Transport Assessment

Proposed Residential Development - Phase 2
Land North of Dukes Meadow Drive
Banbury

Revision C: October 2023

Report Reference: 802-TA-01-C

Martin Andrews Consulting Limited | Regents Pavilion, 4 Summerhouse Road, Northampton, NN3 6BJ
T: 01604 340544 | E: info@mac-ltd.co.uk | W: preplanningengineering.co.uk

Report Originator(s)
Martin Andrews MEng (Hons) CEng MICE MCIHT
Director
martin.andrews@mac-ltd.co.uk

Revision Record

Revision	Date	Description	Written	Approved
0	25/07/22	Planning Issue – Draft	MJA	MJA
A	20/09/22	Planning Issue	MJA	MJA
B	26/09/22	Updated layout	MJA	MJA
C	19/10/23	Updated layout	MJA	MJA
C	30/10/23	Corrected dwelling numbers – Draft	MJA	MJA

Contents

Appendices

1.0 Introduction

1.1 Instructions

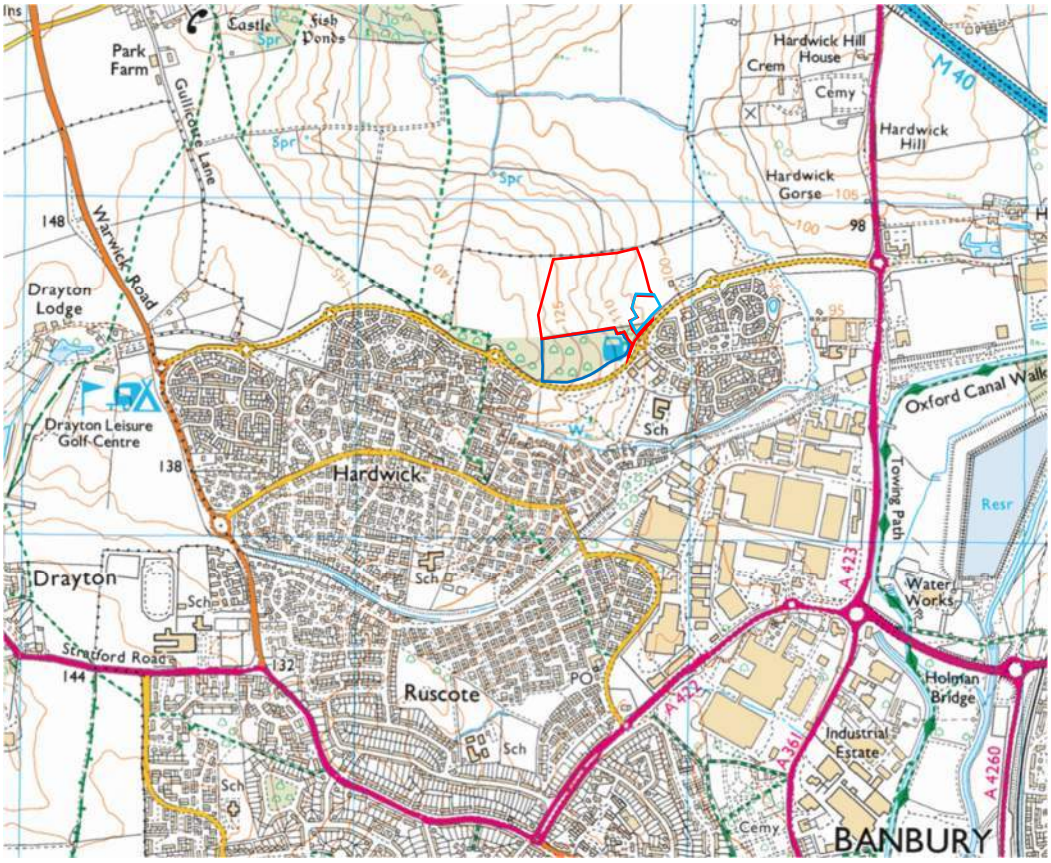
1.1.1 MAC have been commissioned by Manor Oak Homes to provide a Transport Assessment to accompany an Outline planning application for a residential development on land north of Dukes Meadow Drive, Banbury, Oxfordshire.

