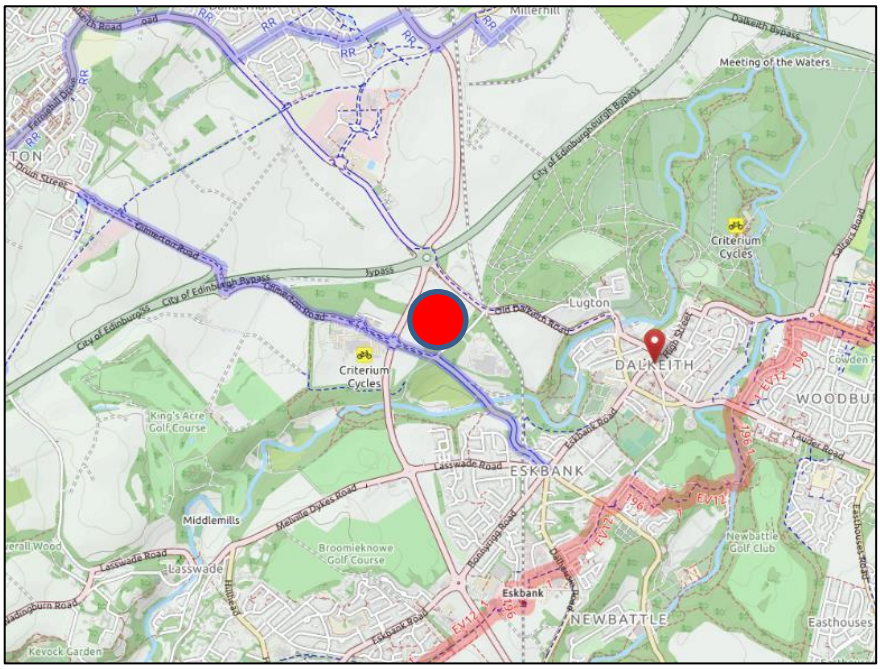


Open Street Map extract

Public transport access

Bus service provision

2.22 Bus stops are located directly in front of the application site on the B6392 Gilmerton Road and also on Melville Gate Road, while further bus stops with additional services are available on the A772 Gilmerton Road to the west of the A7. Shelter and timetable provision is provided at some of these bus stops, which are shown in the following photos.

Westbound bus stop on the B6392 Gilmerton Road

Eastbound bus stop on the B6392 Gilmerton Road

Westbound bus stop on the A772 Gilmerton Road

Eastbound bus stop on the A772 Gilmerton Road

Northeastbound bus stop on Melville Gate Road

Southwestbound bus stop on Melville Gate Road

Northbound bus stop on the A6106 Old Dalkeith Road

Southbound bus stop on the A6106 Old Dalkeith Road

2.23 The frequency of bus routes serving the bus stops identified in the previous paragraphs, at the time of writing, is summarised in Table 2.1.

Table 2.1 – Bus Routes Serving the Surrounding Bus Stops

Route No.	Route Description	Frequency	
		Mon – Sat Daytime	Sun
B6392 Gilmerton Road			
3 (Lothian)	Wester Hailes, Sighthill, Saughton, Balgreen, Haymarket, Princes Street, Newington Road, Dalkeith	10 mins (M-F)/ 12 mins (Sat)	30 mins
X95 (Borders Buses)	Edinburgh, Newtongrange, Dalkeith, Galashiels, Selkirk, Hawick	60 mins	5 return journeys
Melville Gate Road			
X95 (Borders Buses)	Edinburgh, Newtongrange, Dalkeith, Galashiels, Selkirk, Hawick	60 mins	5 return journeys
Old Dalkeith Road			
X33 (Lothian)	Dalkeith, Edinburgh	2 northbound journeys AM and 2 southbound journeys PM	
48 (Lothian)	Fort Kinnaird, Jack Kane Centre, Royal Infirmary, Dalkeith, Easthouses, Mayfield, Newtongrange, Gorebridge	30 mins	30 mins
49 (Lothian)	Rosewell, Bonnyrigg, Eskbank, Dalkeith, Royal Infirmary, the Bridges, Easter Road, Restalrig, Lochend, Portobello, Newcraighall	20 mins	30 mins
51 (Borders Buses)	St Boswells, Newtown St Boswells, Leaderfoot, Earlston, Lauder, Oxton, Fala, Pathhead, Dalkeith, Edinburgh	120 min	3 return journeys
X95 (Borders Buses)	Edinburgh, Newtongrange, Dalkeith, Galashiels, Selkirk, Hawick	60 mins	5 return journeys

2.24 It can be seen from the above table that bus stops within easy walking distance of the application site are served by regular and frequent bus services providing links throughout the surrounding area.

Existing road network

2.25 The B6392, Melville Gate Road and Old Dalkeith Road are each single carriageway roads with one lane in each direction, but with widening in places for turning movements. They are each subject to 40mph speed limits in the vicinity of the application site. The trunk road network can be accessed in the form of the A720 at Sheriffhall roundabout.

B6392 Gilmerton Road

2.26 Gilmerton Road, which runs generally in an east-west direction between the A7 and Melville Gate roundabouts, is a single carriageway (approximately 7.3 metres in width) and subject to a 40mph speed limit. Footways exist along both sides of the carriageway for the majority of its length and there is ample street lighting.

