

Gillian McDermott
Wychavon District Council
Civic Centre
Queen Elizabeth Drive
Persnore
Worcestershire
WR10 1PT

**Economy and
Infrastructure**
Development Control
Engineer
County Hall
Spetchley Road
Worcester
WR5 2NP

Date: 1 July 2024
Your ref: W/23/02112/OUT
Our ref: Karen Hanchett

Dear Gillian,

**TOWN AND COUNTRY PLANNING ACT 1990
(DEVELOPMENT MANAGEMENT PROCEDURE) (ENGLAND) ORDER 2015
ARTICLE 18 CONSULTATION WITH HIGHWAY AUTHORITY**

PROPOSAL: Planning application for the demolition of existing farmhouse, agricultural buildings and structures, the erection of a phased development of up to 300 residential dwellings (Use Class C3) and associated public open space, drainage, infrastructure and engineering works with all matters reserved except access.

LOCATION: Orchard Farm Defford Road Persnore WR10 3BX

APPLICANT: Formula Land Ltd

Worcestershire County Council (WCC), acting in its role as Highway Authority, has undertaken a full assessment of this planning application. Based on the appraisal of the development proposals and the additional information submitted, the Transport Planning and Development Management Team Leader, on behalf of the County Council, under Article 18 of the Town and Country Planning (Development Management Procedure) (England) Order, 2015 and recommends **DEFERRAL** on the grounds that insufficient information has been provided to demonstrate that the proposals would not result in a severe congestion or unacceptable highway safety impact on the surrounding local highway network, contrary to NPPF paragraph 115 or that the proposals would be served by safe and suitable access for all users, contrary to NPPF paragraph 114.

The justification for this decision is provided below. Requests for further information to overcome the Highway Authority's recommendation are provided in **bold-type** and summarised at the Conclusion.

WCC Highways has previously provided a formal response, dated 17 April 2024 recommending deferral on the grounds that insufficient information had been provided to demonstrate that the proposals would not result in a severe congestion or unacceptable highway safety impact on the surrounding local highway network, contrary to NPPF khanchett@worcestershire.gov.uk
www.worcestershire.gov.uk

Please recycle this item after use

paragraph 115 or that the proposals would be served by safe and suitable access for all users, contrary to NPPF paragraph 114. The Highway Authority is now in receipt of a Technical Note (TN) prepared by SLR (May 2024), a Paramics Microsimulation model of the A4104 Three Springs Road/Worcester Road junction and Worcester Road/Station Road junction and updated standalone junction models.

WCC Highways response to the additional information received (TN) is contained herein and should be read in conjunction with the previous formal response dated 17 April 2024. For the avoidance of repetition, requests for developer contributions set out within WCC Highways previous response have not been included again below.

Application Site

The proposed site currently comprises agricultural land, which is located to the immediate south-west of the market town of Pershore and immediately south of planning application site reference 24/00270/FUL. The site is bound to the south by Defford Road (A4104), to the west by Tiddesley Wood, to the north by arable land, and to the east by residential properties accessed from Desjardins Way.

To the south of the site, Defford Road (A4104) is a two-lane single carriageway, which runs between Pinvin to the north and Defford, Upton-upon-Severn and Little Malvern to the south-west. Within the immediate vicinity of the site, Defford Road (A4104) is a two-lane single carriageway subject to a 50mph speed limit along the full extent of the site's southern frontage. The speed limit of the A4104 reduces to 30mph approximately 225m north of the south-eastern corner of the site (just south of the Three Springs Road/ B4536 Defford Road junction). At Three Springs Road, Defford Road continues east, where it forms a section of the B4536, to Pershore town centre.

There are currently no footways on Defford Road along the site frontage. However, there is an existing footway located along the northern side of Defford Road (A4104), beginning approximately 150m north of the south-eastern corner of the site. This footway is approximately <1m wide at its southern extent with a further <1m of grass verge between the footway and the carriageway. This footway widens to approximately 2m at the Defford Road/ Three Springs Road junction.

To the north of the site, the B4536 Defford Road is a two-lane single carriageway forming a section of the B4536, which runs from Defford Road (A4104) in the south-west and the junction at Broad Street (B4536)/ Church Walk, where it merges into Broad Street (B4536). The speed limit on Defford Road (B4536) is 30mph at the junction of Defford Road (A4104)/ Defford Road (B4536).

There are continuous footways on the northern side of Defford Road (B4536) from its junction with Three Springs Road which connect the site to the Pershore town centre.

Development Proposal

The Applicant seeks outline consent (except for access) for a residential development of up to 300 dwellings, together with associated infrastructure, landscaping, and access. All other matters are reserved.

Pre-application Advice

WCC Highways outlined in its preapplication response that there was an in-principle concern with the suitability of the site to provide a sustainable residential development in highways and transport terms and the potential for an over-reliance on the private car. The response requested any future TA include further evidence to show improvements to sustainable transport provision and that the site layout and its accesses are designed in accordance with the WCC Streetscape Design Guide (SDG), if it is intended to offer the internal street network for adoption.

WCC Highways notes the references in the TN to technical elements of the TA having been agreed with the Highway Authority prior to the submission of the planning application. The Applicant is reminded that WCC Highways preapplication advice does not bind the Council's decision making or constitute a formal representation by the Council as the Highway Authority. Any views or opinions expressed are given in good faith and to the best of Officer's knowledge, without prejudice to the formal consideration of any future planning application and subject to the proviso that circumstances and information may change or come to light that may alter that position.