1.1.2 The benefit of this report is to our instructing Client.

1.2 Site Location

1.2.1 The proposed residential development is located at land north of Dukes Meadow Drive, Banbury, as shown in **Inset 1.1** below and enclosed in **Appendix A**. The approximate National Grid Reference for the site is E444729, N242728.

Inset 1.1: Site Location Plan



1.2.2 The application site covers an area of approximately 8.78 hectares and is located to the north of Banbury Town Centre.

1.3 Current Use and Description

1.3.1 The site currently comprises undeveloped greenfield land. There has been no previous development on the site.

1.3.2 The existing site is shown on the topographical survey enclosed in **Appendix B**.

1.4 Proposed Development

1.4.1 The proposed development will comprise 117 dwellings. The proposed development layout is shown on the plan enclosed in **Appendix C**.

1.4.2 The adjacent land comprising Phase 1 was granted Outline planning permission in April 2022 for up to 78 dwellings and associated open space with all matters reserved other than access, Cherwell District Council planning application reference 21/03426/OUT.

1.4.3 Access to the Phase 1 site was approved from with the creation of a fourth arm off the existing Dukes Meadow Drive/Lapsley Drive roundabout. The Phase 2 site will also be accessed from this point via a slightly altered and upgraded access. The site access arrangement for the Phase 1 site is provided within **Appendix H**.

1.5 Consultations

1.5.1 A Transport Assessment Scoping Note (Ref 802-TAS-01-0) was prepared and submitted to Oxfordshire County Council (OCC) as the Local Highway Authority. The Scoping Note agreed key elements such as scope of junction assessment and trip rates. A copy of the Scoping Note and OCC response are enclosed in **Appendix J**.

1.6 Summary

1.6.1 This TA has been prepared in accordance with OCC Highway Design Guide and its Guidance on Transport Assessments and Statements. This Transport Assessment has been structured as follows:

Section 2 describes the existing conditions including the surrounding highway network, the available facilities for public transport, cyclists and pedestrians and the range of local facilities and amenities. Local highway safety is considered through a review of personal injury collision records.

Section 3 presents the proposals of the development, including the site access arrangements, layout, and parking provision for vehicles and cycles.

1.6.2 **Section 4** presents the trip generation likely to be associated with the proposed development.

1.6.3 **Section 5** summarises the highway impact of the proposed development on the local network and **Section 6** provides a summary and conclusion to this Transport Statement

2.0 Existing Conditions – Site Information

2.1 Site Location

2.1.1 The proposed residential development is located at land north of Dukes Meadow Drive, Banbury, as shown in **Inset 1.1** and enclosed in **Appendix A**.

2.2 Permitted Use

2.2.1 The site is currently an undeveloped greenfield site with no previous development.

2.3 Neighbouring Land Uses

2.3.1 The neighbouring land uses are agricultural land to the west and to the north. To the east, the site is adjacent to a sports facility. To the south is the Phase 1 site beyond which is Dukes Meadow Drive and residential development.

2.3.2 We are not aware of any planned changes to the neighbouring land uses other than the Phase 1 development which has been mentioned above.

2.4 Existing Access Arrangements

2.4.1 There is an existing gated field access to the site off Dukes Meadow Drive / Lapsley Drive Roundabout. As noted in **paragraph 1.4.3** a new access is to be constructed to support the Phase 1 development.

3.0 Existing Conditions – Baseline Transport Data

3.1 Walking and Cycling

3.1.1 Dukes Meadow Drive provides a 3m shared footway / cycleway to the southern / eastern side of the carriageway. This links with other off-road pedestrian / cycle routes through Duke Meadow's Park to the south of the site, as such provides excellent active travel connections to Banbury town centre, the railway station and employment areas.

3.1.2 A Public Right of Way (PRoW) is located beyond the western boundary of the site. PRoW No. 120/107/20 connects the village of Hanwell to the north and Banbury town centre to the south. An extract of the PRoW within the vicinity of the site is enclosed in **Appendix C**.

3.1.3 Walking and cycling distances to key local facilities is set out in the plan enclosed in **Appendix D**. The plan also shows the proximity of the site to key facilities including: schools, health services, shops etc. The suitability of the walking distance shown on the drawing is based on the guidance described in full below. Cycle journeys are generally considered acceptable if the distance is less than 5km.

