APPENDIX 5

ECS
TRANSPORT PLANNING LIMITED

Proposed Residential Allocation, Avontoun, Linlithgow

Transport Statement

November 2015

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Client Name: AWG Property Ltd & Cemex UK Properties Ltd
Document Reference: 02
Project Number: 15065

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Comments [redacted]

Comments

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Executive Summary

ECS Transport Planning Limited (ECS) has been commissioned by AWG Property Ltd & Cemex UK Property Ltd (the Applicants) to produce a Transport Statement (TS) in support of a proposed residential development on land adjacent to the A706 and Mill Road, Linlithgow.

The findings of this study are based on a review of the existing site / local traffic conditions, potential connections to the existing transport infrastructure and have been produced in accordance with the Scottish Government document 'Transport Assessment Guidance'. Consideration has also been given to the requirements of local and national government transport planning policies, including SPP and PAN 75.

The site can accommodate a phased residential development of up to 210 units, with access proposed via the A706. The development is likely to consist of a mixture of housing types, which will be defined by market demand at the time of any future detailed planning application

A people trip assessment of the development proposals has been undertaken for all modes of travel which confirms that the walking, cycling and public transport provision in the area is sufficient to accommodate the expected future demand from the site with minor improvements to the footway network. A footway will be introduced on the A706 which will be linked with the internal site infrastructure and ensure direct connections to the existing infrastructure on Mill Road and Mains Road.

The internal development layout will be designed to link to the existing transport infrastructure and ensure the layout is porous and encourages access by all modes which is consistent with Designing Streets and national / local transport policy.

The proposed development will extend the urban edge of Linlithgow west which will alter the characteristics of the A706, changing it from rural to urban along the site frontage. Housing would be visible from the road which will introduce a natural traffic calming effect and support the relocation of the 30mph speed limit to the western boundary of the site.

The proposed access junctions have been designed as simple priority controlled junctions. However, should they require to be improved to ghost island right turn junctions through the planning process, the landowners have the available land on the A706 frontage to ensure delivery.

The western access junction will utilise the existing access junction to the metalworks which will be amended to ensure it is appropriate for residential use. The eastern junction will be formed on the straight section of the A706 on approach to the Mill Road / Kettil'Stoun Mains / A706 roundabout.

This Transport Statement demonstrates that the development site will be accessible by sustainable modes of travel and integrate effectively with the existing transport network following the introduction of additional non-car promoting measures. In addition, the site can be accessed safely from the adjacent road network by private vehicles without compromising the safety or efficiency of existing road users, therefore, in transportation terms, the proposed development satisfies all policy requirements.

1. Introduction

1.1. ECS Transport Planning Limited (ECS) has been commissioned by AWG Property Ltd & Cemex UK Property Ltd (the Applicants) to produce a Transport Statement (TS) in support of a proposed residential development on land adjacent to the A706 and Mill Road, Linlithgow.

1.2. The development site, which is located to the south west of the town centre, is currently a mix of vacant land and a metalworks with an existing access junction off the A706.

1.3. This report examines the key transportation issues and access opportunities associated with all modes of travel for residential development on the site, and documents the potential to improve the walking, cycling and public transport connections in the area. If this site should be successfully allocated within the LDP and a subsequent planning application submitted, a detailed Transport Assessment (TA) will be produced to support the proposals and will be comprehensively scoped with WLC.

1.4. The findings of this study are based on discussions with WLC, a review of the site including existing traffic observations and, has been produced in accordance with the Scottish Executive (Government) document 'Transport Assessment Guidance' (2012), where appropriate. Consideration has also been given to the requirements of local and national government transport planning policies including 'Designing Streets'.

1.5. The subsequent chapters of this report are structured as follows:-

- Development Proposals;
- Local & National Transport Policy;
- Accessibility;
- Vehicle Accessibility; and,
- Summary & Conclusions.

