recommendation to a subsequent full planning application.

Transport Strategy

The following planning policies are relevant in the consideration of the proposed development:

National Planning Policy Framework (NPPF)

Revised NPPF para 103 states that:

“The planning system should actively manage patterns of growth in support of these objectives. 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.”

Revised NPPF para 108 states that:

“In assessing sites that may be allocated for development in plans, or specific applications for development, it should be ensured that:

(a) appropriate opportunities to promote sustainable transport modes can be – or have been – taken up, given the type of development and its location;

(b) safe and suitable access to the site can be achieved for all users; and

(c) 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.”

Revised NPPF para 109:

“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.”

Cherwell District

Cherwell Local Plan Policy SLE 4: Improved Transport and Connections sets out that:

“The Council will support the implementation of the proposals in the Movement Strategies and the Local Transport Plan to deliver key connections... New development in the District will be required to provide financial and/or in-kind contributions to mitigate the transport impacts of development.

All development where reasonable to do so, should facilitate the use of sustainable modes of transport to make the fullest possible use of public transport, walking and cycling. Encouragement will be given to solutions which support reductions in greenhouse gas emissions and reduce congestion. Development which is not suitable for the roads that serve the development and which have a severe traffic impact will not be supported.”

It should be noted that the infrastructure outlined in the Bicester Area Strategy of the Local Transport Plan is designed to accommodate the allocated growth in the Cherwell Local Plan, none of which is allocated in Chesterton. This site is a speculative development and therefore has not been taken account of in the plan making process.

Cherwell Local Plan Policy SLE 3: Supporting Tourism Growth sets out that:

The Council will support proposals for new or improved tourist facilities ***in sustainable locations***, where they accord with other policies in the plan, to increase overnight stays and visitor numbers within the District (emphasis added).

Oxfordshire Local Transport Plan 4 (LTP4)

Local Transport Plan 4 Policy 17 states:

“Oxfordshire County Council will seek to ensure through cooperation with the districts and city councils, that the location of development makes the best use of existing and planned infrastructure, provides new or improved infrastructure and reduces the need to travel and supports walking, cycling and public transport”

The [Active & Healthy Travel Strategy](#) within OCC’s [Connecting Oxfordshire: Local Transport Plan 2015-2031](#) states that:

“Developers must demonstrate through master planning how their site has been planned to make cycling convenient and safe, for cyclists travelling to and from major residential, employment, education, shopping and leisure sites within 5-10 miles, and also within and through the site.” (paragraph 3.28, p.12)

Further to this, the [Bicester Area Strategy](#) refers to the [Bicester Sustainable Transport Strategy](#), which recommends pedestrian and cycling improvement schemes for the town.

Any walking and cycling schemes developed should follow guidelines in the [Oxfordshire Walking and Cycling Design Standards](#) and [Residential Road Design Guide](#).

Policy BIC1 in the Bicester Area Strategy states:

“BIC1 – Improve access and connections between key employment and residential sites and the strategic transport system by:

- Continuing to work with Highways England to improve connectivity to the strategic highway. We will continue to work in partnership on the A34 and A43 strategies, as well as Junctions 9 and 10 of the M40 to relieve congestion

In terms of provision for Public Transport, Policy BIC 2 states:

“BIC2 – We will work to reduce the proportion of journeys made by private car through implementing the Sustainable Transport Strategy by: Improving Bicester’s bus

services along key routes and providing improved public transport infrastructure considering requirements for and integrating strategic development sites.

Bus connectivity improvements may be required at anticipated pinch points within the town as future developments come forward. This will include connections between North West Bicester and the town centre and consider the need for bus lanes along the A41 to connect with the Park and Ride scheme.”

Bicester Area Strategy Policy Bic 4:

“To mitigate the cumulative impact of development within Bicester and to implement the measures identified in the Bicester area transport strategy we will secure strategic transport infrastructure contributions from all new development”

Key Local Planning Decision

An appeal on the refusal of planning application 15/00454/FUL for 51 dwellings accessed from the Hale, Chesterton, was dismissed in February 2016. On whether the development would amount to sustainable development, the inspector concluded the following:

Appeal Decision APP/C3105/W/15/3130576

42. On the environmental dimension of sustainability, the development would have a harmful effect on the rural character of the countryside. There would be some benefits to biodiversity from the proposed pond and linear swales and additional planting. But the likely reliance of occupiers on the private car for their travel needs would have environmental disbenefits.
43. Taking all these considerations into account, I conclude that the harm the development would cause would significantly outweigh the benefits, and that it would not amount to sustainable development as envisaged in the Framework.
44. I have taken all other matters raised in the representations and at the hearing into account, but none of them lead me to alter my conclusion that the appeal should be dismissed.

The appeal site is in immediate proximity to the proposed leisure resort site. The weight given to the environmental disbenefits of car dependent development in this appeal decision and that the conclusion that it would not amount to sustainable development should be of key consideration by the LPA. This decision is particularly relevant to the proposed leisure resort because of the parallels with location and dependency on the private car.

Sustainable Travel

There is currently a lack of sustainable alternatives to the private motor vehicle in the area of the site. Proposals need to demonstrate sustainability in transport terms, with suitable access available on foot, by cycle and public transport, as well as availability of local amenities.

It is noted that a shared use cycle connection is proposed with 2.5m width on the south side of the A4095 between the proposed site access and The Hale. For shared use paths, the Cycling Design Guidance¹ states:

“3.4.9 Usage should dictate the width of such paths, with 3 metres the recommended width, 2.5 metres the minimum. Paths wider than 3 metres should normally be segregated rather than shared.”

Although the pedestrian/cycle measures proposed are welcomed, they are unlikely to make any significant change in modal shift. There is no onward cycle provision on the A4095 through Chesterton and I am not aware of any funding mechanism in place to deliver cycle provision through the Country Park between Chesterton and Bicester.

There are no designated cycle routes in the vicinity of the proposed development site beyond what is proposed. Any visitor wishing to cycle to the site would have to do so along sections of road that are unlit and unrestricted.

Although a shuttle bus is proposed, without some certainty that an appropriate level of service will be provided and in perpetuity, the site is as good as inaccessible by public transport. Access to public transport is by a very long 2.3 km walk to the Park and Ride site, taking approximately 30 minutes, where a 15-minute frequency service operates between Oxford City Centre and Bicester, with some buses extending to Glory Farm, Launton, Langford and Arccott.

The routing of the shuttle bus is noted; however, there is no entry into The Causeway from Market Square and Manorsfield Road bus stops would be another key interchange to service. Please see the comments below under “Sustainability and Public Transport” which justify the reasoning for a public bus service to the development rather than the proposed shuttle buses.

A new leisure development in this location would not be making the best use of infrastructure, is inaccessible by sustainable modes of transport and would not be reducing the need to travel. Therefore, from a transport perspective it cannot be considered a sustainable location.

Site Access

Access to the development site will be via a new priority junction. Speed surveys have been carried out (not included with the submission but viewed by OCC) which indicate that the available visibility splays are adequate according to the requirements of the Design Manual for Roads and Bridges.