Vehicular Access

Vehicular access is proposed to be taken from Defford Road (A4104) via a priority junction. This site access is proposed to comprise a ghost island right-turn arrangement, designed to retain the existing 50mph speed limit. The main spine road/access road would include a 6.0m carriageway, a 2.0m wide footway on the east side and 15.0m radii kerbing. The proposed vehicular access layout is shown on SLR Drawing No. 227119_PD02/N 'Proposed 50mph Ghost Island Arrangement'.

The TN outlines that A central island has not been provided within the bellmouth, but instead dropped kerbs and tactile paving have been provided at a crossing point further into the site as shown in drawing 227119_PD14-4 Rev A _Proposed Site Access - RT Facility-GA & Vis Assessment. The TN suggests that provision of these facilities in the proposed locations is on the natural desire line for any pedestrians wishing to cross the spine road, and also directs pedestrians to cross the Spine Road in a more appropriate location. WCC Highways is satisfied that as a pedestrian footway will not be provided on the western (southern) side of the access junction and there is no desire line across the access junction to the west, the proposed crossing point as shown on drawing 227119_PD14-4 Rev A _Proposed Site Access - RT Facility-GA & Vis Assessment is acceptable.

In WCC Highways previous response it was requested that in accordance with the Worcestershire SDG a minimum carriageway width of 6.1m is provided where the primary residential street (spine road) will also serve as a bus route. The TN confirms that the proposed access/spine road has been widened to 6.1m as shown on drawing 227119_PD14-4 Rev A _Proposed Site Access - RT Facility-GA & Vis Assessment.

In WCC Highways previous response, it was suggested that the Applicant be advised that the main spine road may be required to connect to the northern-most application site boundary, such that a connection through to application site 24/00270/FUL can be made.

The TN outlines that the Applicant does not believe it is the intention to provide a vehicular connection through to the Holloway Phase 2 development (24/00270/FUL) and that the Applicant is not aware that the same request has been made for application 24/00270/FUL. The TN also notes that rationale and benefit of providing this form of vehicular connection are also unclear.

WCC Highways has raised the requirement for the Holloway Phase 2 spine road, which is an extension of the access road for Holloway Phase 1 (which was required at 6.1m), to be constructed to the southern site boundary and at a width of 6.1m. The Highway Authority considers that this would facilitate the comprehensive and integrated development of the area of land between Holloway and Defford Road and prevent isolated, poorly connected 'pockets' of new residential development from occurring. In addition, a road connecting Defford Road in the south to Holloway in the north provides improved opportunities for a potential future bus service and the critical mass required to help make any future service commercially viable. **The Applicant is therefore required to confirm that the main spine road would be constructed to the northern boundary of the site, as it meets the southern site boundary for Holloway Phase 2.**

The recorded 85th percentile speeds at the proposed site access location are 49.8mph northbound and 51.8mph southbound, which is consistent with the existing 50mph speed limit at this location.

To comply with DMRB design standards, visibility splays of 2.4m x 160m northwards and southwards are appropriate for the site access and submitted drawing 227119_PD14-4 Rev A _Proposed Site Access - RT Facility-GA & Vis Assessment shows these can be achieved.

The Worcestershire SDG outlines that the desirable gradient for all new roads is 1:20 (5%) but that gradients of 1:12 (8%), which do not exceed a length of 30m, may be considered. The TN explains that the proposed gradient of the site access road is 5% (1:20) from the junction give way line 20m into the site followed by a vertical curve with K value of 6, followed by a grade of 8% (1:12) as shown in drawing 06842-CI-D-0100-P07 Junction General Arrangement. WCC Highways is satisfied that the first 70m of the proposed access road/spine road is proposed in accordance with Worcestershire's SDG. **However, the Highway Authority requires the gradient of the full length of the spine road as it routes through the site to be confirmed, if it is intended for the spine road to be adopted. This is so that the Highway Authority can be given reasonable confidence that the site access road/spine road will be safe and suitable for all users.**

In WCC Highways previous response it was noted that access junction swept path analysis has been provided for a standard design vehicle only, as shown on drawing 227_119_AT_A02 D. **The Highway Authority requests that swept path analysis is provided for the following vehicles:**

- 11.3m length (with tailgate raised) refuse vehicle;
- Appropriate bus vehicle (dimensions tbc);
- Pantehnicon (large furniture removals wagon); and
- 8.7m length Hereford and Worcester standard fire appliance.

The Applicant should be advised that construction of the proposed 'ghost island' junction will require alterations to the existing public highway. This will require the Applicant to enter into a separate S278 Agreement with the Highway Authority if planning consent were granted.

The Applicant also intends to provide a combined pedestrian, cycle and emergency access at the north-eastern corner of the site, at the junction of Fleury Close and Henderson Close, offering an alternative highway connection for emergency services and a public access point to the site. This emergency access will only be used as such in the unlikely event that access via the main spine road is blocked. The Highway Authority has no objection to the proposed emergency access. If it is the Applicant's intention to put this access forward for adoption then it must (a) connect to the public highway and (b) be subject to a TRO to restrict vehicular access to emergency vehicles only. The TRO would require the Applicant to fund the processing fees, which can be covered by a financial contribution if planning consent were subsequently granted.