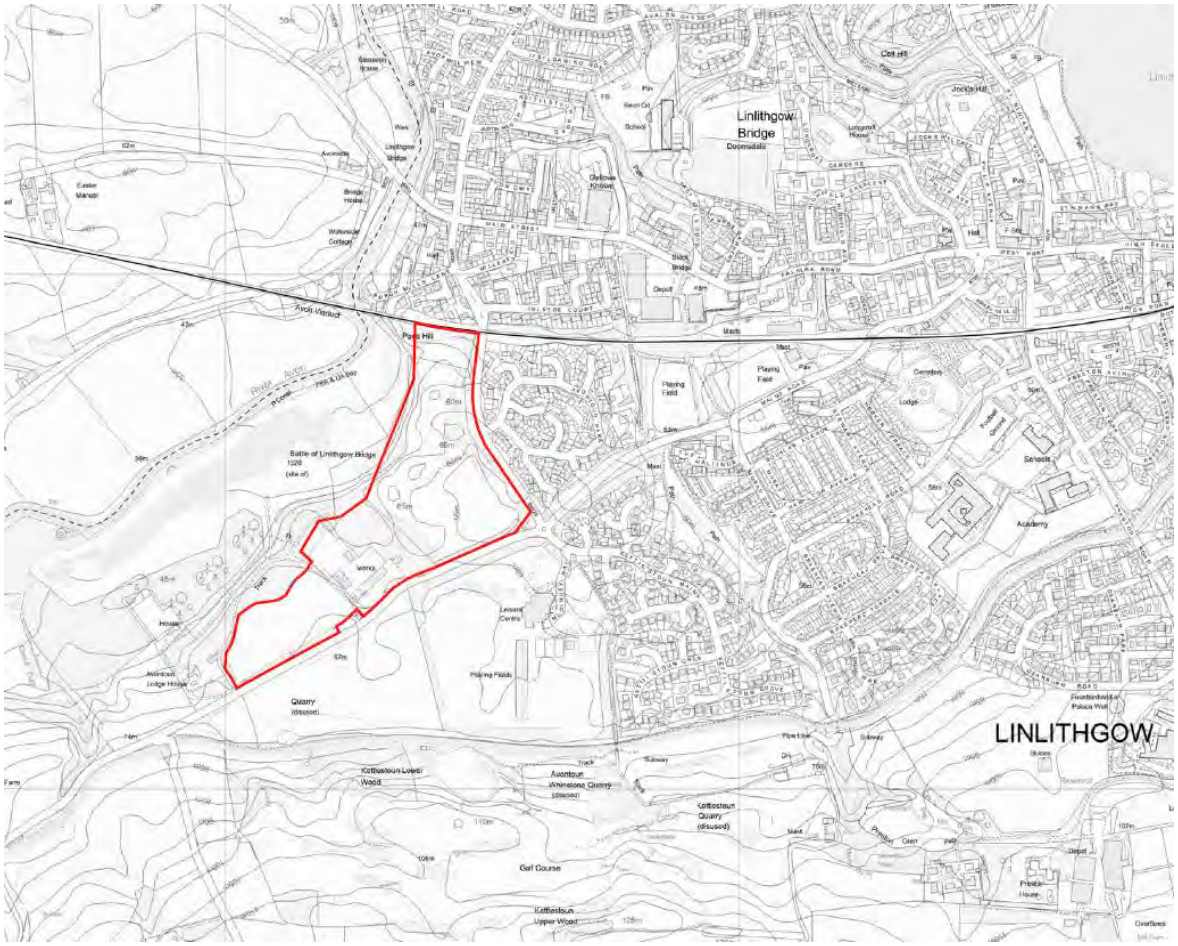
2. Development Proposals

Existing Site & Surrounding Area

2.1. The proposed site is situated in Linlithgow which is located in the north-east of West Lothian, close to the border of Stirlingshire. The town is approximately 20 miles west of Edinburgh, on the Glasgow to Edinburgh railway line. With a population of 14,000 residents, Linlithgow is a popular commuter town to both Edinburgh and Glasgow.

2.2. The proposed development site is located on the western periphery of Linlithgow adjacent to Linlithgow Leisure Centre and is surrounded predominately by residential properties. The site is bound to the north by the River Avon and the Edinburgh to Glasgow rail link, the B8029 Mill Road to the East, the A706 to the south, and the Claud Burn to the west. The location of the site in a local context is highlighted in red within ***Figure 1*** below.

Figure 1: Site Location



2.3. The site is occupied by a metalworks complex, open grass land with existing woodland running through the edge of the site and a small loch along the northern boundary. The metalworks has an existing priority junction access directly off the A706.

2.4. *Figures 2 & 3* below present the site in its current form. Figure 2 displays a view of the site looking north, with Figure 3 showing the existing metalworks from the A806.

Figure 2: View of Site looking North

Figure 3: View of Exisitng Metalworks

Proposed Development

Development & Access Overview

2.5. The site can accommodate a phased residential development of up to 210 units, with access proposed via two junctions from the A706. The development is likely to consist of a mixture of housing types which will be defined by market demand at the time of any future detailed planning application.

2.6. As can be seen from Figure 1, the landowners' site boundary extends to the A706 and Mill Road. Two vehicle access points will be promoted from the A706 which will provide a natural loop road through the site. The opportunities for multiple access points will ensure that the site is porous for sustainable and vehicle modes of travel which is consistent with Designing Streets policy.