The B6392 Gilmerton Road looking eastwards from the A7 Gilmerton roundabout with the application site to the left

The B6392 Gilmerton Road looking westwards towards the A7 Gilmerton roundabout with the application site to the right

The B6392 Gilmerton Road looking eastwards with the application site to the left

The B6392 Gilmerton Road looking westwards from the approximate location of the proposed vehicular access to serve the application site

The B6392 Gilmerton Road looking eastwards from the approximate location of the proposed vehicular access to serve the application site

The B6392 Gilmerton Road looking westwards from the Melville Gate roundabout

The B6392 Gilmerton Road looking eastwards towards the Melville Gate roundabout

Melville Gate Road

2.27 Melville Gate Road, which runs generally in a northeast-southwest direction between the A6016 Old Dalkeith Road and the Melville Gate roundabout, is a single carriageway (approximately 7.3 metres in width) and subject to a 40mph speed limit. Footways exist mainly along the eastern side of the carriageway and there is ample street lighting.

Melville Gate Road looking northeastwards from Melville Gate roundabout

Melville Gate Road looking southwestwards towards Melville Gate roundabout

Melville Gate Road looking northeastwards close to the proposed vehicular access to the application

Melville Gate Road looking southwestwards close to the proposed vehicular access to the application

Melville Gate Road looking northeastwards where the two lanes commence towards the junction with the A6106 Old Dalkeith Road

Melville Gate Road looking southwestwards from a short distance away from the A6106 Old Dalkeith Road

Melville Gate Road looking northeastwards looking toward the junction with the A6106 Old Dalkeith Road

Melville Gate Road looking southwestwards from the A6106 Old Dalkeith Road junction

Summary

2.28 The site is well-situated in relation to the existing transport network. A series of footways and usable cycle links connect it to the wider network.

2.29 The site is also well-located for access to public transport services with local bus routes serving the majority of the surrounding settlements.

3. THE DEVELOPMENT AND ITS TRANSPORT INFRASTRUCTURE

Introduction

3.1 This chapter outlines the commercial development proposal subject to the planning application and comments on any necessary transport infrastructure required as a consequence of the proposal.

The development

3.2 The application site is situated to the north of the B6392 Gilmerton Road and the west of Melville Gate Road in an area called Sheriffhall South East, on the northern outskirts of Dalkeith.

3.3 A drawing prepared by the applicants architects showing the proposed layout of the development is provided in Appendix A. The proposed development is intended to comprise an eventual total of 128,027 sqft/ 11,894 sqm Gross Floor Area (GFA) of commercial floorspace split over a number of blocks. An ancillary use of 2,121 sqft/ 197 sqm is also proposed (envisaged to be a coffee shop).

3.4 The drawing shows those elements being applied for in detail (Phase 1) and the remaining areas of the scheme.

Development access

Pedestrians

3.5 Pedestrians will be able to access the development site making use of the existing off site footway and footpath network. Direct connectivity with the existing network on the B6392 Gilmerton Road can be simply made.

3.6 However, new footway connections will be required on the western side of Melville Gate Road to link to the existing bus stops and onto the B6106 Old Dalkeith Road.

Cyclists

3.7 Cyclists will be able to utilise all of the pedestrian accesses and direct accessibility to designated cycle networks on the site side of Gilmerton Road is available.

3.8 The proposals contain provision of a non motorised user path which will connect the Gilmerton Road access with the Melville Gate Road access. It is proposed that the path will emerge onto Melville Gate Road on the northern side of the newly proposed access and that a crossing facility will be provided between the new access and the existing Royal Bank of Scotland access opposite (and to the north).

3.9 Doing this will enable a path connection from Gilmerton Road, through the site and across Melville Gate Road, northwards on Melville Gate Road to Old Dalkeith Road where another crossing located to the east of Kings Gate enables access to the wide shared foot/cycleway on the north side of Old Dalkeith Road, thereby helping provide a missing link in the active travel network.

Public transport

3.10 The site is located within easy walking distance of existing public transport services that are available on the B6392 Gilmerton Road and Melville Gate Road, while further bus stops with additional services are available of the A772 Gilmerton Road on the western side of the A7 and on the B6106 Old Dalkeith Road at the east end of Melville Gate Road.

3.11 All the identified bus stops can be reached using existing and planned footway links.

3.12 Facilitating the vehicular access points may require slight relocation of bus stops.

Road access and site internals

3.13 The main part of the proposed commercial site will be accessed via a new ghost island priority junction from the B6392 Gilmerton Road (i.e. in line with application 17/00508). The smaller part of the proposed commercial site will be accessed via a new priority junction from Melville Gate Road.

Parking provision - vehicular

3.14 The appropriate levels of parking standards for commercial land use are contained in Midlothian Council's parking standards.

3.15 For office development next to public transport corridors (Table 2), the minimum provision is 1 space per 50 sqm and the maximum provision is 1 space per 40 sqm.

3.16 Breaking the proposed development (i.e. the area applied for in detail) into different zones via internal junctions would suggest a parking requirement (based on office use) as follows:-

- Terrace 1 area – 6,545 sqft/ 608 sqm – 12 - 15 spaces (plus we have assumed 33 required for the food use – within the SCOTS maximum)
- Terrace 2 and 3 area – 24,499 sqft/ 2,276 sqm – 45 - 57 spaces;
- Terrace 4 and 5 area – 14,779 sqft/ 1,373 sqm – 26 - 34 spaces.