The junction design will incorporate a ghosted right-turn lane allowing vehicles arriving on the A4095 from the west to be able to pull off the main carriageway so that they do not cause an obstruction to through traffic while waiting to turn into the site. The minor arm will incorporate a central refuge to aid pedestrians and cyclists continuing along the A4095. Highway works required to create the access will be subject to a S278 agreement.

Car Park

The capacity of the car park was discussed during the pre-application stage. Based on a total occupancy of 2,250 persons and an average car occupancy of three guests per car (based on a Centre Parcs survey), 750 spaces are required for guests. 160 spaces are estimated for staff use, assuming that 80% of the 200 staff on site have driven. Therefore, a car park capable of accommodating approximately 910 vehicles is to be provided. The figures appear robust in relation to the number of hotel rooms (498) so there should be spare capacity to allow efficient turnover of spaces.

10% of all parking bays will be equipped with electric charging facilities, and ductwork will be installed to allow future expansion of charging equipment to all bays in future as required. 6% of spaces will be disabled accessible bays in accordance with good practice.

Cycle Parking

A total of 40 cycle parking spaces are to be provided for staff use. This is an over-provision in relation to OCC guidelines, but has been promoted to encourage cycling as a sustainable mode of transport for those employees from Bicester or other nearby locations as there is no public transport available. It is recognised that guests, other than a few local people with day tickets, are extremely unlikely to travel by cycle, so the number of cycle stands for guests reflects this.

Trip Generation

In the absence of data from comparable leisure facilities in the UK, the trip generation was based on traffic surveys from three of the existing Great Wolf resorts in the USA. The surveys were undertaken over a Veteran Day weekend (comparable to a UK Bank Holiday) so are considered to represent a peak period of occupation. There was a geographical spread of the resorts, which had between 402 and 608 bedrooms. Recorded trip numbers did not distinguish between guests and staff.

At OCC's request, a "first principles" analysis was carried out to verify the results of the surveys. This required various assumptions on room occupancy, length of stay, car occupancy, and guest/staff arrival and departure profiles. Even assuming the "worst-case" scenario, the number of trips derived from the first principles assessment was less than the survey results. Therefore, it is accepted that the trip generation numbers used in the TA are appropriate and suitably robust, given the relative unpredictability of leisure uses.

Number of movements (in and out, guests and staff) assuming 100% occupancy:

Weekday 3.955/room = 1977/day 113 (am peak) 154 (pm peak)

Saturday 5.522/room = 2761/day 247 (lunchtime peak)

Assuming an arrival and departure profile similar to that of a Centre Parcs resort, the majority of guest trips will occur between the network peak hours. 68% of arrivals and 57% of departures will take place between the hours of 10:00 to 15:00. Staff movements are more likely to coincide with the peak hours.

Conference facilities

The proposals include approximately 550 m² of floorspace that would be available for use as a conference or meeting space. The Transport Consultant has previously confirmed that the facilities are not typically for business type conferences, and delegates would usually be staying in the hotel so would not be creating additional vehicle movements. The surveyed resorts in the USA have comparable conference facilities.

Day tickets

The application documents state that day tickets will only be issued if the hotel is not at full occupancy. This may not necessarily be controlled, unless CDC consider that an appropriate condition could be applied. The total number of residents plus day visitors will not exceed the capacity of the hotel, i.e. 2,250 people. A maximum of number of day tickets (450), equivalent to 20% of hotel capacity, will be issued irrespective of the occupancy.

The distribution of day tickets will not increase traffic levels above that of full hotel occupancy. As the opening hours for day visitors are 10:00 to 23:00, their journeys will not coincide with the local network morning peak, and the departures are likely to be spread out across the afternoon and evening. It is proposed to sell discounted day passes to local postcode areas, including Banbury and Kidlington, so the distribution of trip origins is unlikely to be affected significantly.

Trip Distribution and Signage Strategy

It has been assumed that visitors will be drawn from a catchment area with a radius of 125 miles. Vehicle trips have been assigned to the primary highway routes according to the distribution of population within the catchment area, which results in the following proportions of total trips:

M40 from south	40%
A34	22%
M40 from north	16%
A43	14%
A4421	7%
A41	1%

The philosophy is to direct all M40 and A34 traffic to the site from the west side, via the B430. Signs on the M40 northbound (subject to the agreement of Highways England) will direct development traffic down the A34 to the B430 junction near Weston-on-the-Green. However, the distribution used in the junction assessment assumes that 50% of the M40 northbound traffic actually turns right at Junction 9, to follow the A41 towards Bicester.

Signage on the A41 will advise drivers to carry on to the Vendee Drive roundabout, rather than turning off to pass through Little Chesterton.

Traffic through Chesterton

The average two-way flow on the A4095 through Chesterton, between the hours of 06:00 to 22:00, is 5,312 vehicles. This is taken from the data recorded by an Automated Traffic Counter over the five months, January to May 2019.

The maximum predicted daily flow due to the development, through Chesterton, is 552 cars. (This is robust as it assumes 50% of M40 cars from the south take the A41, rather than following signage via the A34/B430). Therefore, the maximum predicted traffic increase equates to 46 per hour when averaged over a 12-hour period. The figures for the peak hours are lower than the average (32 in the morning peak and 44 in the evening) as the majority of guest trips will take place between 9am and 2pm. Nearly all additional vehicle movements will be private cars as there will be few HGV trips associated with the development.

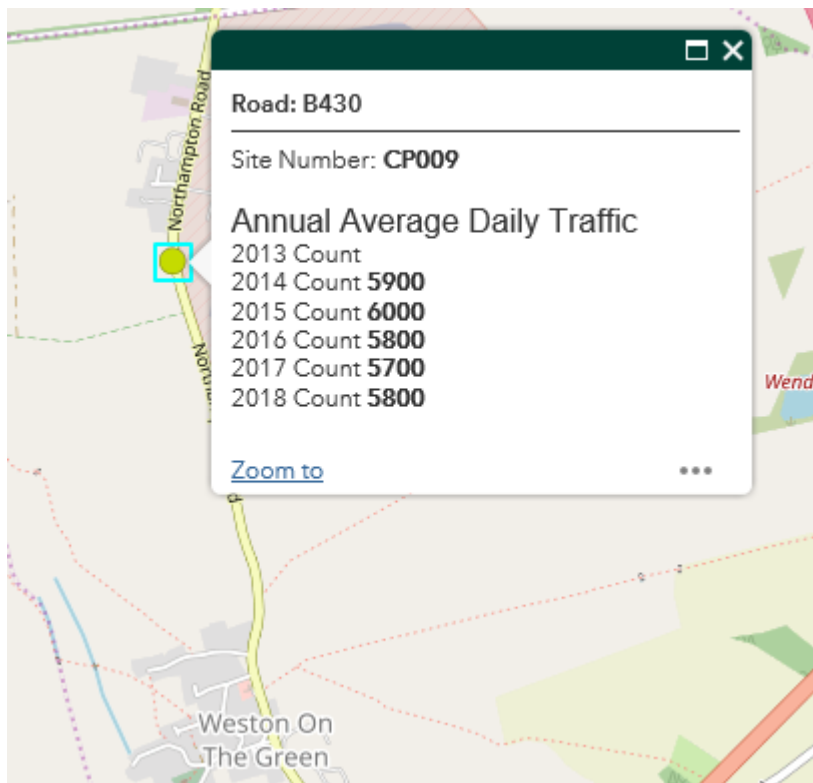
There is a build-out traffic calming feature on the northern edge of the village that requires incoming vehicles to give-way to outbound traffic. It is understood this feature can cause considerable delays, particularly in the morning when two-way flows over 800 vehicles have been recorded between 7:00 and 8:00, with the majority of vehicles heading into the village. Peak evening total flows are approximately three-quarters of the morning flows, with the primary direction of travel reversed. As noted above, additional traffic associated with the development will tend to be mainly outside of the peak hours and will, therefore, not have a significant effect on the queuing at the build-out.