2.7. The proposed development will extend the urban edge of Linlithgow west which will alter the characteristics of the A706, changing it from rural to urban along the site frontage. Housing would be visible from the road which will introduce a natural traffic calming effect and support the relocation of the 30mph speed limit to the western boundary of the site.

2.8. The proposed access junctions have been shown as simple priority controlled junctions. However, should they require to be improved to ghost island right turn junctions through the planning process, the landowners have the available land on the A706 frontage to ensure delivery.

2.9. The western access junction, as shown in the accompanying concept masterplan, will utilise the existing access junction to the metalworks which will be amended to ensure it is appropriate for residential use. The eastern junction will be formed on the straight section of the A706 on approach to the Mill Road / Kettil'Stoun Mains / A706 roundabout.

2.10. Mill Road rises as it goes north form the A706 and, although it is feasible to deliver a vehicle access, it is likely that this boundary will be promoted for pedestrian links. An internal footway network would be developed linking the full site with existing infrastructure on Mill Road and Mains Road (A706).

2.11. A concept masterplan layout of the proposed site is presented on CDA Architects drawing SK 006 Rev A contained within **Appendix A**. The indicative access arrangements with the local road network are presented on drawings 15065_001 & 002, respectively, contained within **Appendix B.**

Designing Streets Internal Site Layout

2.12. If successfully allocated and a subsequent residential planning application is brought forward, the future site layout would be developed in consultation with WLC and designed in line with the Scottish Government document 'Designing Streets', with the aim of creating an accessible and sustainable community. The layout would introduce walk and cycle links within the site connecting to existing facilities and surrounding local amenities.

2.13. It is envisaged that a future design would detail the internal street layout comprising a network of interconnected shared surface routes. A shared surface arrangement would support pedestrian, cycling and vehicle movements, and allow residents to move freely within the site.

Development Parking Provision

2.14. Vehicle parking will also be provided within the development site which will include a mix of private and visitor / communal provision, as per WLC's adopted Transportation Development Guidelines. Typically, private spaces will be provided within the plot curtilage and visitor / communal parking within a suitable walking distance of surrounding dwellings on the adopted street network. Provision will be based on the size of dwelling once the development layout has been finalised at the detailed planning stage.

Multi-Recreational Facility

2.15. A proposed multi-recreational facility is being promoted by the Linlithgow Community Development Trust on land adjacent to the leisure facility, to the south of the A706. The proposals include sports pitches, cycle track, changing and facilities building, car park, and new vehicular access to the west of the proposed residential development access locations.

2.16. The landowners of the Avontoun site support the above proposals and, should the leisure site be progressed, every effort will be made to integrate with the site to enhance connectivity between existing infrastructure and core paths.

2.17. The proposed residential development access proposals do not impact on the leisure facilities ability to take access from the A706. Indeed, the development of both sites would assist with changing the A706 from a rural road to an urban road which will increase accessibility and road safety.

3. Local & National Transport Policy

3.1. The planning system is used to make decisions about the future development and use of land in our towns, cities and countryside. It considers where development should happen and how development affects its surroundings. The system balances different interests, including transport, to make sure that land is used and developed in a way that creates high quality, sustainable places.

3.2. To inform this process, National and Local Government have developed a series of policy documents / statements and guidance in terms of transportation. As most forms of transport are fundamental to modern life, whether moving people to school, work, shopping or recreation, the integration of transport and land use is a key element to support economic growth, as well as, social inclusion. In reducing Scotland's carbon footprint, the promotion of public transport is seen as key for new developments with walking and cycling taking an important role.

3.3. The following provides an overview of the current national / central and local government policies and guidelines, which the development proposals and have been reviewed against within this report.

National / Central Government Transport Planning Policy

The Government's White Paper

3.4. The White Paper 'The Future of Transport: A Network for 2030, Executive Summary, Paragraph 6' states that:-

"We need a transport network that can meet the challenges of a growing economy and the increasing demand for travel, but can also achieve our environmental objectives. This means coherent transport networks with:-

- *the road network providing a more reliable and free-flowing service for both personal travel and freight, with people able to make informed choices about how and when they travel;*
- *the rail network providing a fast, reliable and efficient service, particularly for interurban journeys and commuting into large urban areas;*
- *bus services that are reliable, flexible, convenient and tailored to local needs;*
- *making walking and cycling a real alternative for local trips; and*
- *ports and airports providing improved international and domestic links."*

Scottish White Paper

3.5. The Scottish White Paper, 'Scotland's Transport Future, Section 2: Objectives' outlines new objectives for achieving an integrated and sustainable transport system in Scotland:-