3.17 Provision shown in the detailed areas is:-

- Terrace 1 area – 47 spaces
- Terrace 2 and 3 area – 50 spaces
- Terrace 4 and 5 area – 26 spaces.

3.18 The proposed parking is in line with the standards (see also note on accessible and electric vehicle provision below).

Cycle parking

3.19 MC's parking standards recommend for office use- 1 space per 400 sqm GFA (staff) and 1 space plus 1 space per 1,000 sqm GFA (visitors).

3.20 For restaurant use the following is stated - Staff: 1 Space plus 1 Space per 20 staff Customers: 1 Space plus 1 Space per 100 sqm Public Floor Area.

3.21 Cycle parking will be accommodated within the various individual plots plus communal provision will also be made available.

Other users

3.22 Disabled parking provision for employment uses is 1 space per disabled employee plus 2 spaces or 5% of maximum standard size whichever is greater. The application exceeds this.

3.23 Recent experience of other developments within Midlothian shows that 15% electric vehicle charging provision is also sought and the application again exceeds this.

Summary

3.24 The site can be developed to be permeable to those on foot, travelling by cycle, using public transport or private car.

3.25 A new non motorised user path is proposed through the site.

3.26 Cycle parking provision in line with Midlothian Council standards is proposed.

3.27 Vehicle parking is in line with provision as specified in Midlothian Council standards, while accessible parking and electric vehicle charging will also be provided.

4. EXISTING ROAD NETWORK

Introduction

4.1 This chapter contains details of the surrounding road network in the vicinity of the application site.

Scope of study area and existing traffic conditions

4.2 Employment based developments typically generate the largest amount of traffic during the weekday AM and PM peak periods. Following consultation with MC-Roads during the scoping study process the weekday AM and PM peaks have been considered.

4.3 Initial discussion with MC-Roads indicated the scope of the study should include the following junctions:

- A7/ A772 Gilmerton Road/ B6392 Gilmerton Road roundabout;
- B6392 Gilmerton Road/ Melville Gate Road roundabout; and
- A6106 Old Dalkeith Road/ Melville Gate Road priority.

4.4 Due to the recent Covid-19 pandemic restrictions and, in particular the large shift to working from home, it was considered that any new traffic surveys undertaken would not be typical. Instead traffic data was extracted from the previous Transport Assessment submitted with the planning application for the site (17/00537/PPP).

4.5 The traffic data contained in the previous Transport Assessment (TA) dates from 2017 at the first two of the junctions mentioned above, although a recent count was undertaken at the third junction as no other traffic data was available.

4.6 The weekday AM peak hour from the previous TA occurred between 0715 and 0815 while the weekday PM peak hour occurred between 1545 and 1645. The turning movements at the junctions within the study area during these two peak hours are shown in Diagrams 1&b (Appendix C).

Year of assessment

4.7 In accordance with the guidance offered in Transport Assessment Guidance, junction assessment will be undertaken for the year of opening, which is assumed to be 2023.

Traffic growth

4.8 The guidance offered in Transport Assessment Guidance states "*No future year transport growth will be applied beyond year of opening or first year of assessment. The assumption is that any growth prior to opening year should apply since nothing is being done as a consequence of the development to influence this, but that beyond that time the emphasis should be on the applicant/developer addressing the impacts of their additional transport movements and ensuring that measures are in place to deal with those specific impacts*."

4.9 Traffic growth is linked to the economy and an element of this is directly attributable to the likelihood of future development within the surrounding area. Due to the nature of the adjacent area, the National Road Traffic Forecasts (NRTF) 'Low' growth factors, obtained from the Department of the Environment, Transport and the Regions, are normally considered appropriate.

4.10 However, in order to account for Local Plan Allocations in the wider Midlothian area it would be more appropriate to use NRTF 'High' growth factors.

4.11 Therefore, 'High' NRTF will be used to predict future background traffic levels on the local road network for the future design year. The 'High' growth factor between the years of 2017 and 2023 corresponds to an overall growth factor of approximately 1.087% and this will be applied to the 2017 flows to give 2023 predicted traffic flows.

4.12 The 2023 weekday AM and PM projected traffic flows are shown in Diagrams 2a&b (Appendix C).

Committed developments

4.13 A site to the south of the B6392 Gilmerton Road, between the Gilmerton and Melville Gate roundabouts is under consideration for circa 105,500 sqft/ 9,800 sqm of Class IV office floorspace so it is necessary for this to be considered as committed development.

4.14 Trip generation and distribution has been extracted from the Transport Statement submitted as part of that application and is shown in Diagrams 3&b (Appendix C).

2023 projected + committed development traffic flows

4.15 The trips associated with the committed development have then been added to the 2023 projected traffic flows to create 2023 projected + committed development traffic flows for the weekday AM and PM peak hours and are shown in Diagrams 4a&b (Appendix C).

Summary

4.16 The extent of the study area has been discussed with MC-Roads. The principal roads infrastructure in the vicinity of the application site has been presented.