Stage 1 Road Safety Audit (RSA1)

An RSA1 and Designer's Response has been provided within the TN. The following safety problems have been identified:

1. Proposed site access junction

Problem: Existing vegetation may obscure visibility splay to the left of the site access potentially leading to sideswipe type collisions. Onsite observations noted that the presence of existing vegetation may constitute an obstruction to the junction visibility. Obstruction to the junction visibility splays may lead to injudicious vehicle movements at the proposed junction, potentially leading to side swipe type collisions between vehicles.

Recommendation: The vegetation to the left of the site access junction be cut back and maintained such that it does not pose an obstruction to the visibility splays.

Designer's Response: Drawing No. 227119 – Proposed Footway 50mph has been updated to include a 4.5m x 160m visibility splay and confirmation that the vegetation which would be required to be cut back is entirely within land controlled by the applicant or the adopted highway boundary. The updated visibility splays are shown in Drawing No. 227119-PD12.4 – Proposed Site Access – Right Turn Facility – General Arrangement and Visibility Assessment. This drawing is included at Appendix B.

WCC Response: Accepted. A condition will be secured against any consent that may be granted, requiring the visibility splay to remain free of obstruction for the lifetime of the development.

2. Ghost island at site access.

Problem: The lead in taper appears too short for the recorded 85th percentile speeds leading to shunt type collisions. The lead in taper length at the ghost island appears too short and would not give drivers enough time to safely merge onto the right-hand turn lane and could lead to loss of control or rear end shunt type collisions.

Recommendation: It is recommended that a longer taper length is provided as this would allow drivers more time to adjust their speed and merge smoothly, reducing the risk of collisions.

Designer's Response: Drawing No. 227119 – Proposed Footway 50mph has been to include a longer taper length. The taper length has been increased to 87.5m north and south of the right turn facility in line with DMRB requirements. The updated taper is shown in Drawing No. 227119-PD12.4 – Proposed Site Access – Right Turn Facility – General Arrangement and Visibility Assessment. This drawing is included at Appendix B.

WCC Response: Accepted. Should a Departure from Standards application be required, this will need to be approved through the S278 process. Planning approval should not be misconstrued as approval for any Departure from Standards application that may be required.

3. Proposed footway along the Cemetery frontage.

Problem: Trees are overhanging onto the footway reducing the effective width for pedestrians. The existing trees are overhanging, reducing the effective width and causing an obstruction on the footway. This could cause pedestrians to step into the carriageway to avoid obstacles / other pedestrians, which could lead to pedestrians being struck by passing vehicles.

Recommendation: It is recommended that the existing trees are regularly maintained / pruned to ensure the safety of the pedestrians walking along this footway.

Designer's Response: This is an existing maintenance issue, and it is expected that the highway authority will regularly inspect the adopted highway under their control and cut back any vegetation which is inhibiting movement around the network.

WCC Response: **Not accepted.** Whilst WCC Highways has an ongoing maintenance programme for vegetation, verges etc, it is not always possible to address issues as they occur, particularly during the peak growing season. As the proposals will increase pedestrian use of the footway, WCC Highways will seek to secure a condition requiring that the trees are pruned prior to the development being brought into use and maintained as such for the life of the development.

WCC Highways notes that within the Designer's Response, the Design Team have erroneously completed the column for the Overseeing Organisation. This should be corrected and an editable version of the Designer's Response issued to the Highway Authority for completion.

WCC Highways also request confirmation as to whether the RSA team considered the requirement to light any new highway features, including the site access.

The Highway Authority requires that the Zebra Crossing immediately north of Defford Road is included within the RSA1, should it be proposed as part of the planning application.

Pedestrian and Cycle Access

The TA states that the overarching strategy for the site will be to reduce the overall need to travel, maximise the opportunity to travel by sustainable modes, and reduce the effect of new car trips from the proposed development. Hence, there is a focus on enhancing connectivity to existing pedestrian, cycle and public transport networks in the vicinity of the site.

Drawing No. P22-2506_DE_0008/G is an illustrative masterplan drawing and shows four pedestrian/cycle routes serving the development site, which are discussed in the TA. Pedestrians and cyclists will be able to use the proposed vehicular access at Defford Road (A4104) but as this is the most southern access point and would be circuitous for journeys between the site and Pershore Town Centre, it is unlikely to form the most attractive active travel route.

In WCC Highways previous response, it was requested that the Applicant confirm the gradient of the new pedestrian/ cycle access is proposed at the south-eastern corner of the site, connecting Defford Road (A4104) to the residential development. The TN confirms that gradient of the proposed shared-use path is 1:20, as shown on drawing 06842-CI-D-0101-P03 Path General Arrangement.

An additional pedestrian/cycle access is proposed at the north-eastern corner of the site, linking to the junction of Fleury Close and Henderson Close. For residents who live towards the north of the site, this link would provide a shorter and more direct route to some facilities, notably to High Street and to Abbey Park School.

In WCC Highways previous response, it was requested that the proposals include a pedestrian/cycle connection to Holloway Phase 2 (application reference 24/00270/FUL) and NCN 442. The TN outlines that:

The Land off Holloway Phase 2 development (application reference 24/00270/FUL) proposes a 3.0m shared footway/cycleway connection at the southern extent of the development. We assume that this is a potential desired connection point for a footway/cycle link into the Orchard Farm (this development). The proposed levels of the Land off Holloway Phase 2 development have been reviewed at the potential connectivity point (referenced to drawing 23506-RLL-24-XX-DR-C-0025 RevP03).