3.1.4 In 2000 the Institution of Highways and Transportation published the document 'Providing for Journeys on Foot'. This document states that:

"80% of walk journeys and walk stages in urban areas are less than one mile. The average length of a walk journey is one kilometre (0.6 miles). This differs little by age or sex and has remained constant since 1975/76."

It goes on to define an average walking speed thus:

"An average walking speed of approximately 1.4 m/s can be assumed, which equates to approximately 400m in five minutes or three miles per hour."

3.1.5 Within the document:

"Table 3.2 contains suggested acceptable walking distances, for pedestrians without a mobility impairment for some common facilities. These may be used for planning and evaluation purposes."

Table 3.2 is replicated below as **Table 3.1**. Predicted journey times have been added to distances based on the 1.4m/s walking pace.

Table 3.1: Suggested Walking Distances - IHT 'Providing for Journeys on Foot'

	Town Centres		Commuting / School / Sight-seeing		Elsewhere	
	Distance	Time	Distance	Time	Distance	Time
Desirable	200m	2m 23s	500m	5m 57s	400m	4m 46s
Acceptable	400m	4m 46s	1000m	11m 54s	800m	9m 32s
Preferred Maximum	800m	9m 32s	2000m	23m 48s	1200m	14m 17s

3.2 Local Facilities & Amenities

3.2.1 Having regard to the above review of sustainable transport options, consideration has been given to the proximity of the site to the key local services including education, employment, retail and health facilities. The accessibility plan provided within **Appendix D** shows the site is located with respect to a range of facilities and services that can be accessed by walking and cycling in accordance with the principles of the NPPF.

3.2.2 A summary of the distances and journey times to the local amenities is provided in **Table 3.2**.

Table 3.2: Distance and Journey Times to Local Facilities & Amenities

Destination	Distance (m)	Journey Time (minutes)	
		Walk	Cycle
Co-op Convenience Store	190	2	1
Hanwell Arms PH	220	3	1
Hanwell Fields Community Centre	250	3	1
Hanwell Fields Community School	310	4	1
Hanwell Fields Sports & Recreation Ground	400	5	2
Penhill Industrial Park	530	6	2
St Francis Church	540	6	2
Cherwell Business Village	820	10	3
Hardwick Primary School	830	10	3
Banbury Cross Retail Park	880	10	4
Tesco Extra	990	12	4
Noral Way Industrial Estate	1050	13	4
Cherry Fields Primary School	1150	14	5
Sainsburys Local	1450	17	6
Banbury Athletics Club	1550	18	6
North Oxfordshire Academy	1550	18	6
Woodgreen Leisure Centre	2050	24	9
Castle Quay Shopping Centre	2150	26	9
Banbury and Bicester College	2250	27	9
Banbury Rail Station	2550	30	11
Banbury United Football Club	2950	35	12

Note: Assumes average walking speed of 1.4m/s and average cycling speed of 4m/s

3.2.3 It is evident from **Table 3.2** that there is a range of local amenities within acceptable walking and cycling distances. These distances have been taken from the access into the Phase 2 development site.

3.3 Public Transport

Bus

3.3.1 The nearest bus stops are located on Highlands to the south of the site. These bus stops are located approximately 790m from the proposed site's western pedestrian / cyclist access. The bus stops are served by the B9 bus route which provides bus services between 0626 and 2321 operating every 15-30 minutes Monday to Saturday.

3.3.2 The Canal bridge bus stop is located on the A423 Southam Road, approximately 10 mins (900m) via walking from the proposed P2 boundary. The bus stop is served by the B3 bus route which provides bus services between 0601 and 1855 operating every 30 minutes Monday to Saturday.

3.3.3 The bus stops serve the routes described in **Table 3.3** below. The local bus route and timetable information is provided within **Appendix E.**

Table 3.3: Bus Services and Frequencies

Route No.	Route	Typical Frequency		
		Mon – Fri	Sat	Sun
B9 (SC)	Banbury & Hardwick Every other journey extends to Gateway Retail Park	Approx 0540-2340 Broadly every 15mins	Approx 060-2330 Broadly every 15mins	Approx 0830-1800 2 per hour
B9 (SC)	Hardwick & Banbury Every other journey extends to Gateway Retail Park	Approx 0550-2335 Broadly every 15mins	Approx 0640-2330 Broadly every 15mins	Approx 0810-1900 2 per hour
B4 (SC)	Banbury Town Centre - Banbury Town Centre	Approx 0600-1900 2 per hour	Approx 0640-1900 2 per hour	No service

SC – Stagecoach

3.3.4 The proposed development has good access to frequent bus services and is therefore located in a sustainable location.