4.17 The 2017 base traffic flows have been projected to 2023 design year flows using High Growth NRTF factors.

4.18 Committed development to the south of the B6392 Gilmerton Road has been considered.

4.19 The trips associated with the committed development have been obtained and then been added to create 2023 design year + committed development traffic flows.

5. GENERATION AND DISTRIBUTION OF THE PROPOSED DEVELOPMENT

Introduction

5.1 Discussion on the volume and distribution of the traffic likely to be generated by the proposed commercial development, and likely to impact on the study network, is presented in this Chapter.

Trip generation

5.2 The previous trip rates for the class IV office and drive through coffee contained in the approved Transport Assessment for the previous application on this site (17/00508) have been used as agreed during the scoping process. These vehicle trip rates are as shown in Table 5.1 below.

Table 5.1 – Proposed Vehicle Trip Rates

Time Period	Land Use	Vehicle Trip Rates		
		Arrive	Depart	Total
Weekday AM Peak	Class 4 (Office)	1.517	0.244	1.761
	Coffee Shop	25.6	25.6	51.2
Weekday PM Peak	Class 4 (Office)	0.199	1.299	1.498
	Coffee Shop	11.2	11.2	22.4

Estimation of generated vehicular trips

5.3 The predicted vehicular trips to the commercial development and the drive through coffee shop of during the weekday AM and PM peak hours, using the vehicle trip rates above, are shown in Table 5.2 below.

Table 5.2 – Proposed Vehicle Trips

Land use	Weekday AM Peak			Weekday PM Peak		
	Arrive	Depart	Total	Arrive	Depart	Total
Class 4 Office	167	27	194	22	143	165
Coffee Shop	43	43	86	19	19	38
Total	210	70	280	41	162	203

5.4 Table 5.2 shows that a total of 280 vehicular trips (two-way) associated with the proposed development are predicted during the weekday AM peak hour and 203 vehicular trips during the weekday PM peak hour.

Trip distribution

5.5 The use of a gravity model methodology is normally considered appropriate for establishing a distribution pattern for assignment of new vehicular trips generated by a proposed development. However, as the Transport Assessment for the previous application contained a distribution that was accepted by MC-Roads, then it was proposed to use this distribution for the proposed commercial development.

5.6 Using the previously accepted distribution, the generated traffic flows associated with the office use of the commercial development have been assigned as shown in Diagrams 5a&b (Appendix C) for the part of the development accessed off the B6392 Gilmerton Road, Diagrams 6a&b (Appendix C) for the part of the development accessed off the Melville Gate Road and Diagrams 7a&b (Appendix C) for the drive through coffee shop use of the commercial development. Diagrams 8a&b (Appendix C) show the total traffic associated with the commercial development.

2023 projected + committed & proposed development traffic flows

5.7 The proposed commercial development trips, as described in the previous paragraphs, have then been added to the 2023 projected + committed development traffic flows to create 2023 projected + committed & proposed commercial development traffic flows for the weekday AM and PM peak hours and are shown in Diagrams 9a&b (Appendix C).

Summary

5.8 The trip rates and distribution for the proposed commercial development have been extracted from approved Transport Assessment for the previous application on the site. The projected trip generation and distribution of the proposed development has then been calculated.

5.9 The total future year traffic flows, including the proposed commercial development and ancillary use have been predicted to allow detailed analysis to be undertaken where appropriate.

6. SITE ACCESS AND TRAFFIC IMPACT OF THE PROPOSED DEVELOPMENT

Introduction

6.1 This Chapter presents a capacity assessment of the junctions on the local road network.

Area of influence

6.2 The Scottish Government's guidelines for the preparation of TA's, Transport Assessment Guidance, do not contain any firm definitions of a traffic impact. Therefore, the guidelines offered in the IHT guidelines have been adopted. The IHT guidelines advise that capacity assessments should be conducted at junctions where traffic to or from the development proposal exceeds 10% of the existing two way traffic flow on the adjoining highway or where congestion exists or will exist in the assessment years, this 10% figure should be lowered to 5%.

6.3 The percentage impacts are shown in Diagrams 10a&b (Appendix C) and the following junction within the study network is predicted to exceed the 10% impact threshold:

- A7/ A772 Gilmerton Road/ B6392 Gilmerton Road roundabout.

6.4 However, due to the close proximity of the other two junctions within the study area:

- B6392 Gilmerton Road/ Melville Gate Road roundabout; and
- A6106 Old Dalkeith Road/ Melville Gate Road priority.

it was proposed that these should be included in testing as well.

6.5 Accordingly, all three existing junctions plus the two site access junctions have been subject to the detailed analysis which is discussed further in the following paragraphs.

Junction analysis

6.6 The junction analysis was undertaken using the ARCADY and PICADY modules of the industry standard computer modelling package JUNCTIONS9 for roundabout and priority junctions respectively.

6.7 Geometric parameters of the junctions were measured on-site, with the physical layouts confirmed by OS mapping. Sketches, showing the layout of each junction (and also used to establish the other modelling parameters) are included at a scale of 1:500 in Appendix D.

6.8 The performance of the junctions has been measured using standard outputs for ARCADY and PICADY - Ratio of Flow to Capacity (RFC), Maximum Queuing (Q), Inclusive Queuing Delay (IQD) and Reserve Capacity.