The proposed level of the footway/cycleway is approximately 36.100. Note that this is approximately 1.2m above the existing ground level of the existing hedgerow located 1.9m south.

The continuation of the 3.0m provision is to potentially connect into the proposed emergency access road presented on drawing 227119_PD14-2 Rev A_Proposed Emergency Access Route (included at Appendix B). The route would need to avoid the tree to the south (inclusive of its root protection zone) and require the removal of a section of the existing boundary treatment for a direct link to be established.

The emergency access road which also provides a footway/cycle link within the Orchard Farm development has proposed levels aligned to the existing ground topography. If a direct link between the Holloway shared route and emergency access route were proposed (as indicated by the redline within the extract below), the level difference would be approximately 2.29m (36.100 – 33.810) over a length of ~15m. The gradient of the route would be 1 in 6.5 which is not DDA compliant but is compliant with inclusive mobility as it remains within a 5% gradient.

It is noted that further to the east of the southern turning head of the Holloway Phase 2 development, there appears to be a break in the boundary treatment and a more suitable location for a potential connection that avoids impact on the existing tree and requirement to remove existing vegetated boundary treatments. The alternative route outlined by the 'blue' line within Figure 3 increases the length of a potential footway/cycleway connection to ~33m and the level difference would be approximately 2.74m (35.8-33.06). The gradient of the route would be 1 in 12 and landings and resting places would need to be duly considered.

WCC Highways requests that the Applicant confirms whether any discussions to connect to, or integrate with, the vehicular and active travel provision within Holloway Phase 2 have taken place with the Applicant for application reference 24/00270/FUL.

The proposed site access drawing reference 227119_PD02/N shows pedestrian/cycle infrastructure improvements along Defford Road (A4104) and the TA discusses these improvements. The proposed design of the vehicular site access includes a new section of 2m footway adjacent to the east side of the site road carriageway. It is then proposed to construct a section of 2m wide footway along the north-western side of Defford Road (A4104) running eastwards. In addition, an alternative 'car free' active travel route has also been proposed which provides a shared footway/ cycleway within the site, exiting onto Defford Road (A4104) in the south-eastern corner of the site. At this point, it ties into the proposed 2m footway along the frontage of the site.

The proposed pedestrian/cycle access connecting to Defford Road will route north to the existing pedestrian infrastructure which begins at the Bridleway 522(B). Dropped kerbs and tactile paving will be provided at this location, as shown on drawing. 227119_SK02/N. The existing footway north of the Bridleway is proposed to be widened to accommodate a 3m

shared route, initially with a 0.5m verge between the shared route and carriageway, which tapers to no verge once the speed limit becomes 30mph, as shown on drawing. 227119_SK07/C. Immediately north of the Three Springs Road / Defford Road junction, a new Zebra Crossing is proposed, as shown on drawing. 227119_SK09.

In WCC Highways previous response, it was requested that the proposed pedestrian and cycle provision along Defford Road and Three Springs Road is included within the RSA1/2. It is noted that the RSA1/2 includes the proposals for active travel enhancements along Defford Road. However, the Zebra Crossing to the north of the Three Springs Road/Defford Road junction has been omitted. The TN suggests this is because the Zebra crossing is an indicative proposal only. WCC Highways considers this to be an ambiguous statement and **requests confirmation from the Applicant as to whether a Zebra crossing immediately north of A4104 Three Springs Road/Defford Road junction is included with the Applicant's development proposals to support safe and suitable access for all users and to facilitate a genuine choice of sustainable travel modes.**

In WCC Highways previous response it was requested that the Applicant provides wayfinding signage to assist pedestrians and cyclists navigating between the site and Pershore town centre. The TN confirms that the Applicant would provide a contribution towards wayfinding signage, secured via a S106 agreement.

Public Transport

The TA states there are existing bus stops within a 5-10-minute walk from the centre of both the north-east development area (Development Area 1) and the southern development area (Development Area 3). The "Cornmore" and "Abbots Grange" bus stops are the nearest stops to the site and are both located on Defford Road (B4536). The "Cornmore" bus stops are located approximately 500m (6-minute walk) north of the south-eastern corner of the site. The centre of the site is within a 600-700m walk from the "Cornmore" bus stops.

The "Abbots Grange" bus stops are located approximately 500m (6-minute walk) north of the north-east corner of the site. These bus stops are served by a number of bus routes, offering a choice of destinations to users.

The TA discusses walking distances to bus stops and refers to an article published by the Chartered Institute of Logistics and Transport (CILT), 2015. The CILT research suggests that the current guidance on how far people walk to access public transport is too rigid for the practicalities of bus service operation. The distance people walk has significant impact in transport planning, particularly in urban redevelopment projects and large-scale residential developments, with urban areas having a mean walking distance of approximately 600m and an 85th percentile walking distance of approximately 800m.

The Highway Authority does not accept that the CILT research is relevant to the consideration of the proposed development and that total journey time for public transport (including travel to the bus stop or station) must be competitive to travel by car to the destinations served, in order for bus travel to be considered as a viable and attractive alternative.