Rail

3.3.5 The Banbury railway station is located 3.5km from the site and can be reached in approximately 11 minutes (3.5km) by cycling or 7 minutes (3.8km) via car.

3.3.6 The railway station can also be reached by the ~~B3 or~~ B9 bus service, as part of a multi modal journey. To use the B3 bus service, this would involve walking approximately 10 minutes (900m) from the proposed site access to the canal bridge bus stop on the A423 Southam Road (S). Proceed to take the southbound bus service to Banbury for approximately 13 minutes (9 stops) until Bridge Street bus stop and continue the rest of the journey by foot for approx. 5 minutes (400m) till Banbury train station.

3.3.7 Alternatively, the B9 bus service would involve walking approximately 13 minutes (1km) from the proposed site access to the High Furlong bus stop on Longelandes Way. Proceed to take the southbound bus service towards Banbury town centre for approximately 9 minutes (8 stops) until George Street bus stop and continue the rest of the journey by foot for approx. 8 minutes (650m) till Banbury train station. The total duration of the journey is expected to take approximately 25-30mins.

3.3.8 The station is located on the Chiltern Main Line and provides three trains per hour to London Marylebone and two trains per hour to Birmingham Moor Street. Local stops include Leamington Spa, Kings Sutton and Oxford.

3.4 Highway network

3.4.1 The proposed development is accessed off Dukes Meadow Drive with the characteristics as set out in **Table 3.4** below. Dukes Meadow Drive is a link road running in an east-west alignment along the northern side of Banbury, between the roundabout with Warwick Road and the roundabout with the A423 Southam Road. Dukes Meadow Drive is subject to a 30mph speed limit and provides a carriageway width of approximately 6.75m. There are five roundabouts along Dukes Meadow Drive providing access to existing residential estates.

3.4.2 Street lighting is provided along Dukes Meadow Drive and a shared use pedestrian-cycleway is provided along the southern side of the carriageway, separated by a grass verge. Informal and controlled crossing points are provided across Dukes Meadow Drive along its length.

3.4.3 The proximity of Dukes Meadow Drive in relation to the wider highway network can be seen on the plan enclosed within **Appendix D**.

Table 3.4: Dukes Meadow Drive characteristics

Characteristic	Value
Road classification	Link Road
Carriageway Width	6.75m
Footways:	3m
Cycleways	3m
Speed limit	30mph
Other features	Street lit

3.5 Traffic Data

3.5.1 In order to consider the current traffic conditions on the local highway network, traffic data has been collected at the following junctions:

- Dukes Meadow Drive / Lapsley Drive roundabout junction
- Dukes Meadow Drive / Noral Way / A423 Southam Road roundabout
- Dukes Meadow Drive / B4100 Warwick Road / Walker Road
- A423 Southam Road / Hennef Way / A361 Southam Road / Ruscote Avenue

3.5.2 The surveys was undertaken on Tuesday 14th June 2022 between 0700-1000 and 1600-1900 and comprised of classified turning count at the junction. The survey data is provided within **Appendix F**.

3.5.3 The junction data was supplemented by a queue length survey.

3.6 Collision Data

3.6.1 The most recent Personal Injury Collision data has been obtained from the Local Highway Authority. The data covers the 5-year period from the 1st January 2016 to 31st May 2021.

3.6.2 Over the 5-year period there have been zero reported collisions along Dukes Meadow drive within the proximity of the site. A copy of the collision report and a plot from the Local Highway Authority is enclosed in **Appendix G.**

3.6.3 From the reported accident data there does not appear to be a significant accident problem on the surrounding highway infrastructure. As such, we do not consider the proposed development will result in conditions detrimental to highway safety.

3.7 Summary

3.7.1 The proposed development is shown to be well served for pedestrian, cyclist and public transport infrastructure.

3.7.2 The footway provision between the development and the local facilities is currently limited to allow pedestrians of the development to access the local facilities.