6.9 The output files for the ARCADY and PICADY assessments are included in Appendix E.

6.10 The scenarios that have been tested are as follows:

1. 2017 weekday AM Peak surveyed
2. 2023 weekday AM Peak projected + committed development
3. 2023 weekday AM Peak projected + committed & proposed development
4. 2017 weekday PM Peak surveyed
5. 2023 weekday PM Peak projected + committed development
6. 2023 weekday PM Peak projected + committed & proposed development

B6392 Gilmerton Road/ Site Access priority

6.11 The indicative layout of the B6392 Gilmerton Road/ Site Access priority junction is shown in Sketch TP324/SK/001 (Appendix D). Table 6.1 below summarises the PICADY results for scenarios 3 and 6.

Table 6.1 – Summary of PICADY Analysis Results (B6392 Gilmerton Road/ Site Access Priority)

Scenario	B6392 Gilmerton Road (west)			Site Access			B6392 Gilmerton Road (east)			Reserve Capacity
	RFC	Queue	Delay	RFC	Queue	Delay	RFC	Queue	Delay	
		(pcu)	(min/ pcu)		(pcu)	(min/ pcu)		(pcu)	(min/ pcu)	%
3	-	-	-	0.23	0.3	0.24	0.12	0.1	0.12	41
6	-	-	-	0.42	0.7	0.28	0.01	0.0	0.11	30

6.12 The junction is predicted to operate satisfactorily during the weekday morning and evening peak hours with the addition of the traffic associated with the proposed development with a maximum RFC of 0.42 and a 1 PCU queue occurring on the Site Access approach in the evening peak hour.

Melville Gate Road/ Site Access priority

6.13 The indicative layout of the Melville Gate Road/ Site Access priority junction is shown in Sketch TP324/SK/002C (Appendix D). Table 6.2 below summarises the PICADY results for scenarios 3 and 6.

Table 7.2 – Summary of PICADY Analysis Results (Melville Gate Road/ Site Access Priority)

Scenario	Melville Gate Road (south)			Site Access			Melville Gate Road (north)			Reserve Capacity
	RFC	Queue	Delay	RFC	Queue	Delay	RFC	Queue	Delay	
		(pcu)	(min/ pcu)		(pcu)	(min/ pcu)		(pcu)	(min/ pcu)	%
3	-	-	-	0.00	0.0	0.00	0.02	0.0	0.09	374
6	-	-	-	0.04	0.0	0.13	0.00	0.0	0.09	267

6.14 The junction is predicted to operate satisfactorily during the weekday morning and evening peak hours with the addition of the traffic associated with the proposed development with a maximum RFC of 0.04 and a 0 PCU queue occurring on the Site Access approach in the evening peak hour.

B6392 Gilmerton Road/ Melville Gate Road roundabout

6.15 The existing layout of the B6392 Gilmerton Road/ Melville Gate Road roundabout junction is shown in Sketch TP324/SK/101 (Appendix D). Table 6.3 below summarises the ARCADY results for scenarios 1 to 6.

Table 6.3– Summary of ARCADY Analysis Results (B6392 Gilmerton Road/ Melville Gate Road Roundabout)

Scenario	B6392 Gilmerton Road (west)			Melville Gate Road			B6392 Gilmerton Road (east)			Reserve Capacity
	RFC	Queue	Delay	RFC	Queue	Delay	RFC	Queue	Delay	
		(pcu)	(min/ pcu)	%	(pcu)	(min/ pcu)		(pcu)	(min/ pcu)	%
1	0.12	0.1	0.05	0.14	0.2	0.04	0.47	0.9	0.07	86
2	0.14	0.2	0.05	0.17	0.2	0.04	0.54	1.2	0.08	64
3	0.15	0.2	0.05	0.18	0.2	0.04	0.58	1.4	0.09	53
4	0.29	0.4	0.06	0.13	0.2	0.04	0.19	0.2	0.04	197
5	0.35	0.6	0.06	0.14	0.2	0.05	0.21	0.3	0.05	153
6	0.37	0.6	0.06	0.15	0.2	0.05	0.21	0.3	0.05	139

6.16 The junction presently operates satisfactorily during the weekday morning and evening peak hours (scenarios 1 and 4) with a maximum RFC of 0.47 and a 1 PCU queue occurring on the B6392 Gilmerton Road (east) approach in the morning peak hour.

6.17 The assessment indicates that the junction will operate satisfactorily during the weekday morning and evening peak hours with 6 years of growth (scenarios 2 and 5). A maximum RFC of 0.54 and a 1 PCU queue is predicted to occur on the B6392 Gilmerton Road (east) approach in the morning peak hour.

6.18 With the addition of the traffic associated with the proposed development (scenarios 3 and 6), the maximum RFC rises to 0.58 and a 1 PCU queue on B6392 Gilmerton Road (east) approach in the morning peak hour, indicating the junction is projected to continue to operate within capacity.

A6106 Old Dalkeith Road/ Melville Gate Road priority

6.19 The existing layout of the A6106 Old Dalkeith Road/ Melville Gate Road priority junction is shown in Sketch TP324/SK/103 (Appendix D). Table 6.4 summarises the PICADY results for scenarios 1 to 6.