Bus Services

The Highway Authority notes that paragraph 5.21 of the TA states that the site will be designed in such a way that if there proves sufficient demand, and the local bus operator diverts buses into the site, a bus will be able to comfortably enter the site, loop around and exit, all in forward gear.

WCC officers are currently in discussions with the bus operator about how best to serve the proposed development by bus, and the adjacent application site to the north, reference 24/00270/FUL. As outlined above, it may be the case that a 'loop' bus service is not considered to be appropriate and that the development proposals should provide for a 'through' service between Defford Road and Holloway.

Given the scale of the proposed development, the Highway Authority considers it reasonable and appropriate to request a financial contribution to provide a bus service, potentially by diverting the existing LMS 566 service into the site. However, to ensure at least an hourly service, this will require there to be two vehicles operating the service instead of the current single service. WCC Highways considers that for a site of the proposed scale, and cumulative proposals in this location, the bus service should operate on a half-hourly basis.

WCC Highways previously requested that new bus stops are provided in the vicinity of the new vehicle access on Defford Road (A4104). It was suggested that the northbound bus stop could be incorporated into the proposed 2.0m footway. The southbound bus stop could be an area of new hardstanding/waiting area and a short length of footway.

The TN outlines that the two regular bus routes, the X50 and the 566, do not pass the Site Access on Defford Road, but instead route via the existing bus stops 'Cornmore' and 'Abbots Grange'. These two regular services are unable to conveniently re-route via the site access, and therefore bus stops at the site access would be poorly served and unattractive.

WCC Highways is in ongoing discussions with service operators to confirm the service route and level of provision required, as well as any associated infrastructure/location of infrastructure to be provided. The required bus service provision and any associated infrastructure costs will be confirmed to the Applicant shortly.

Transport Sustainability

The TA states the application site benefits from being in proximity to a number of services, amenities and facilities that are predominantly located to the north and west of the site. Tables 2.1, 2.2 and 2.3 of the TA provides walking and cycling distances to typical services, amenities, and facilities within Pershore along existing walking and cycling routes.

For Development Area 1, Table 2.1 indicates there is a range of facilities, including Pershore town centre, located within 2km (approximately a 25-minute walk or a 7-minute cycle). The two key destinations more than 2km are Pershore High School and Pershore College.

For Development Area 2, Table 2.2 indicates the majority of the facilities, including Pershore town centre, are located within 2km (approximately a 25-minute walk or a 7-minute cycle). Four of the facilities (excluding the High School and College) are within 2.2km.

For Development Area 3, Table 2.3 shows approximately half of the key services and facilities identified are still within 2km, with ten others (excluding the High School and College) now within 2.2km.

The Highway Authority notes convenience shop goods can be purchased from the petrol filling station on Three Springs Road and this facility is approximately 1.2km from the centre of the site. Whilst WCC Highways accepts that some prospective residents have the option to walk or cycle to surrounding services and facilities, most of the proposed development area requires residents to walk the maximum generally acceptable distance of 2km (rather than the desirable maximum of 800m), with some having to walk further. The location and proximity of the site in relation to key services and facilities within Pershore and the distances for some prospective residents will not be conducive to maximising travel by active modes, and travel by car may be perceived to be more attractive and viable. **WCC Highways therefore considers that improved bus connectivity from the site to Pershore town centre is necessary to maximise access by sustainable transport modes and reduce car dependency.**

Traffic Generation and Distribution

The TA initially considers multi-modal trip generation and uses information derived using the TRICS database to calculate appropriate person trip rates. The TA then considers journey purpose, being (i) work commute, (ii) education and (iii) retail & leisure and forecasts total person trips for the 300 dwellings. The assessment suggests the proposed development would generate 135 two-way vehicle trips in the AM peak hour (equating to a two-way trip rate of 0.45) and 173 two-way vehicle trips in the PM peak hour (equating to a two-way trip rate of 0.58).

In WCC Highways previous response, it was outlined that for the post-covid TRICS trip rate analysis provided within the TA, many of the site surveys selected were for developments containing mixed houses and flats. Flats typically generate fewer person-trips and vehicle trips than houses, and so the Highway Authority requested further information regarding the proposed housing mix of the development. Furthermore, the site surveys selected include populations above 10,000 within a 1mile radius, which is not comparable to the application site. In addition, WCC Highways requested that the site survey with a car ownership ratio of 0.6-1.0 is removed from the selection as this is not comparable to Pershore.

The TN outlines that the TRICS assessment has been revised in accordance with WCC Highways request. However, the TRICS outputs have not been provided in the TN for review. WCC Highways requests that the TRICS assessment outputs are submitted.

The TA also advises that a sensitivity test of the forecast trip generation has been undertaken utilising a nearby donor site. A vehicle trip survey was undertaken at the Desjardins Way development via an automatic traffic count (ATC) placed for one week

during June 2023. The ATC recorded the movements of 150 dwellings and generated a vehicle trip rate per dwelling for the peak hours, using a 5-day average. The donor site survey/Sensitivity Test results in 23 fewer vehicle trips during the AM peak hour and 48 more trips during the PM peak hour than TRICS assessment. However, the Highway Authority noted that the Desjardins Way development is located in closer proximity to Pershore town centre and the convenience shop (petrol station) on Three Springs Road, as well as bus stops, than much of the developable area of the proposed development. The Highway Authority therefore requested confirmation from the Applicant that the proposed density and housing mix of the proposed development is comparable to the Desjardins Way development.