3.7.3 The site is shown to be served by frequent bus services to key destinations.

3.7.4 A review of the collision data shows that there is not an accident problem on the local highway network within the vicinity of the proposed development site.

4.0 Proposed Development

4.1 Type and Scale

4.1.1 The proposed development comprises up to 117 residential dwellings. A plan showing the proposed development is enclosed in **Appendix C**.

4.2 Access – all modes

4.2.1 The proposed development will be accessed via an upgraded Phase 1 access to realign the access to ensure that it principally serves the Phase 2 site with the Phase 1 site being accessed off a simple priority junction. The new access is shown in **Appendix H** with the Phase 2 access with an overlay of the Phase 1 access shown in **Appendix I**.

4.2.2 The new roundabout arm will have a carriageway width of 5.5m. Either side of the access road leading into the site a 3m wide shared footway / cycle will be provided. To connect these to the existing footway / cycleway provision on the southern / eastern side of Dukes Meadow Drive, two new uncontrolled crossings will be provided.

4.2.3 Within the site the 5.5m wide development road will be bound by two 2m wide footways.

4.2.4 Towards the western extent of the site additional uncontrolled pedestrian crossing points will be provided across Dukes Meadow Drive as part of the Phase 1 development.

4.2.5 The proposed access arrangement and footpath connections to the site have been reviewed and agreed in-principle with the Local Highway Authority as of the Phase 1 approval.

4.2.6 An emergency access is to be incorporated off Dukes Meadow Drive to the south of the site. This is shown illustratively on the plan enclosed in **Appendix Q**.

4.3 Parking

4.3.1 Parking within the development will be provided in line with current Oxfordshire County Council's Residential Road Design Guide for new development for urban areas in Cherwell as referenced in the Supplementary Planning Document, Cherwell Residential Design Guide, adopted in July 2018.

4.3.2 Cycle parking will be provided at a level of at least one space per one bed dwellings and at least two spaces per dwelling of two or more bedrooms.

4.3.3 Consideration will also be given to the provision of electric charging points for vehicles. Car and cycle parking provision will be confirmed as part of a Reserved Matters Application.

4.4 Sustainable Travel Strategy

4.4.1 In order to promote sustainable travel each household will be provided with a Travel Welcome Pack. The pack will contain a high-quality map of the area, showing cycle, walking and public transport routes, and up-to-date timetables for local bus and connecting train services. The key role of the Travel Welcome Pack will be to raise awareness of sustainable initiatives. A Travel Plan Statement has been prepared and accompanies this Transport Assessment.

4.5 Trip Generation

4.5.1 Person trip rates have been obtained from the TRICS 7.8.2 database. The person trip selection criteria is set out in **Table 4.1** below. The trip rates outlined below were adopted within the approved Transport Statement for Phase 1 that accompanied the planning application reference 21/03426/OUT and approved for reuse in the Scoping Note for Phase 2. The full TRICS data is enclosed in **Appendix K**:

Table 4.1: TRICS Parameters

Parameter	Selection
Version	7.8.2
Main land use	03-Residential
Sub land use	A – Houses Privately Owned
Regions	All of England except Greater London
Locations	Suburban Area, Edge of Town, Neighbourhood Centre

4.5.2 From the TRICS database the predicted person trip rates are set out in **Table 4.2** below.

Table 4.2: Person Trip Rates

Use	Morning Peak (0800-0900)			Afternoon Peak (1700-1800)		
	Arr	Dep	Total	Arr	Dep	Total
Residential	0.195	0.746	0.941	0.597	0.251	0.848

4.5.3 Using the above person trip rates from the TRICS database it is possible to calculate the number of person trips generated by the proposed development. The below calculations are based on the quantum of development specified in **Section 4.1**.

4.5.4 To understand the number of trips generated by the development by mode we need to establish the likely modal split for a development in this location. The 2011 Census includes the 'Method of Travel to Work' (MTW) dataset which defines mode choice for all local authority wards. MTW data has been extracted from the 2011 Census for the Cherwell 002 ward which includes the development site. The 'Method of Travel to Work' data is summarised in **Table 4.3** below.