Table 6.4– Summary of PICADY Analysis Results (A6106 Old Dalkeith Road/ Melville Gate Road Priority)										
Scenario	A6106 Old Dalkeith Road (east)			Melville Gate Road			A6106 Old Dalkeith Road (west)			Reserve Capacity
	RFC	Queue	Delay	RFC	Queue	Delay	RFC	Queue	Delay	
		(pcu)	(min/ pcu)	%	(pcu)	(min/ pcu)		(pcu)	(min/ pcu)	%
1	-	-	-	L 0.46 R 0.31	0.8 0.5	0.20 0.22	0.12	0.2	0.10	48
2	-	-	-	L 0.48 R 0.33	0.9 0.5	0.21 0.23	0.12	0.2	0.10	44
3	-	-	-	L 0.48 R 0.35	0.9 0.5	0.21 0.24	0.14	0.3	0.11	42
4	-	-	-	L 0.36 R 0.41	0.6 0.7	0.18 0.26	0.24	0.5	0.11	43
5	-	-	-	L 0.38 R 0.47	0.6 0.9	0.18 0.30	0.24	0.5	0.11	31
6	-	-	-	L 0.39 R 0.51	0.6 1.0	0.19 0.32	0.25	0.5	0.11	25

6.20 The junction presently operates satisfactorily during the weekday morning and evening peak hours (scenarios 1 and 4) with a maximum RFC of 0.46 and a 1 PCU queue occurring on the Melville Gate Road left turn lane in the morning peak hour.

6.21 The assessment indicates that the junction will operate satisfactorily during the weekday morning and evening peak hours with 2 years of growth (scenarios 2 and 5). A maximum RFC of 0.48 and a 1 PCU queue is predicted to occur on the Melville Gate Road left turn lane in the morning peak hour.

6.22 With the addition of the traffic associated with the proposed development (scenarios 3 and 6), the maximum RFC rises to 0.51 and a 1 PCU queue on Melville Gate Road right turn lane approach in the evening peak hour, again indicating the junction is projected to continue to operate within capacity.

A7/ A772 Gilmerton Road/ B6392 Gilmerton Road roundabout

6.23 The existing layout of the A7/ A772 Gilmerton Road/ B6392 Gilmerton Road roundabout junction is shown in Sketch TP324/SK/102 (Appendix D). Table 6.5 below summarises the ARCADY results for scenarios 1 to 6.

Table 6.5 – Summary of ARCADY Analysis Results (A7/ A772 Gilmerton Road/ B6392 Gilmerton Road Roundabout)													
Scenario	A7 (north)			B6392 Gilmerton Road			A7 (south)			A772 Gilmerton Road			Res Cap
	RFC	Queue	Delay	RFC	Queue	Delay	RFC	Queue	Delay	RFC	Queue	Delay	
		(pcu)	(min/ pcu)		(pcu)	(min/ pcu)		(pcu)	(min/ pcu)		(pcu)	(min/ pcu)	%
1	0.53	1.2	0.10	0.86	5.9	0.48	0.80	3.9	0.30	0.48	1.0	0.10	2
2	0.64	1.8	0.14	1.01	23.8	1.63	0.96	13.1	0.89	0.61	1.6	0.14	-8
3	0.71	2.5	0.19	1.09	47.3	2.80	1.02	26.1	1.55	0.66	2.0	0.17	-11
4	0.57	1.4	0.15	0.41	0.7	0.13	0.65	1.9	0.13	0.92	9.9	0.59	0
5	0.64	1.9	0.18	0.63	1.7	0.21	0.74	2.9	0.18	1.04	38.6	1.86	-10
6	0.65	1.9	0.19	0.79	3.7	0.36	0.78	3.5	0.21	1.08	54.0	2.49	-10

6.24 The junction presently operates close to capacity during the weekday morning and evening peak hours (scenarios 1 and 4) with a maximum RFC of 0.92 and a 10 PCU queue occurring on the A772 Gilmerton Road approach during the evening peak hour.

6.25 The assessment indicates that the junction will operate over capacity during the weekday morning and evening peak hours with 6 years of growth and the committed development added (scenarios 2 and 5). A maximum RFC of 1.04 and a 39 PCU queue is predicted to occur on the A772 Gilmerton Road approach during the evening peak hour.

6.26 With the addition of the traffic associated with the proposed development (scenarios 3 and 6), the maximum RFC rises to 1.09 and a 47 PCU queue on the B6392 Gilmerton Road approach during the morning peak hour.

6.27 As this junction is predicted to be over capacity following 6 years of growth and the traffic associated with the committed development even without the addition of the traffic associated with the proposed commercial development, an improvement has therefore been investigated to provide additional capacity at the junction to offset the impact of the proposed commercial development.

6.28 Sketch TP324/SK/003 (Appendix D) shows an indicative layout of the potential improvements which are to slightly widen the A772 Gilmerton Road and the B6392 Gilmerton Road approaches and to adjust the splitter islands to allow a 2 lane approach for at least two car lengths back from the give-way line. The results of this ARCADY analysis with the indicative improvements to the junction in place are summarised in Table 6.6.