The LPA will need to consider the environmental impacts of the predicted traffic increase through Chesterton (noise, vibration, air quality) separately.

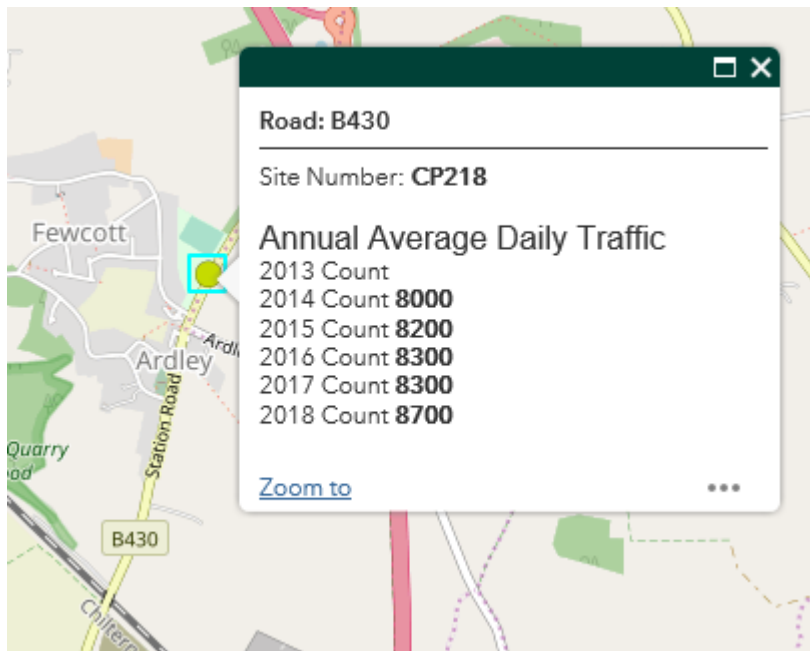
Traffic through other local villages

The average two-way flow on the B430 through Weston-on-the-Green, over the last five years, is 5,840 vehicles. The maximum predicted daily flow due to the development is approximately 834 cars, leading to an increase of 14.3%. If all M40 northbound development traffic were to follow the signed route via the A34/B430 then an additional 400 cars approximately would pass through Weston-on-the-Green, leading to an increase of 21%.

The B430 occasionally accommodates significant traffic volumes that re-route due to incidents or blockages on the M40 or Junction 9, with daily flows up to 12,500 having been recorded. Although the percentage increase is greater than the A4095, the effect of the development traffic on the B430 is not considered to be sufficiently severe to justify an objection. OCC agree that the proposed signage strategy is the most appropriate and will more evenly distribute the additional traffic, should the application be permitted.



The average two-way flow on the B430 through Ardley, over the last five years, is 8,300 vehicles. The maximum predicted daily flow due to the development is approximately 591 cars, leading to an increase of 7.1%. This will be in addition to the significant increase in traffic that will result from the Local Plan development at Heyford.



Smaller increases in daily traffic flows may also be experienced in other villages that are not on the primary routes to the site, such as Kirtlington and Enslow on the A4095 to the west. Although this is acknowledged, it cannot be specifically cited as a reason for objection

Sustainability and Public Transport

The site is not directly served by public transport so there will be a very heavy reliance on private car use. This is contrary to the aims of the local and national policies listed above.

The applicant has included the following proposed measures in order to improve the sustainability of the site in transport terms:

- Shuttle buses to/from both rail stations for guests
- Shuttle bus to Bicester for staff (and Chesterton residents)
- Walking/cycle access to Chesterton via new cycletrack along A4095
- Improvements to the Public Right of Way 161/1 (across new country park to Vendee Drive) connection with the A4095
- Travel Plan and advance info to guests on booking

OCC considers that a single, publicly accessible, bus service should be available between the site and Bicester so that it could be properly integrated into the rest of the town bus network, with the associated benefits for staff access that would result. The opportunities for integration are significant given the scale of wider development in the area, meaning that the bus service could ultimately be integrated with another service to secure its ongoing viability, which would never be achieved with two separate shuttle-type minibus services.

The potential to utilise a high quality, branded vehicle on the service would appeal to their guests and provide a mobile advertisement for the scheme. The existence of such a service should be promoted on their website, in all promotional material and in booking details for guests.

The opportunity would also be there for the applicant to reduce their financial exposure by collecting revenue for the service, either for all users or for non-site users only. If the service could be secured in perpetuity then that would provide comfort on the future accessibility of the site.

Should the scheme be approved then the applicant should provide sufficient funds for an operation using one bus which would run between the site, Bicester town centre and Bicester North and Village railway stations for a period of 10 years post-completion. The total cost of this would be £1.6m at today's prices, subject to indexation.

The situation is analogous to the level of bus service provided at Centre Parcs in Cumbria, where inter-urban service 104 is extended on an hourly basis from Penrith (two-hourly late evenings and Sundays) with a last journey from Centre Parcs at 0035.

https://tiskon-maps-stagecoachbus.s3.amazonaws.com/Timetables/Cumbria/Carlisle/104_Sep18.pdf

The 104 bus service will be mainly for staff but also facilitates access for visitors from the national bus and rail networks (Penrith rail/bus stations and Carlisle bus/rail stations).

A bus service to/from the proposed Chesterton facility does not need to have an inter-urban element, but it does need to connect with the national rail network (at one or both Bicester rail stations) and with the regional bus network (at Manorsfield Road). It does need to operate at least hourly at regular memorable intervals, which could permit operation through some residential areas of Bicester, as required. Also it does need to operate until late evening, to take staff working evening shifts at the various facilities on site back to Bicester (again, note the 0035 departure from Centre Parcs in Cumbria, which is presumably specified to perform this function, seven nights per week). The bus service to this site does not necessarily need to be free to users, as this would work against the longer-term sustainability of the public transport service. A suitable covered bus stop would be required in a convenient location within the resort, and the movement of an appropriate vehicle through the site would need to be demonstrated by a swept path analysis.

The application proposes two separate shuttle bus services, one for guests and the other for staff and local residents. The former is proposed to run on a two-hour basis, which will not be attractive to many of the guests who arrive by rail as they may have a significant wait. Similarly, it is suggested that the staff bus will run only to coincide with the start and finish times of the main shifts, whereas a public bus service would provide a benefit over a greater portion of the day.