Table 4.3: Method of Travel to Work - 2011 Census – Cherwell 002 Super Output Area (SOA) Middle Layer

Mode	Number	Proportion
Train	98	2%
Bus	171	4%
Taxi	28	1%
Motorcycle	23	0%
Driving	3,376	72%
Passenger	287	6%
Bicycle	140	3%
On foot	522	11%
Other	24	1%

4.5.5 Using the above mode splits in **Table 4.3** above, it is possible to calculate the predicted number of trips generated by each mode. The proposed trips by mode is shown in **Table 4.4** below.

Table 4.4: Trip Numbers by Mode – 117 Dwellings

Mode	Morning Peak (0800-0900)			Afternoon Peak (1700-1800)		
	Arr	Dep	Total	Arr	Dep	Total
Train	0	2	2	1	1	2
Bus	1	3	4	3	1	4
Taxi	0	1	1	1	0	1
Motorcycle	0	0	0	0	0	0
Driving	16	63	79	50	21	71
Passenger	1	5	7	4	2	6
Bicycle	1	3	3	2	1	3
On foot	3	10	12	8	3	11
Other	0	1	1	1	0	1
Total	23	87	110	70	29	99

4.5.6 The proposed development is predicted to generate 79 vehicle trips in the morning peak and 71 vehicle trips in the evening peak.

4.5.7 The number of vehicle trips generated by more sustainable forms of transport is considered to be acceptable considering the existing sustainable transport infrastructure.

4.6 Distribution

4.6.1 Vehicle trips have been assigned onto the highway network onto the highway network using observed turning proportions. At the access the vehicles have been signed as per the movements out of Lapsley Drive which has similar characteristics after which vehicles have been assigned as per the existing movements on the highway network. The proposed distribution is shown within **Appendix L**:

5.0 Junction Impact Assessments

5.1 Introduction

5.1.1 This section presents a junction impact assessment for the development proposal based on existing traffic survey data in the locality of the site.

5.1.2 This capacity assessment was undertaken for a much larger development, circa 176 dwellings rather than the current 117 dwelling as such it represents a conservative and worst case scenario.

5.1.3 The assessments have been undertaken using TRL Junctions 9 ARCADY for roundabout junctions. The junction geometry parameters used are shown within **Appendix M**:

5.1.4 A junction is considered to be operating within capacity if the RFC (Ratio of Flow to Capacity) value is less than or equal to 0.85. An RFC value of 1.0 represents absolute capacity, however, a lower value of 0.85 is used to reflect the practical capacity of the junction.

5.2 Assessment Year

5.2.1 The outline planning application is to be submitted in 2022. It is anticipated the site can deliver the proposed number of dwellings within 5 years. Therefore, junction capacity analysis will be undertaken for an assessment opening year of 2027 when the development is expected to be fully occupied.

5.2.2 To growth traffic counts to the future assessment years TEMpro growth factors will be applied utilising the following inputs:

- TEMpro – v7.2b
- Area – Cherwell 002
- NTM AF15 – All

5.2.3 The traffic growth factors proposed are set out in **Table 5.1**.

Table 5.1: Local Traffic Growth Factors – Cherwell 002

Period	2022-2027
AM Peak	1.0675
PM Peak	1.0720

5.3 Committed Development

5.3.1 The Phase 1 land adjacent to the site was granted outline planning permission; Cherwell District Council planning application reference 21/03426/OUT and will be considered as committed development within the Transport Assessment.

5.4 Background Traffic

5.4.1 Background traffic counts were undertaken on the 14th June 2022 between 0700-1000 and 1600-1900 at the proposed assessment locations listed below and shown within **Appendix F** with the traffic count data:

- A1 – Access Dukes Meadow Drive / Lapsley Drive
- J1 – A423/Dukes Meadow Drive
- J2 – Dukes Meadow Dr/ B4100 Warwick Road/Walker Rd
- J3 – A423/Hennef Way/A361 /Ruscote Avenue

5.5 Junction Assessment Locations

5.5.1 Assessment of vehicular impact will be undertaken at the locations listed below during the morning and afternoon periods of 0800-0900 and 1700-1800.