The Highway Authority notes the additional information provided in the TN regarding the Desjardins Way donor site and is satisfied that the surveys provide a robust basis to derive a sensitivity assessment vehicular trip rate for the development proposals. However, WCC Highways maintains that Desjardins Way is located within closer proximity to Pershore town centre and key facilities and services than the proposed development site, making active travel a more viable and attractive mode choice.

Highway Impact and Capacity Assessment

Traffic counts on Defford Road (A4104) were undertaken between Tuesday 31 January 2023 and Monday 6 February 2023. Further junction turning counts at the four town centre junctions to be assessed were undertaken on Tuesday 31 January 2023, to establish AM and PM peak hour periods. The junctions assessed are as follows:

- Priority Junction: B4536/ A4104 Defford Road/ Three Springs Road;
- Roundabout: Three Springs Road/ Conningsby Drive/ Petrol Filling Station; and
- Priority Junction: A4104 Three Springs Road/ B4084 Worcester Road; and
- Signalised Junction: A4104/ High Street.

In the Highway Authority's previous response it was noted the traffic surveys were undertaken in January and February 2023. These are not neutral months, which are recommended for surveys, as set out in TAG Unit M1.2, which suggests March to November (excluding August) as more appropriate. January and February traffic flows are likely to be lower than during neutral months and will, therefore, underestimate the volumes of traffic that generally flows through the four junctions and along Defford Road (A4104) at the proposed site access. The Applicant was requested to provide traffic surveys undertaken during neutral months or demonstrate to the Highway Authority that the surveys provided are generally comparable to typical traffic flows at the four identified junctions.

The TN provides that the surveys were undertaken during weekdays and did not fall within a public or school holiday. Nevertheless, WCC Highways notes that the surveys do not meet the guidance set out within TAG Unit M1.2. The TN also suggests that the surveys demonstrate that traffic flows are comparable to those derived from traffic surveys for planning application W/19/01718/FUL Land to the West of Station Road. However, the Highway Authority notes that surveys for Land to West of Station Road are 5 years old (4 years when compared to the 2023 surveys supporting the application) and pre-Covid 19. **As such, the Highway Authority maintains its request that the Applicant provide**

traffic surveys undertaken during neutral months or demonstrate that the surveys provided are comparable to current, typical traffic flows at the four identified junctions.

Junction capacity assessments have been provided in the TN for the following locations:

- Site Access/Defford Road
- Priority Junction: A4104 Three Springs Road/Defford Road;
- Roundabout: A4104 Three Springs Road/ Conningsby Drive/ Petrol Filling Station; and
- Priority Junction and signal controlled junction: A4104 Three Springs Road/ Worcester Road and High Street/Station Road (Paramics microsimulation model).

The model calibration at the junctions where queue survey data has been collected compares the average modelled queue against the observed queue collected during 5-minute intervals. The calibration and validation has been undertaken only for the AM peak hour, the PM peak hour must also be undertaken and provided to WCC Highways.

Site Access/ Defford Road

WCC Highways is satisfied that the model provides a suitable basis for development impact testing. For the forecast year 'with development' scenario, the model results show the junction operates within capacity. The conclusion of the modelling is not anticipated to change should the spine road connect to the Holloway Phase 2 proposals.

A4104 Three Springs Road/ Defford Road

WCC Highways is satisfied that the model provides a suitable basis for development impact testing, subject to confirming the PM peak hour model is appropriately calibrated and validated. However, the PM peak hour flows input into the forecast year models does not appear to match those in the TA. As a result, the outputs suggest that the 2030 'with development' scenario generates lower queues and delays than the 2030 'without development' scenario. **WCC Highways requests that the PM peak hour forecast year models are revised accordingly.**

A4104 Three Springs Road/ Petrol Filling Station

WCC Highways is satisfied that the model provides a suitable basis for development impact testing, subject to confirming the PM peak hour model is appropriately calibrated and validated. The modelling results suggest that for the forecast year 'with development' scenario, the junction operates within capacity.

A4104 Three Springs Road/ Worcester Road and High Street/Station Road (Paramics microsimulation model).

The model network is relatively sparse and does not enable the full assignment of trips from the proposed development, or reassignment effects to be understood. In particular, traffic reassigning to other local routes to avoid delays on the A4104 Three Springs Road (extending from the junction with Worcester Road) in future years will not be captured by

the model. Any delays on the A4104 Three Springs Road side arms will also not be captured. **The Applicant is requested to confirm the approach for the full assignment of development traffic and for identifying any reassignment effects as a result of the proposals.**

The model calibrates adequately to volumetric data. However, WCC Highways is concerned that there are some significant differences between modelled and observed journey times, particularly on the A4104 Three Springs Road. Typically, a 15% criteria would be used for a model of this size as the 60 second criteria is redundant given the short journey time routes. It is noted that the journey times on the A4104 Three Springs Road are around 30% too fast in both directions. As this difference is in both directions it could be that the model is overestimating link speeds rather than junction delay. This overestimation of link speeds could be important where route choice is available.

During the 2030 AM peak hour reference case model, it is noted that a significant queue forms on the A4104 Three Springs Road. This indicates a potential that drivers could reassign to avoid delays, which may be exacerbated with development traffic in place. The coverage of the model means that it will not be able to assess development impact on the surrounding network that may occur due to the congestion on Three Springs Road.