Table 6.6 – Summary of ARCADY Analysis Results (A7/ A772 Gilmerton Road/ B6392 Gilmerton Road Roundabout)

Scenario	A7 (north)			B6392 Gilmerton Road			A7 (south)			A772 Gilmerton Road			Res Cap
	RFC	Queue (pcu)	Delay (min/ pcu)	RFC	Queue (pcu)	Delay (min/ pcu)	RFC	Queue (pcu)	Delay (min/ pcu)	RFC	Queue (pcu)	Delay (min/ pcu)	%
3	0.71	2.5	0.19	1.09	47.3	2.80	1.02	26.1	1.55	0.66	2.0	0.17	-11
3r	0.70	2.4	0.18	1.00	21.5	1.39	1.00	22.1	1.33	0.64	1.9	0.16	-7
6	0.65	1.9	0.19	0.79	3.7	0.36	0.78	3.5	0.21	1.08	54.0	2.49	-10
6r	0.65	1.9	0.19	0.73	2.7	0.27	0.75	3.0	0.18	1.04	40.1	1.90	-10

6.29 Comparing the results of the existing layout against the indicative improvements (scenario 3 against 3r & scenario 6 against 6r), the maximum RFC would reduce from 1.09 to 1.00 and the 47 PCU queue would drop to a 22 PCU queue on the B6392 Gilmerton Road approach during the morning peak hour. Similarly, the maximum RFC would reduce from 1.08 to 1.04 and the 54 PCU queue would drop to 40 PCU queue on the A772 Gilmerton Road approach during the evening peak hour, thereby offsetting the effect of the proposed development.

Summary

6.30 The analysis predicts that the existing junctions will operate satisfactorily for the design year including the traffic associated with the proposed commercial development, with the exception of the A7 Gilmerton Road roundabout.

6.31 The existing A7 Gilmerton Road roundabout is predicted to be over capacity in the future design years including traffic associated with committed development. The addition of traffic attributed to the proposed development will obviously effect the operation of this junction. Therefore an improvement to the junction layout has been investigated and assessment of this indicative layout has been shown to achieve no net detriment during both the weekday AM and PM peak hours in terms of junction operation/ capacity.

7. SUMMARY AND CONCLUSIONS

Introduction

7.1 Transport Planning Ltd has been appointed by Buccleuch Property to advise on transport related issues associated with an application for commercial development at a site at Sheriffhall South East, to the northwest of Dalkeith.

7.2 The site lies to the west of the A7, north of the B6392 Gilmerton Road and west of Melville Gate Road.

7.3 In its entirety, the proposed development is intended to comprise 128,027 sqft/ 11,894 sqm Gross Floor Area (GFA) of commercial floorspace split over a number of blocks. An ancillary use of 2,121 sqft/ 197 sqm is also proposed (envisaged to be a drive-through coffee shop) is included in these figures.

7.4 Vehicular access for the majority of the development would be from a new priority junction onto the B6392 Gilmerton Road, while a smaller part of the development is proposed to be accessed via a new priority junction from Melville Gate Road.

Site accessibility and transport provision

7.5 A review of current accessibility and provision has been undertaken and this has included a review of walking, cycling and public transport provision within the vicinity of the application site.

7.6 The application site is well-situated in relation to the existing transport network. Footways and cycle routes exist around the application site linking it to the wider pedestrian and cycle network and key local facilities.

7.7 The proposals contain provision of a non-motorised user path which will connect the Gilmerton Road access with the Melville Gate Road access. It is proposed that the path will emerge onto Melville Gate Road on the northern side of the newly proposed access and that a crossing facility will be provided between the new access and the existing Royal Bank of Scotland access opposite (and to the north).

7.8 The application site is well-located for access to public transport services with bus routes passing along the B6392 Gilmerton Road and Melville Gate Road, with additional bus services available of the A772 Gilmerton Road to the west of the A7 and on the A60106 Old Dalkeith Road at the eastern end of Melville Gate Road. The available bus services provide frequent and regular access to the surrounding population areas.

Existing road network

7.9 The extent of the study area has been discussed with MC-Transportation. The principal roads infrastructure in the vicinity of the application site has been presented.

7.10 Due to the ongoing COVID-19 pandemic restricting the collecting of new traffic survey data, previous traffic survey information dating from 2017 for the majority of the surrounding road network has been utilised and the weekday AM and PM peak hours extracted from this data.

7.11 The potential year of opening of the commercial land use has been indicated, together with the appropriate future growth factors. The 2017 base traffic flows have been projected to 2023 design year flows using High Growth NRTF factors.

7.12 Committed development to the south of the B6392 Gilmerton Road has been considered.

Generation and distribution of proposed commercial development

7.13 The trip rates and distribution for the proposed development have been extracted from the approved Transport Assessment for the previous application on the site. The projected trip generation and distribution of the proposed development has then been calculated.

7.14 The total future year traffic flows, including the proposed development, have been predicted to allow detailed analysis to be undertaken where appropriate.

Site access and traffic impact of the proposed commercial development

7.15 The analysis predicts that the proposed site access junctions and the existing assessed junctions, except for the A7 Gilmerton Road roundabout, will all operate satisfactorily for the design year with both the committed and proposed commercial development trips included.

7.16 The existing A7 Gilmerton Road roundabout is predicted to be over capacity in the future design years with the addition of traffic associated with committed development. The addition of traffic attributed to the proposed commercial development will obviously exacerbate the operation of this junction. Therefore an improvement to the junction layout has been investigated and assessment of this indicative layout has been shown to allow the junction to achieve no net detriment during the weekday AM and PM peak hours in terms of junction operation/ capacity.