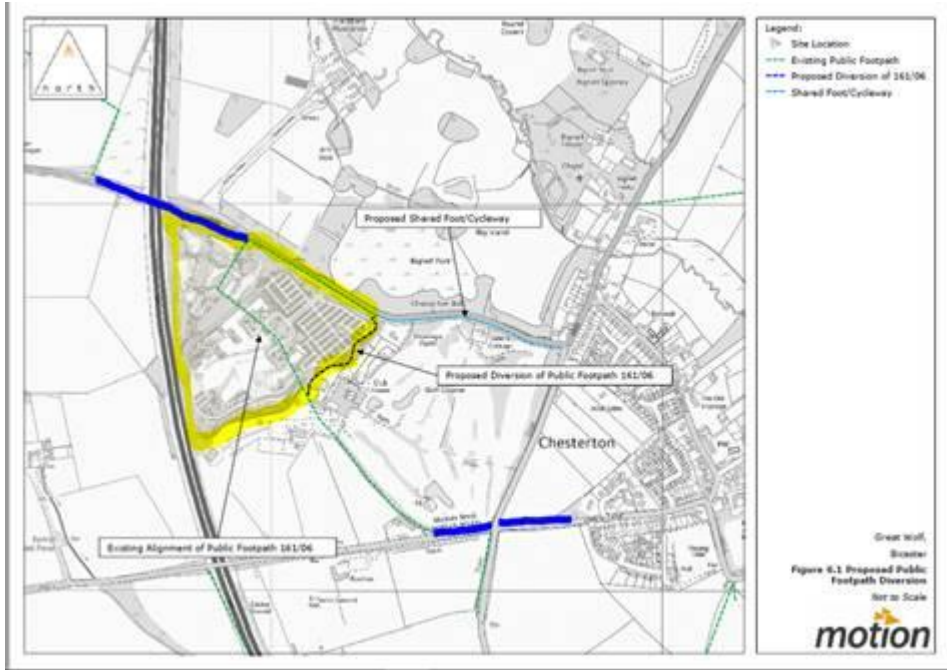
Public Rights of Way

The proposed footpath diversion, as set out in Ch6 of the Environmental Statement and the lack of consideration for its continuance to the northwest and south east are the main points of concern here.

The current footpath alignment offers traffic-free walking from the golf resort's car park to the A4095. Currently users have the ability to enjoy the feeling of open space of the golf course the path passes through. The development proposes removing and diverting the section of footpath northwest of the golf resort buildings and car park and diverting along a landscape strip to the A4095 and a new shared use cycleway and footpath. This proposal will reduce the amount of traffic-free walking route in open landscape and replace it with a roadside path shared with cycle. In addition it will be necessary for footpath users to have to negotiate the main vehicle access junction with the A4095. It is recognised that this provision will make the A4095 safer for NMUs and will increase the likelihood for local journeys to be made on foot and by bike to the site – but by itself it does nothing to improve the situation for the public footpath users as all this does is remove the footpath to enable development to take place.

A better solution delivering net gain for access would be to create a circular footpath around the perimeter of the site that includes the proposed diverted route onto the cycle path. A rough route suggestion is highlighted in yellow below. This or a similar route would enable access to the proposed new public greenspace areas/public nature trail and also give options for traffic-free access to complement the proposed A4095 cycle route. It could be developed into a shared “trim trail” type facility benefitting the public as well as visitors to the development and incorporate outside exercise stations. Ladygrove park at Didcot is a good example of this. Operational security could be maintained at the development site as it is assumed that there will be additional internal security fencing to the development anyway.

Additionally, there does not appear to be any consideration of the continuation of the footpath to the northwest and south east. It is requested that the footpath/cycleway is extended to the M40 overbridge as part of s278 works as well as creation of shared used cycle path or NMU segregation along Green lane into Chesterton (shown in blue on the plan below). Taken together this will help address the expected increase in traffic along the A4095 in the vicinity of the development and give more sustainable access connection choices for the golf resort as well as to the development.



Junction Analyses

The Transport Assessment has examined local highway junctions as requested by OCC. The analyses consider the weekday morning and evening peak hours and the Saturday peak.

The following junctions show a slightly increased Ratio of Flow to Capacity (RFC) and queue lengths but remain within capacity:

A4095 / Site Access (new)

A4095 / B430

B430 / B430 mini-roundabout (north of A34 interchange)

A41 / Bicester Park & Ride / Vendee Drive

B430 / Church Road (Weston-on-the-Green)

M40 Junction 9

It should be noted that that allocated development at Cherwell's Bicester 10 Phase 2 employment site, on the A41 to the east of the Vendee Drive junction, has yet to be assumed in the Bicester Saturn Model given the lack of certainty of what will be delivered there and so forecast capacity at Junction 9 is likely to be underestimated.

The following junction is marginally over capacity with the proposed development in place:

A4095 / Vendee Drive

The analysis predicts the RFC for the A4095 to Vendee Drive north arm movement will increase from 0.83 to 0.87. The accepted figure for efficient operation is generally regarded as 0.85. As the analysis is based on the worst case in terms of generated numbers of vehicles, this minor theoretical exceedance is not considered to justify improvement measures.

The following junctions are already over-capacity so are adversely affected by the proposed development:

B430 / B4030

The 2026 baseline model including Heyford Park Phase 2 shows significant queues on all arms in AM and PM peaks.

Development traffic adds to the queues on the B430 both directions:

- Northbound AM peak 86 to 92 Passenger Car Units (PCUs)
 - PM peak 86 to 83 PCUs
- Southbound AM peak 140 to 151 PCUs
 - PM peak 67 to 86 PCUs

M40 Junction 10 southern roundabout

The 2026 baseline model indicates the M40 northbound exit slip is forecast to operate over capacity in PM peak.

Development traffic increases the queue length from 87 to 90 PCUs, although the RFC remains unchanged.

B430 / B4030

The impact on this signalised junction is discussed in paragraphs 6.29 to 6.41 of the Transport Assessment (TA). It should be noted that the planning ref. in 6.29, for the initial Heyford Park application, is 10/01642/OUT.

As noted in the TA, the submitted Heyford Park Phase 2 scheme results in a significant increase in traffic movements at the B430 / B4030 junction. OCC objected to this application, partly for the reason that “The application cannot be fully assessed until a strategic mitigation package has been identified as appropriate and deliverable”.

A mitigation package that includes this junction is currently being developed and negotiated. However, whatever measures are agreed upon, they are unlikely to eliminate the very significant congestion that occurs on a regular basis, and which is confirmed by the outputs of the junction analysis contained within the TA (see summary above).

Heyford Park is a Local Plan allocated site, whereas the proposed Great Wolf scheme is a speculative development. It is, therefore, considered that any additional capacity that may be created at the junction should be to the benefit of Heyford Park and that extra traffic from this application will negate the potential improvements, to the detriment of all road users. Any additional pressure on this sensitive junction would exacerbate the challenges and could prejudice delivery of an appropriate scheme to meet the needs of Heyford Park.