WCC Highways requests that the Applicant demonstrates that the overestimation of link speeds on the A4104 Three Springs Road is unlikely to change the overall conclusions of the modelling exercise.

WCC Highways notes that the signal timings in the model have been calibrated to base survey data. The signal timings should not be changed in future years without an appropriate justification.

Street Lighting

There is no confirmation that street lighting is to be provided, either at the new site access with Defford Road or within the site. **The Highway Authority requests confirmation that the RSA1 team were informed that it is not currently proposed to light the site access junction. In addition, WCC Highways reiterates the comments made in its previous formal response and requests confirmation from the Applicant as to the intended streetlighting proposals:**

- Street lighting is limited in the area, assets are mainly Parish Council, which means the lighting is not to standard, not adopted and not suitable for major highways developments including new conflict areas and zebra crossings;
- Compliance of existing lighting with LTN1/20 is unknown but it is best to assume it is non-compliant until proven otherwise;
- There are records of completely light-averse bat species – lesser horseshoe bats – in the woods. Please note, there is no proven mitigation to reduce impact on this species;
- The bat surveys have only covered the internal of the development and not the external elements. The Highway Authority will need to understand if the changes will be lawful;

- Full bat surveys of everywhere lighting will interact are required to confirm the project is lawful;
- Please note the gaps provided by the Parish lighting will enable protected species to move about mostly unhindered due to provision of dark corridors;
- Because of the gaps – dark corridors - this means typically all lighting will need upgrading, extending or enhancing to be to standard and suitable for development;
- As the lighting will be required to be to standard, this will create a uniform lit barrier which will restrict or stop existing bat movement across the site, not just between the woods and the river Avon;
- Any additional lighting will likely impact on any bats roosting within trees or properties (all buildings not just listed buildings) adjacent to the A4104, i.e., The Spinney and the cemetery so other areas must not be forgotten as roosts will be used to enable commuting to the woods and river;
- The proposed Zebra crossing is adjacent to the cemetery and it is likely bats are roosting in the area so the developer will need to confirm they are not roosting before this is conditioned as part of the development;
- Pedestrian crossings continue to be a challenge because of bats but also due to the significant increase in lighting levels and complaints from local residents; and
- Application of LTN120 from an urbanised point of view could lock bats into certain properties – properties adjacent to any cycle paths should be surveyed to ensure bats are not roosting and lighting is viable.

The site access and internal development will need a full strategic lighting proposal. A lighting report will need to be submitted, which must comply with the WCC Street Lighting Design Guide. The lighting report must be discussed with the WCC Ecology Officer.

To protect ecology, residential amenity, minimise energy consumption and maintenance cost, all applications should commence with the assumption that all works are to remain unilluminated. Applicants shall complete a Street Lighting Feasibility Assessment prior to commencing any form of discussion with WCC Street Lighting Officers to justify the use of adoptable Street Lighting within their proposals.

Failure to provide a Street Lighting Feasibility Assessment or to engage with WCC Street Lighting during the planning application process will lead to WCC to consider the development as unsuitable for the use of adoptable street lighting, which may prejudice the future adoption of the internal street network.

Highway Adoption/ S38 Agreement

The TA states that the main routes through the site, as well as all active travel routes adjacent to the highway, will be offered for adoption. This does not include footways divorced from the carriageway nor shared surface/ cul-de-sac/ courtyard arrangements. For any internal streets intended to be offered for adoption, the layout/ arrangement will need to conform to WCC SDG standards and the Applicant will be required to enter into a S38 Agreement with the Highway Authority. Appropriate drawings and details will need to be submitted and a suitable layout agreed.

S278 Agreement

As the proposals involve modifications to the existing public highway, there will be a requirement for the Applicant to enter into a S278 Agreement with WCC. The Agreement will require a detailed design of the proposed improvements to be submitted to and approved by the Highway Authority with all associated costs paid by the Applicant.

WCC Highways considers that contributions towards the proposed Farleigh Road dropped kerb pedestrian crossings and the requested wayfinding signage should be secured via S106 agreement.

Travel Plan

The TN provides an Interim Travel Plan at Appendix H. A Full Travel Plan will be secured by condition should consent be granted, to be submitted to and approved in writing by the LPA, subject to consultation with WCC Highways.

Targets

Section 6 the Travel Plan outlines the targets, indicating that travel surveys will be undertaken within three months of meaningful occupation to determine the baseline modal split. The targets will then be quantified and agreed with WCC in line with the results of these surveys. It is envisaged that this target would be focussed on a reduction in single occupancy vehicle use.

Whilst this approach is acknowledged, initially it is recommended that the modal split should be estimated using Census 2011 Journey to work data and targets should be set accordingly with adjustments made once baseline modal split from the travel survey is available. Targets should be aligned with WCC travel plan guidance, which quotes DfT guidance stating a reduction in commuter car usage between 11% and 21%. The travel plan must include a target for reducing single occupancy car use over 5 years, aiming to match this figure. WCC Highways expect the first-year monitoring report to include a table presenting baseline modal split numbers, with survey results submitted to the Travel Plan Officer at WCC within two months of the survey.

Travel Plan Measures and Initiatives

Section 8 of the Travel Plan outlines measures aimed at promoting and encouraging residents to travel via sustainable modes of travel, including walking and cycling, public transport, and car sharing. Whilst these are welcomed by WCC Highways, the Highway Authority expects to see further measures to encourage residents to travel by sustainable travel options and reduce car dependency. For example, offering residents taster tickets for bus / rail services or providing bike service vouchers and maintenance workshops. It should also be ensured that these initiatives are in line with the targets.