- A1 – Access Dukes Meadow Drive/Lapsley Drive
- J1 – A423/Dukes Meadow Drive
- J2 – Dukes Meadow Dr/ B4100 Warwick Road/Walker Rd

5.5.2 These junctions are shown to have an increase of at 5% on any arm as defined by OCC.

5.5.3 We have undertaken an assessment of the number of trips expected to be generated at the Southam Road / Hennef Way / Ruscote Avenue junction (J3) and found that the number of arrivals and departures arriving at the Southam Road arm of this junction is less than 5%.

5.6 A1: Access / Dukes Meadow Drive / Lapsley Drive

5.6.1 This junction is an existing three arm roundabout junction and will comprise a new fourth access arm to the development site. The arms are labelled thus:

Arm A – Dukes Meadow Drive (N)
Arm B – Lapsley Drive
Arm C – Dukes Meadow Drive (S)
Arm D – Proposed Site Access

5.6.2 The full junction input data and results can be found in **Appendix N**. The results of the assessment are summarised below.

Table 5.2: A1 Access / Dukes Meadow Drive / Lapsley Drive–AM Peak 0800-0900

	2027 Background + Committed		2027 Background + Committed + Phase 2 Development		Difference	
	Max RFC	Max Queue	Max RFC	Max Queue	Max RFC	Max Queue
A	0.22	0.3	0.23	0.3	0.01	0
B	0.19	0.2	0.20	0.2	0.01	0
C	0.40	0.7	0.42	0.7	0.02	0
D	0.05	0.1	0.17	0.2	0.12	0.1

Table 5.3: A1 Access / Dukes Meadow Drive / Lapsley Drive– PM Peak 1700-1800

	2027 Background + Committed		2027 Background + Committed + Phase 2 Development		Difference	
	Max RFC	Max Queue	Max RFC	Max Queue	Max RFC	Max Queue
A	0.39	0.6	0.42	0.7	0.03	0.1
B	0.10	0.1	0.11	0.1	0.01	0
C	0.19	0.2	0.22	0.3	0.03	0.1
D	0.01	0.0	0.04	0.0	0.03	0

5.6.3 The existing Dukes Meadow Drive / Lapsley Lane roundabout with the proposed site access is shown to operate well within its operational capacity in the future year scenario during both peak periods.

5.7 J1: Southam Rd A423 (N) / Noral Way / Southam Rd A423 (S) / Dukes Meadow Drive.

5.7.1 This junction is an existing four arm roundabout junction The arms are labelled thus:

Arm A – Southam Road A423 (N)
Arm B – Noral Way
Arm C – Southam Road A423 (S)
Arm D – Dukes Meadow Drive

5.7.2 The full junction input data and results can be found in **Appendix O**. The results of the assessment are summarised below.

Table 5.4: J1 A423 (N) / Noral Way/ A423 (S) / Dukes Meadow Drive –AM Peak 0800-0900

	2027 Background + Committed		2027 Background + Committed + Phase 2 Development		Difference	
	Max RFC	Max Queue	Max RFC	Max Queue	Max RFC	Max Queue
A	0.53	1.1	0.55	1.2	0.02	0.1
B	0.03	0.0	0.03	0.0	0	0
C	0.47	0.9	0.48	0.9	0.01	0
D	0.38	0.6	0.42	0.7	0.04	0.1

Table 5.5: J1 A423 (N) / Noral Way/ A423 (S) / Dukes Meadow Drive – PM Peak 1700-1800

	2027 Background + Committed		2027 Background + Committed + Phase 2 Development		Difference	
	Max RFC	Max Queue	Max RFC	Max Queue	Max RFC	Max Queue
A	0.28	0.4	0.28	0.4	0	0
B	0.13	0.2	0.13	0.2	0	0
C	0.83	4.8	0.86	5.6	0.03	0.8
D	0.21	0.3	0.22	0.3	0.01	0

5.7.3 The existing A423 Southam Road / Noral Way / Dukes Meadow Drive roundabout is shown to operate within its operational capacity within the 2027 Background and committed development AM and PM peak with an RFC value of 0.47 and 0.83 respectively.

5.7.4 In the AM peak, the junction is shown to operate within capacity for the 2027 Background + Committed +Phase 2 development.

5.7.5 In the evening peak period, Arm C A423 Southam Road (S) operates slightly over capacity in the 2027 Background + Committed +Phase 2 development. RFC values peak at 0.86 with the development increasing RFC values by 0.03 and increasing vehicle queue length by 0.8.