Paragraph 6.41 of the TA states “..... *it is considered that the development will not have a material effect on the operation of the junction. Furthermore, it is anticipated that the Heyford Park Development will be required to provide a package of mitigation measures and as such the effect of the Proposed Development may be lessened. On this basis, no further analysis or mitigation works are deemed necessary.*”

OCC’s position is that the development **will** have a material effect on the operation of the junction, and that further mitigation works (beyond Heyford Park Phase 2) will not be able to counteract the effect. It is considered that the development traffic will have a severe impact on the road network, so the proposals are contrary to paragraphs 108 (c.) and 109 of the NPPF. **Reason for objection.** OCC will be seeking contributions for a proportion of the mitigation scheme cost that is currently under discussion with Heyford Park, should the Great Wolf proposal be approved.

M40 Junction 10 southern roundabout

This junction is discussed in paragraphs 6.51 to 6.55 of the TA. The roundabout itself, along with the M40 slip roads and A43 arm, are classified as trunk roads and come under the management of Highways England.

The junction analysis shows that the M40 off-slip is over capacity during the afternoon peak in the 2026 baseline scenario, and that the development will add marginally to the expected queue length. This will be due to the additional flows across the roundabout on the B430 and A43 arms as there will be no northbound cars coming off the M40 at this junction.

Improvements to this roundabout are expected as part of the mitigation scheme being negotiated for, and primarily funded by, Heyford Park Phase 2. Any additional pressure on this sensitive junction would exacerbate the challenges and could prejudice delivery of an appropriate scheme to meet the needs of Heyford Park. OCC will be seeking funding towards this scheme should the Great Wolf application be approved.

Travel Plans

The submitted travel plan has been checked against our approved guidance and requires further development. Our comments on the submitted travel plan are included below.

At the moment, the submitted travel plan is quite basic and does not include the level of detail that is required. Although we have provided comments on what has been submitted so far these comments, because of the limited scope of the submitted plan are not exhaustive and bringing the plan up to the required standard is likely to take a collaborative approach to its development.

- Para 1.1 There appears to be three main groups of people that will be travelling to and from this proposed development, employees, guests and conference delegates. The travel plan will need to consider each of these groups separately and to provide full details of where each group will be travelling from to access these facilities. All these groups will need separate targets for travel plan purposes.
- Para 1.3 If this framework travel plan is to be acceptable for the whole site it should carry specific details for each area of the proposed facility. At the moment it carries no information about employee numbers to be based on the proposed site, where they are likely to be travelling from on a daily basis, their shift patterns or recruitment policies. It contains no information relating to guests who will be staying and making use of the facilities, where they are likely to be travelling from or any idea of predicted trips rates to and from the site. For conferences no detail is given about the frequency of planned conferences or the number of attendees that they are likely to attract etc.
- Para 1.5 Bearing in mind the sites location and the availability of sustainable travel options to make journeys to and from the site the focus of the travel plan is to reduce the level of single occupancy car trips made to and from the site. Car share is one practical measure that may be employed to do this but will advocate the use of the private motor car.
- Para 2.12 The current bus stops are 700 metres from the site which is 300 metres more than is desirable. This is going to make travelling by bus less attractive as a travel option. How will this barrier be overcome?
- Para 3.2 Please consider the three main groups, that have been mentioned previously, who will be travelling to and from the site separately. Each group must be considered separately and will need their own set of targets for travel plan purposes.
- Para 3.4 Until the baseline survey has taken place 2011 travel to work data should be included to set initial mode share for employees which will be updated within the months of occupation. As the sites operator already runs a similar business at another location, they should be able to provide details of travel for guests. A commitment to carry out the baseline survey should be made within three months of occupation and once this survey has taken place to update the travel plan with this new information.
- The travel plan contains no details of on site car parking, or cycle parking or how these facilities will be managed. This will need to be included as well as any car park management policy.
- Para 4.3 Employees should be given the travel information pack at the recruitment stage to help them to make informed travel choices before they commence employment.
- Para 5.6 How will the shuttle bus service be managed to ensure that it meets the demands of employees and guests? How will it be ensured that there are enough spaces to meet demand?

- Para 5.8 Will guests using the shuttle bus service pre book to ensure that there is room for the service to take them?
- Para 6.1 It would be best to allow travel patterns amongst employees to settle down before carrying out the baseline survey. A copy of the survey that will be used should be included in the travel plans appendices.
- Para 6.3 Targets will be set separately for the three main groups who will need to travel to and from then site. A 5-10% reduction in SOV travel will be sought and a target for all modes will need to be specified in actual numbers as well as percentages for each year in which a travel survey will take place.
- Para 6.12 Within a month of a survey taking place a monitoring report will be sent to the Travel Plan Team at Oxfordshire County Council.
- How will travel by guests and conference delegates be captured for travel plan purposes?
- Once specific targets have been introduced into the travel plan the action table should be checked to ensure that the action table provides a credible mix of short, medium and longer term actions that will help the travel plan to achieve these targets. All actions should be specific about what will actually be done, have a start and completion date and a named representative who will be responsible for ensuring each action is carried out.

A link to our guidance is included below.

<https://www2.oxfordshire.gov.uk/cms/sites/default/files/folders/documents/roadsandtransport/transportpoliciesandplans/newdevelopments/TravelAssessmentsandTravelPlans.pdf>

Construction Management Plan

The important factor at this stage is the commitment to a lorry route which avoids Chesterton. All HGVs must approach the site from the west along the A4095.

The potential to utilise a shuttle bus to Bicester and other “crew buses” is welcomed.

Delivery and Servicing Management Plan

The Plan demonstrates how delivery and servicing vehicles will be kept apart from guest movements. Swept path analysis has been included for a 10m rigid vehicle and a Refuse Collection Vehicle, and for a 11m vehicle in the servicing area only.

The Plan should clarify the maximum size of vehicle expected, and the predicted numbers of daily vehicle movements.

Planning Statement

The Planning Statement provides an overview of the development proposals. Section 7 outlines the suggested obligations that may be secured through a Section 106 Agreement. Our comments on some of the proposed obligations are as follows:

- Free-to-use shuttle buses for guests, staff and the public. OCC's preference, as outlined above, is for a financial contribution that would allow a service to be procured for a minimum of ten years. This would allow guests, staff and the public to use a single vehicle on an hourly (approx.) basis that would operate for most of the day. An obligation would be secured by S106.
- The enhanced Public Right of Way would be provided as part of the S278 works. It would be included in the S106 to secure a commitment to future maintenance.
- The Travel Plan, Construction Management Plan and Delivery and Servicing Management Plan will be subject to planning conditions
- Co-ordinated off-site signage cannot be delivered as part of the S278 works but will require an appropriate condition and S106 funding. It should be noted that "white-on-brown" tourist road signs are only applicable to facilities that are "open to the public without prior booking", therefore, it may be necessary to provide alternative signage. This must be established in consultation with OCC – please see the following webpage for details: <https://www.oxfordshire.gov.uk/residents/roads-and-transport/street-maintenance-z/tourism-signing>

Environmental Statement

The Environmental Statement is based on the Guidelines for the Environmental Assessment on Road Traffic, which is an old document (1993) but has not been superseded. Impacts on local roads are judged by the estimated percentage increases in all traffic.