Finance Plan

WCC guidance states that a budget should be included which covers the costs of implementing the travel plan and should include the cost of employing the Travel Plan Coordinator, cost of implementing the measures, marketing and cost of monitoring the travel plan. This budget should cover the time from first occupation of the development on a year-

by-year basis until five years after full occupation. This information should be included in the Travel Plan.

The Applicant will also need to prepare Welcome Packs for each dwelling, which should be consistent with guidance set out in the WCC Guidelines for Travel Welcome Pack document. A draft must be sent to travelplans@worcestershire.gov.uk for approval before first occupation and can be secured by suitable conditions if planning consent were subsequently granted.

Construction Traffic Management

No details have been provided in respect of the construction stages of the development. A Construction Traffic Management Plan, setting out the proposed hours of operation, vehicle routing, access proposals and site details, will be required by condition attached to any planning consent that may be granted.

Conclusion

The Highway Authority has undertaken a robust assessment of the planning application. Based on the analysis of the information submitted, and recommends **DEFERRAL** until further information has been submitted by the Applicant to address the following matters:

- **The Applicant is required to confirm that the main spine road would be constructed to the northern boundary of the site, as it meets the southern site boundary for Holloway Phase 2.**
- **The Highway Authority requires the gradient of the full length of the spine road as it routes through the site to be confirmed, if it is intended for the spine road to be adopted. This is so that the Highway Authority can be given reasonable confidence that the site access road/spine road will be safe and suitable for all users.**
- **The Highway Authority requests that swept path analysis is provided for the following vehicles:**
 - 11.3m length (with tailgate raised) refuse vehicle;
 - Appropriate bus vehicle (dimensions tbc);
 - Pantechicon (large furniture removals wagon); and
 - 8.7m length Hereford and Worcester standard fire appliance.
- **WCC Highways notes that within the RSA1 Designer's Response, the Design Team have erroneously completed the column for the Overseeing Organisation. This should be corrected and an editable version of the Designer's Response issued to the Highway Authority for completion.**
- **WCC Highways also request confirmation as to whether the RSA team considered the requirement to light any new highway features, including the site access.**
- **The Highway Authority requires that the Zebra Crossing immediately north of Defford Road is included within the RSA1, should it be proposed as part of the planning application.**
- **WCC Highways requests that the Applicant confirms whether any discussions to connect to, or integrate with, the vehicular and active travel provision within**

Holloway Phase 2 have taken place with the Applicant for application reference 24/00270/FUL.

- WCC Highways requests confirmation from the Applicant as to whether a Zebra crossing immediately north of A4104 Three Springs Road/Defford Road junction is included with the Applicant's development proposals to support safe and suitable access for all users and to facilitate a genuine choice of sustainable travel modes.
- WCC Highways is in ongoing discussions with service operators to confirm the service route and level of provision required, as well as any associated infrastructure/location of infrastructure to be provided. The required bus service provision and any associated infrastructure costs will be confirmed to the Applicant shortly.
- WCC Highways considers that improved bus connectivity from the site to Pershore town centre is necessary to maximise access by sustainable transport modes and reduce car dependency.
- The TN outlines that the TRICS assessment has been revised in accordance with WCC Highways request. However, the TRICS outputs have not been provided in the TN for review. WCC Highways requests that the TRICS assessment outputs are submitted.
- The Highway Authority maintains its request that the Applicant provide traffic surveys undertaken during neutral months or demonstrate that the surveys provided are comparable to current, typical traffic flows at the four identified junctions.
- The standalone junction model calibration at the junctions where queue survey data has been collected compares the average modelled queue against the observed queue collected during 5-minute intervals. The calibration and validation has been undertaken only for the AM peak hour, the PM peak hour must also be undertaken and provided to WCC Highways.
- A4104 Three Springs Road/ Defford Road: WCC Highways is satisfied that the model provides a suitable basis for development impact testing, subject to confirming the PM peak hour model is appropriately calibrated and validated. However, the PM peak hour flows input into the forecast year models does not appear to match those in the TA. As a result, the outputs suggest that the 2030 'with development' scenario generates lower queues and delays than the 2030 'without development' scenario. WCC Highways requests that the PM peak hour forecast year models are revised accordingly.
- In relation to the A4104 Three Springs Road/Worcester Road and High Street/Station Road Paramics model, the Applicant is requested to confirm the approach for the full assignment of development traffic and for identifying any reassignment effects as a result of the proposals.
- WCC Highways requests that the Applicant demonstrates that the overestimation of link speeds within the Paramics model on the A4104 Three Springs Road is unlikely to change the overall conclusions of the modelling exercise.
- The Highway Authority requests confirmation that the RSA1 team were informed that it is not currently proposed to light the site access junction. In

addition, WCC Highways reiterates the comments made in its previous formal response and requests confirmation from the Applicant as to the intended streetlighting proposals.

- **The site access and internal development will need a full strategic lighting proposal. A lighting report will need to be submitted, which must comply with the WCC Street Lighting Design Guide. The lighting report must be discussed with the WCC Ecology Officer.**

Yours sincerely

Karen Hanchett

Transport Planning and Development Management Team Leader