5.7.6 As the RFC is marginally exceeding the theoretical RFC value of 0.85, the impact of the development is minimal and we have included twice as many dwellings from the proposed development we do not consider this to be a significant adverse impact upon the roundabout and therefore nil detriment improvement is required.

5.8 J2: Dukes Meadow Dr / Warwick Rd B4100 (S) / Walker Rd / Warwick Rd B411 (N).

5.8.1 This junction is an existing four arm roundabout junction The arms are labelled thus:

Arm A – Dukes Meadow Drive
Arm B – Warwick Road B4100 (S)
Arm C – Walker Rd
Arm D – Warwick Road B4100 (N)

5.8.2 The full junction input data and results can be found in **Appendix P**. The results of the assessment are summarised below.

Table 5.6: J2 Dukes Meadow Dr/ B4100 (S)/ Walker Rd / B4100 (N)–AM Peak 0800-0900

	2027 Background + Committed		2027 Background + Committed + Phase 2 Development		Difference	
	Max RFC	Max Queue	Max RFC	Max Queue	Max RFC	Max Queue
A	0.30	0.4	0.33	0.5	0.03	0.1
B	0.33	0.5	0.33	0.5	0	0
C	0.10	0.1	0.10	0.1	0	0
D	0.29	0.4	0.29	0.4	0	0

Table 5.7: J2 Dukes Meadow Dr/ B4100 (S)/ Walker Rd / B4100 (N)– PM Peak 1700-1800

	2027 Background + Committed		2027 Background + Committed + Phase 2 Development		Difference	
	Max RFC	Max Queue	Max RFC	Max Queue	Max RFC	Max Queue
A	0.33	0.5	0.37	0.6	0.04	0.1
B	0.38	0.6	0.39	0.6	0.01	0
C	0.14	0.2	0.18	0.2	0.04	0
D	0.29	0.4	0.32	0.5	0.03	0.1

5.8.3 The existing Dukes Meadow Drive / Warwick Road / Walker Road roundabout with the proposed site access is shown to operate well within its operational capacity in the future year scenario.

6.0 Conclusion

6.1 Site Location and Permitted Use

6.1.1 The proposed residential development is located at land north of Dukes Meadow Drive, Banbury. The site is currently an undeveloped greenfield site with no previous development and is bound by agricultural lands to the north and west, residential area to the south and a leisure facility to the east.

6.2 Existing Conditions

6.2.1 The proposed development is shown to be well served for pedestrian, cyclist, and public transport infrastructure. The footway provision between the development and the local facilities is currently limited to allow pedestrians of the development to access the local facilities.

6.2.2 The site is shown to be served by frequent bus services to key destinations.

6.2.3 A review of the collision data shows that there is not an accident problem on the local highway network within the vicinity of the proposed development site.

6.3 Proposed Development

6.3.1 The proposed development will comprise 117 dwellings.

6.3.2 The adjacent land comprising Phase 1 was granted Outline planning permission in April 2022 for up to 78 dwellings and associated open space with all matters reserved other than access, Cherwell District Council planning application reference 21/03426/OUT.

6.3.3 Access to the Phase 1 site was approved from the creation of a fourth arm off the existing Dukes Meadow Drive/Lapsley Drive roundabout. The Phase 2 site will also be accessed from this point and in addition to the provision of an emergency point of access in the form of an uprated cycle track or a reinforced grass area.

6.3.4 Parking within the development will be provided in line with current Oxfordshire County Council's Residential Road Design Guide for new development for urban areas in Cherwell

6.3.5 All junctions are shown to operate within capacity except Arm C Southam Road (S) of Junction 1 A423(N) / Noral Way / Dukes Meadow Drive during the 2027 PM peak period. With the proposed development an RFC value of 0.86 is recorded a small increase of 0.1 above the capacity value of 0.85. The development creates a small RFC increase of 0.3 and queue length increase of 0.8 as such the impact of the development is considered insignificant, and mitigation is not considered necessary especially as the capacity assessment which has been undertaken includes additional dwellings than the current proposal.

6.3.6 It is considered the proposed development will not result in a detrimental impact on highway safety, and the residual cumulative impact on the local road network would not be severe.