Due to the routing strategies for construction lorries and guest trips, the most notable percentage impacts are on the A4095 adjacent of the site. LGV construction traffic numbers on links 7 and 8 need to be reviewed as the percentage changes are incorrect. HGV movements are forecast to increase during the construction period by 224% to the west of the access but it is agreed that there are few residential properties along this route so the environmental impacts are limited.

It is assumed that the LGV numbers for operational traffic are the guest car trips, and the figures given for links 7 and 8 were those determined when M40 northbound traffic was all to arrive via the A41 and Vendee Drive (i.e. too low west of access and too high to the east).

S106 obligations and their compliance with Regulation 122(2) Community Infrastructure Levy Regulations 2010 (as amended):

£ (figure to be confirmed) Highway Works Contribution indexed using Baxter Index

Towards:

The partial funding of a mitigation scheme at the Middleton Stoney signalised junction

Justification:

The junction suffers from very significant congestion at present. Heyford Park Phase 2 development is to deliver a package of measures that is designed to mitigate the impact of further traffic generated by that development. The proposed development would contribute towards the need for these measures, so it is reasonable for this scheme to contribute towards the overall cost.

Calculation:

The extent and cost of the measures are not yet agreed. Therefore, the contribution required from Great Wolf is to be confirmed.

£ (figure to be confirmed) Highway Works Contribution indexed using Baxter Index

Towards:

The partial funding of a mitigation scheme at the M40 Junction 10 southern roundabout

Justification:

Analysis has indicated that this junction will be over-capacity at times in the 2026 baseline assessment. Heyford Park Phase 2 development is to deliver a package of measures that is designed to mitigate the impact of further traffic generated by that development. The proposed development would contribute towards the need for these measures, so it is reasonable for this scheme to contribute towards the overall cost.

Calculation:

The extent and cost of the measures are not yet agreed. Therefore, the contribution required from Great Wolf is to be confirmed.

£ (figure to be confirmed) Highway Works Contribution indexed using Baxter Index

Towards:

The installation of off-site directional signage

Justification:

Suitable signage will be required to direct guests to use the appropriate routes to and from the site, in accordance with the strategy discussed above. This will be designed and installed in conjunction with OCC.

Calculation:

To be determined

£1,600,000 Public Transport Service Contribution indexed from November 2019 using RPI-x

Towards:

Provision of a new bus service linking the site to Bicester town centre and railway stations

Justification:

The development is required to provide a sustainable transport solution which would allow visitors and staff to access the site from residential areas of Bicester and the public transport interchanges at the railway stations and town centre. This is best achieved by a frequent, publicly accessible service that could be integrated into other potential Bicester developments in the future, with hours of operation that would suit all shift patterns.

Calculation:

The cost of providing a single bus is approximately £160,000 per year.

Total cost = £160,000 x 10 years = £1,600,000

£2,105.60 Public Transport Infrastructure Contribution indexed from November 2019 using Baxter Index

Towards:

Provision of two pole and flag units for Chesterton village

Justification:

The proposed public bus service will stop at one location each way in Chesterton village.

Calculation:

2 x Pole and flag unit at £1,052.80 each = £2,106.60

£ (figure to be confirmed) Public Rights of Way Contribution indexed using Baxter Index

Towards:

Maintenance of the realigned PRow through the site

Justification:

The development will necessitate the realignment of Public Footpath 161/6 through the site, which will be included in the S278 works. Long-term maintenance by OCC of the footpath will be required unless the landowner is obligated to take on this responsibility.

Calculation:

To be determined

£2,040 Travel Plan Monitoring Fee indexed from November 2019 using RPI-x

Justification:

To cover the cost to the County of monitoring progress of the Travel Plan against the mode share targets to ensure that the Travel Plans is either meeting targets or being adjusted to meet targets.

Calculation:

The fees charged are for the work required by Oxfordshire County Council to monitor a travel plan related solely to this development site.

The work to be carried out by the monitoring officer is as follows.

- Review the survey data produced by the developer.
- Compare it to the progress against the targets in the approved travel plan and census or national travel survey data sets.
- Agree any changes, updated actions, and future targets in an updated travel plan.

Three biennial monitoring and feedback procedures to be undertaken at years 1, 3 & 5 following first occupation would require an expected 51 hours of officer time at £40 per hour. Total £2,040.

S278 Highway Works:

An obligation to enter into a S278 Agreement will be required to secure mitigation/improvement works, including:

- A new site access priority junction from the A4095, including a ghosted right-turn lane, as shown indicatively on Motion drawing 1803047-03 Rev E
- A new shared use cycletrack along the south side of the A4095, as shown indicatively on Motion drawings 1803047-03 Rev E and 1803047-02 Rev A
- A new length of footway at the A4095 connection of the Public Right of Way 161/1, as shown indicatively on Motion drawing 1803047-08
- A new length of Public Right of Way 161/6 along part of the south-east boundary of the site
- Two new lengths of footway, approximately 235m and 125m, along the A4095 either side of the M40 overbridge, to connect PRow 161/6 with 161/11
- 150 240 Two new lengths of footway, approximately 150m and 240m, along Green Lane either side of The Hale, to connect PRow 161/6 with Chesterton village

Notes:

This is secured by means of S106 restriction not to implement development (or occasionally other trigger point) until S278 agreement has been entered into. The trigger by which time S278 works are to be completed shall also be included in the S106 agreement.

Identification of areas required to be dedicated as public highway and agreement of all relevant landowners will be necessary in order to enter into the S278 agreements.

S278 agreements include certain payments that apply to all S278 agreements however the S278 agreement may also include an additional payment(s) relating to specific works.

Planning Conditions:

In the event that permission is to be given, the following planning conditions should be attached:

Access: Full Details

Prior to the commencement of the development hereby approved, full details of the means of access between the land and the highway, including, position, layout, construction, drainage and vision splays shall be submitted to and approved in writing by the Local Planning Authority. Thereafter, the means of access shall be constructed and retained in accordance with the approved details.

Reason - In the interests of highway safety and to comply with Government guidance contained within the National Planning Policy Framework

No Other Access

Other than the approved access no other means of access whatsoever shall be formed or used between the land and the highway.

Reason - In the interests of highway safety and to comply with Government guidance contained within the National Planning Policy Framework

Details of Turning for Service Vehicles

Prior to the commencement of the development hereby approved, and notwithstanding the application details, full details of refuse, fire tender and pantechnicon turning within the site shall be submitted to and approved in writing by the Local Planning Authority. Thereafter, the development shall be carried out in accordance with the approved details.

Reason - In the interests of highway safety and to comply with Government guidance contained within the National Planning Policy Framework

Plan of Car Parking Provision

Prior to the commencement of the development hereby approved, a plan showing car parking provision for vehicles to be accommodated within the site, shall be submitted to and approved in writing by the Local Planning Authority. Thereafter, and prior to the first occupation of the development, the parking spaces shall be laid out, surfaced, drained and completed in accordance with the approved details and shall be retained for the parking of vehicles at all times thereafter.