Conclusions

7.17 This report has assessed the transport issues surrounding the proposed commercial development on the application site to the east of the A7. North of the B6392 Gilmerton Road and west of Melville Gate Road at Sheriffhall South East. It has been concluded that:

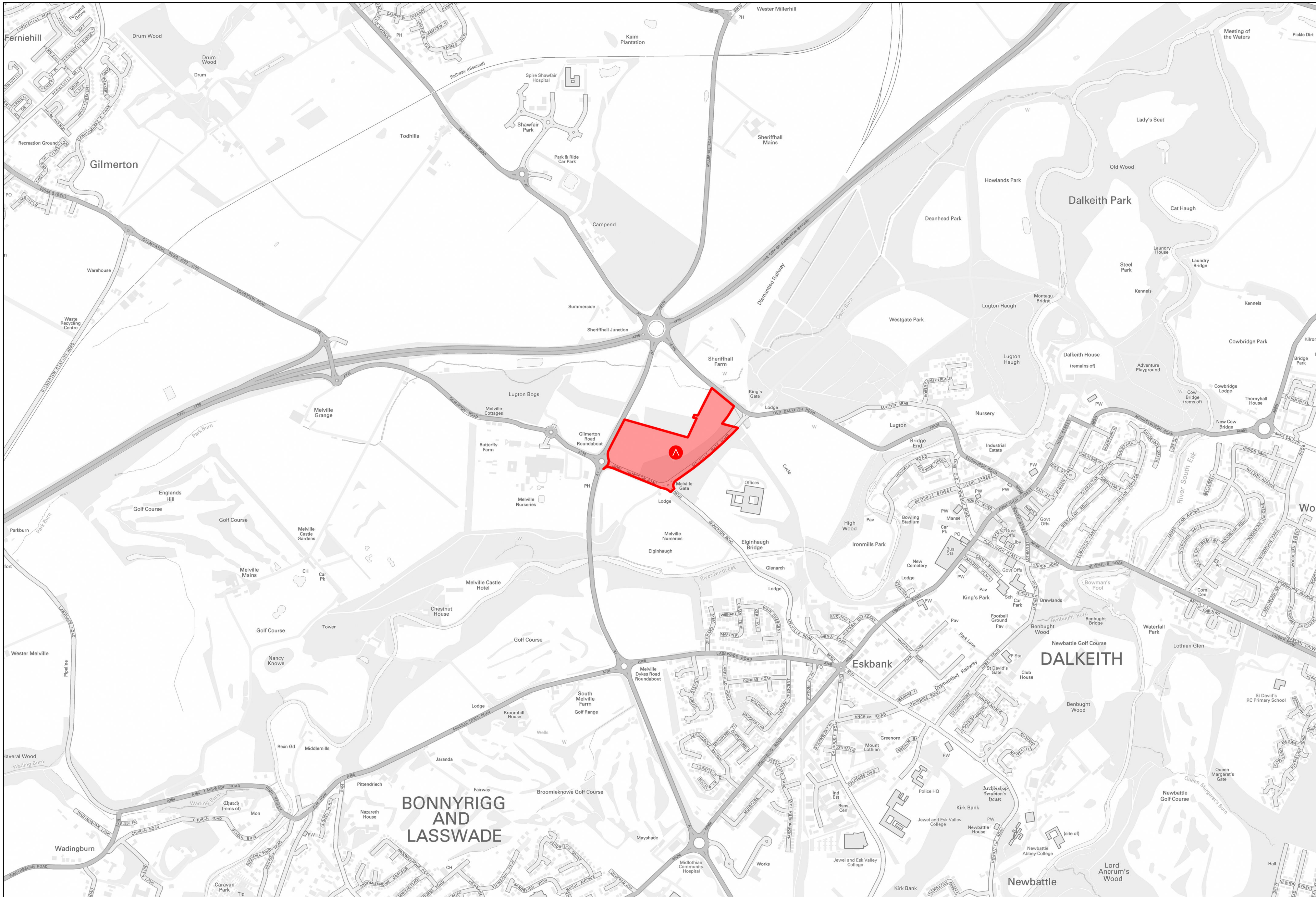
- the application site is located in close proximity to well established pedestrian and cycle routes;
- existing bus stops are located within walking distance of the application site;
- the development proposals will contain a number of measures to enhance the existing accessibility of the site;
- the application site lies in close proximity and with good access to the wider road network; and
- the development can be satisfactorily accessed via new priority junctions onto the B6392 Gilmerton Road and Melville Gate Road.

7.18 Taking all of the foregoing into consideration, there are no transport related reasons why the site should not receive planning permission.

APPENDICES

APPENDIX A

FIGURES, SITE LAYOUT PLAN, CORE PATHS PLAN



Sheriffhall South, Midlothian

Site Location Plan

Key

(A) Site of Proposed Development

Sheriffhall South, Midlothian	Buccleuch Property		
Site Location Plan	Drawing Number: TP324 Figure 1		Scale: NTS @ A3
	Drawn by: NW	Date: Aug 2021	Checked by: SL

TRANSPORT PLANNING