Reason - In the interests of highway safety, to ensure the provision of off-street car parking and to comply with Government guidance contained within the National Planning Policy Framework.

Cycle Parking Provision

Prior to the first use or occupation of the development hereby permitted, covered cycle parking facilities shall be provided on the site in accordance with details which shall be firstly submitted to and approved in writing by the Local Planning Authority. Thereafter, the covered cycle parking facilities shall be permanently retained and maintained for the parking of cycles in connection with the development.

Reason - In the interests of sustainability and to ensure a satisfactory form of development, in accordance with Government guidance contained within the National Planning Policy Framework

Travel Plan

Prior to the first occupation of the development hereby approved, a Travel Plan, prepared in accordance with the Department of Transport's Best Practice Guidance Note "Using the Planning Process to Secure Travel Plans", shall be submitted to and approved in writing by the Local Planning Authority. Thereafter, the approved Travel Plan shall be implemented and operated in accordance with the approved details.

Reason - In the interests of sustainability and to ensure a satisfactory form of development, in accordance with Government guidance contained within the National Planning Policy Framework

Provision of New Permanent Public Footpaths

Prior to the first use of any new public footpath, the new footpath shall be formed, constructed, surfaced, laid and marked out, drained and completed in accordance with specification details which shall be firstly submitted to and approved in writing by the Local Planning Authority.

Reason - In the interests of highway safety and public amenity and to comply with Government guidance contained within the National Planning Policy Framework

Construction Traffic Management plan

No development shall take place in respect of the development until a Construction Traffic Management Plan (CTMP) has been submitted to and approved by the relevant Local Planning Authority, in conjunction with the Local Highway Authorities.

The CTMP shall provide for:

- (i) the routing of construction vehicles and Construction Plan Directional signage (on and off site)
- (ii) the parking of vehicles of site operatives and visitors
- (iii) loading and unloading of plant and materials
- (iv) storage of plant and materials used in constructing the development
- (v) operating hours and details of deliveries
- (vi) the erection and maintenance of security hoarding including decorative displays and facilities for public viewing, where appropriate
- (vii) wheel washing facilities
- (viii) measures to control the emission of dust and dirt during construction
- (ix) a scheme for recycling/disposing of waste resulting from demolition and construction works
- (x) Overall strategy for managing environmental impacts which arise during construction
- (xi) Procedures for maintaining good public relations including complaint management, public consultation and liaison
- (xii) Control of noise emanating from the site during the construction period
- (xiii) Details of construction access(s)
- (xiv) Provision for emergency vehicles

Reason - In the interests of highway safety, convenience of highway users and to protect the amenities of residents and safeguard the visual amenities of the locality and to comply with Government guidance contained within the National Planning Policy Framework.

Delivery and Servicing Management Plan

The development shall not be occupied until a delivery and servicing management plan has been submitted to and approved in writing by the Local Planning Authority. The development shall thereafter be carried out strictly in accordance with the approved delivery and servicing management plan.

Reason - In the interests of highway safety and to comply with Government guidance within the National Planning Policy Framework.

Signage Strategy

The development shall not be occupied until a signage strategy for the site has been submitted and approved in writing by the Local Planning Authority. The development shall thereafter be completed and signage installed in accordance with the approved details prior to the first use of any building on the site.

Reason - To ensure that traffic is directed along the most appropriate routes and to comply with Government guidance contained within the National Planning Policy Framework.

Officer's Name: Roger Plater

Officer's Title: Transport Planner

Date: 8 January 2020

Application no: 19/02550/F

Location: Land to the east of M40 and south of A4095, Chesterton, Bicester

Lead Local Flood Authority

Recommendation:

Objection

Key issues:

Further information and clarification of points listed below required.

Detailed comments:

Discharge noted to be to Gagle Brook ordinary watercourse. Riparian ownership and consent to discharge to be justified. Ditch condition and capacity to take additional flows to be demonstrated.

Borehole/BRE to determine level of ground water to be provided.

Section 4.2.2. states that there will be an “increase in peak discharge from that of a greenfield site.” This should occur and robust justification as to why this is deemed the case to be provided.

Section 5.2.2. identifies the use of Qbar methodology. For a site this size FEH should be used, (Qmed).

MicroDrainage calculations provided use default Cv values, these are not representative of the site. It is recommended values of 0.95 for roofs and 0.9 for paved areas are applied. The designer must justify where a Cv of less than 0.9 has been used.

Calculations should be undertaken for all relevant return periods and identify the critical duration used.

A sub-catchment approach should be applied to surface water management, with clearly defined flow controls, on site utilising a method of dispersed site storage.

Ground water depth to bottom of proposed tanking/attenuation requires justification as does the need for buried attenuation when it appears there is ample space to use on the surface SuDS and surface water management techniques.

Flow control from site should ensure greenfield discharge for relevant return periods, i.e. 1:10, 1:30, 1:100 and 1:100 + 40% climate change. It is doubtful the current proposed attenuation approach will maximise the attenuation and simply allow free discharge up to the 1:100 + 40%.

Section 5.1 notes proposal to divert two ditch lines. This should not be undertaken. It is also unclear what is meant by the two ditch lines being incorporated into the car park. It is noted that the proposed diversion had been previously agreed, evidence of this needs to be provided.

In conjunction the diversion of the two ditch lines is noted to have a potential impact on existing pond levels. Pond levels should remain unaffected to protect and promote bio-diversity.

With the amount of green space on site it is felt the use of on the surface SuDS features has not been maximised. Additional techniques should be explored, e.g. bio-retention, rain gardens etc.

Surface water storage locations, extents and critical levels including freeboard require further explanation.

Although we acknowledge it will be hard to determine all the detail of source control attenuation and conveyance features at concept stage, by Outline Design Stage we will expect the Surface Water Management Strategy to set parameters for each parcel/phase to ensure these are included when these parcels/phases come forward. Space must be made for shallow conveyance features throughout the site and by also retaining existing drainage features and flood flow routes, this will ensure that the existing drainage regime is maintained, and flood risk can be managed appropriately.

By the end of the Outline Design Stage evaluation and initial design/investigations Flows and Volumes should be known. Therefore, we ask that the following Pro-Forma is completed and returned as soon as possible:



OCC Pro-Forma.pdf

Officer's Name: Adam Littler
Officer's Title: Drainage Engineer
Date: 08 January 2020

Application no: 19/02550/F

Location: Land to the east of M40 and south of A4095, Chesterton, Bicester

Archaeology Schedule

Recommendation:

Objection for the following reason:

- The results of an archaeological evaluation will need to be submitted prior to the determination of this application in order that the impact on any surviving archaeological features can be assessed.

Comments:

We previously provided comments on a scoping opinion for this site where we highlighted that the desk based assessment set out in the scoping report would need to be undertaken and included in any EIA.

We also highlighted that an archaeological trenched evaluation would need to be undertaken and the results used to inform the baseline of this assessment. This report will need to be submitted with this application and the baseline updated before we can provide appropriate advice.

This is reiterated in the cultural heritage chapter of the EIA which states that this work will be submitted prior to the determination of any application (10.3.5) and that an addendum to the chapter following the completion of the trenching.

We would agree with the approach.

As such we would not recommend that planning permission is granted at this stage until the evaluation report and cultural heritage addendum have been submitted. We will then be able to give further advice on the heritage implications of this proposal.

Officer's Name: Richard Oram

Officer's Title: Planning Archaeologist

Date: 4th December 2019

SuDS Flows and Volumes - LLFA Technical Assessment Pro-forma

This form identifies the information required by Oxfordshire County Council LLFA to enable technical assessment of flows and volumes determined as part of drainage / SuDS calculations.

*Note : * means delete as appropriate; Numbers in brackets refer to accompanying notes.*

SITE DETAILS

- 1.1 Planning application reference
- 1.2 Site name
- 1.3 Total application site area (1)m² ha
- 1.4 Is the site located in a CDA or LFRZ Y/N
- 1.5 Is the site located in a SPZ Y/N

VOLUME AND FLOW DESIGN INPUTS

- 2.1 Site area which is positively drained by SuDS (2) m²
- 2.2 Impermeable area drained pre development (3) m²
- 2.3 Impermeable area drained post development (3)1 m²
- 2.4 Additional impermeable area (2.3 minus 2.2) m²
- 2.5 Predevelopment use (4) Greenfield / Brownfield / Mixed*
- 2.6 Method of discharge (5) Infiltration / waterbody / storm sewer/ combined sewer*
- 2.7 Infiltration rate (where applicable)m/hr
- 2.8 Influencing factors on infiltration
- 2.9 Depth to highest known ground water table.....mAOD
- 2.10 Coefficient of runoff (Cv) (6)
- 2.11 Justification for Cv used
- 2.12 FEH rainfall data used (Note that FSR is no longer the preferred rainfall calculation method) Y/N
- 2.13 Will storage be subject to surcharge by elevated water levels in watercourse/ sewer Y/N
- 2.14 Invert level at outlet (invert level of final flow control)mAOD
- 2.15 Design level used for surcharge water level at point of discharge(14)1.....mAOD

SuDS Flows and Volumes - LLFA Technical Assessment Pro-forma

CALCULATION OUTPUTS

Sections 3 and 4 refer to site where storage is provided by attenuation and/or partial infiltration. Where all flows are infiltrated to ground omit Sections 3-5 and complete Section 6.

3.0 Defining rate of runoff from the site

- 3.2 Max. discharge for 1 in 1 year rainfalll/s/ha,l/s for the site
- 3.2 Max. discharge for Q_{med} rainfalll/s/ha,l/s for the site
- 3.3 Max. discharge for 1 in 30 year rainfalll/s/ha,l/s for the site
- 3.4 Max. discharge for 1 in 100 year rainfalll/s/ha,l/s for the site
- 3.5 Max. discharge for 1 in 100 year plus 40%CCl/s/ha,l/s for the site

4.0 Attenuation storage to manage peak runoff rates from the site

- 4.1 Storage - 1 in 1 yearm³m³/m² (of developed impermeable area)
- 4.2 Storage - 1 in 30 year ⁽⁷⁾ m³m³/m²
- 4.3 Storage - 1 in 100 year ⁽⁸⁾m³m³/m²
- 4.4 Storage - 1 in 100 year plus 40%CC ⁽⁹⁾ m³m³/m²

5.0 Controlling volume of runoff from the site

- 5.1 Pre development runoff volume ⁽¹⁾ m³ for the site
- 5.2 Post development runoff volume (unmitigated) ⁽¹⁾ m³ for the site
- 5.3 Volume to be controlled/does not leave site (5.2-5.1)..... m³ for the site
- 5.4 Volume control provided by
 - Interception losses ⁽¹¹⁾m³
 - Rain harvesting ⁽¹²⁾m³
 - Infiltration (even at very low rates)m³
 - Separate area designated as long term storage ⁽¹³⁾m³
- 5.5 Total volume control (sum of inputs for 5.4)m³ ⁽¹⁵⁾

6.0 Site storage volumes (full infiltration only)

- 6.1 Storage - 1 in 30 year ⁽⁷⁾m³m³/m² (of developed impermeable area)
- 6.2 Storage - 1 in 100 year plus CC ⁽⁹⁾m³m³/m²

SuDS Flows and Volumes - LLFA Technical Assessment Pro-forma

Notes

1. All area with the proposed application site boundary to be included.
2. The site area which is positively drained includes all green areas which drain to the SuDS system and area of surface SuDS features. It excludes large open green spaces which do not drain to the SuDS system.
3. Impermeable area should be measured pre and post development. Impermeable surfaces includes, roofs, pavements, driveways and paths where runoff is conveyed to the drainage system.
4. Predevelopment use may impact on the allowable discharge rate. The LLFA will seek for reduction in flow rates to GF status in all instances. The design statement and drawings explain/ demonstrate how flows will be managed from the site.
5. Runoff may be discharge via one or a number of means.
6. Sewers for Adoption 6th Edition recommends a Cv of 100% when designing drainage for impermeable area (assumes no loss of runoff from impermeable surfaces) and 0% for permeable areas. Where lower Cv's are used the application should justify the selection of Cv.
7. Storage for the 1 in 30 year must be fully contained within the SuDS components. Note that standing water within SuDS components such as ponds, basins and swales is not classified as flooding. Storage should be calculated for the critical duration rainfall event.
8. Runoff generated from rainfall events up to the 1 in 100 year will not be allowed to leave the site in an uncontrolled way. Temporary flooding of specified areas to shallow depths (150-300mm) may be permitted in agreement with the LLFA.
9. Climate change is specified as 40% increase to rainfall intensity, unless otherwise agreed with the LLFA / EA.
10. To be determined using the 100 year return period 6 hour duration rainfall event.
11. Where Source Control is provided Interception losses will occur. An allowance of 5mm rainfall depth can be subtracted from the net inflow to the storage calculation where interception losses are demonstrated. The Applicant should demonstrate use of subcatchments and source control techniques.
12. Please refer to Rain harvesting BS for guidance on available storage.
13. Flow diverted to Long term storage areas should be infiltrated to the ground, or where this is not possible, discharged to the receiving water at slow flow rates (maximum 2 l/s/ha). LT storage would not be allowed to empty directly back into attenuation storage and would be expected to drain away over 5-10 days. Typically LT storage may be provided on multi-functional open space or sacrificial car parking areas.
14. Careful consideration should be used for calculations where flow control / storage is likely to be influenced by surcharged sewer or peak levels within a watercourse. Storm sewers are designed for pipe full capacity for 1 in 1 to 1 in 5 year return period. Beyond this, the pipe network will usually be in conditions of surcharge. Where information cannot be gathered from Thames Water, engineering judgement should be used to evaluate potential impact (using sensitivity analysis for example).
15. In controlling the volume of runoff the total volume from mitigation measures should be greater than or equal to the additional volume generated.

Design and Credit to: McCloy Consulting Ltd