"Our objectives are to:-

- *promote economic growth by building, enhancing, managing and maintaining transport services, infrastructure and networks to maximise their efficiency;*
- *promote social inclusion by connecting remote and disadvantaged communities and increasing the accessibility of the transport network;*

- *protect our environment and improve health by building and investing in public transport and other types of efficient and sustainable transport which minimise emissions and consumption of resources and energy;*
- *improve safety of journeys by reducing accidents and enhancing the personal safety of pedestrians, drivers, passengers and staff;*
- *improve integration by making journey planning and ticketing easier and working to ensure smooth connection between different forms of transport".*

Scottish Planning Policy

3.6. National policy for transport is detailed in Scottish Planning Policy (SPP). The relevant aim of planning policy is to support and accommodate new investment and development in locations accessible by a range of means of transport which seek to minimise the impact on existing transport networks and the environment.

Planning Advice Note 75: Planning for Transport

3.7. Planning Advice Note (PAN) 75 accompanies SPP and provides a good practice guide for planning authorities and developers in relation to carrying out policy development, proposal assessment and project delivery. The aim of the document focuses on how planning and transport can be managed; the role of different bodies / professions in the planning process and provides reference to other sources of information.

3.8. Respectively, paragraphs 7 and 24 of the document state the following in terms of transport:

"The intention is for new developments to be user focused and for the transport element to promote genuine choice, so that each mode contributes its full potential and people can move easily between different modes. Consideration should be given to freight logistics as well as person travel."

"Development plan policy should encourage development of significant travel generating proposals at locations which are key nodes on the public transport network that have a potential for higher density development and a potential for mixed use development with an emphasis on high quality design and innovation. These locations should encourage modal shift of people and freight by providing good linkages to rail, walking and cycling networks and with vehicular considerations, including parking, having a less significant role. Mixed use development, for example the inclusion of local shops and services within larger housing developments can encourage multi-purpose trips and reduce overall distances travelled by car by bringing together related land uses."

3.9. Furthermore, maximum travel distances for walking and cycling, as well as, establishing how far people would be prepared to walk to access public transport are contained within PAN 75. Paragraph B13 of the document states the following:-

"Accessibility to public transport services:

- *For accessibility of housing to public transport the recommended guidelines are less than 400m to bus services and up to 800m to rail services."*

"Accessibility to local facilities by walking and cycling:

- *A maximum threshold of 1,600m for walking is broadly in line with observed travel behaviour."*

Designing Streets

3.10. This document is the first policy statement in Scotland for street design and sits alongside Designing Places, setting out government aspirations for design and the role of the planning system in delivering these. Together, they are the Scottish Government's two key policy statements on design and place making. Both documents are national planning policy and are supported by a range of design-based Planning Advice Notes (PANs). Designing Streets updates and replaces PAN 76 New Residential Streets (which is now withdrawn) and, in doing so, marks a distinct shift, raising the importance of street design issues.

3.11. The key policies from Designing Streets that should be considered are as follows:

- *"Street design must consider place before movement.*
- *Street design guidance, as set out in this document, can be a material consideration in determining planning applications and appeals.*
- *Street design should meet the six qualities of successful places, as set out in Designing Places.*
- *Street design should be based on balanced decision-making and must adopt a multidisciplinary collaborative approach.*
- *Street design should run planning permission and Road Construction Consent (RCC) processes in parallel."*

Scottish Executive Development Department: Transport Assessment Guidance (TAG)

3.12. The above document was published in 2012 and seeks to provide a best practice guide to help identify and deal with the likely impacts of development proposals in-terms of transport. As with SPP, this guidance focuses on the overall accessibility of the development. Detailed below are the key aims of a Transport Assessment.

- Reducing the need to travel, especially by private vehicle;
- Reducing environmental impact of development;
- Encouraging accessibility of development / location; and,
- Promotion of measures that influence sustainable travel behaviour.

3.13. TAG provides recommendations for pedestrians, cyclists and public transport accessibility in relation to new development, defining mechanisms for identifying the location and measures.

3.14. Paragraph 2.9 of the document states that:

"Accessibility analysis and location considerations will lead the process of assessment. Person trips will form the platform for all numerical and computational work with numbers associated with car and non-car modes being appropriately addressed in accordance with current policy."

"In many cases, vehicle impacts will still be important and, in terms of the principals involved in the analytical process, will generally follow the well-established IHT procedures…"

"The assessment years will be year of opening or completion for developments with short construction periods (say up to 2 years), and year of opening (or first full year) plus year of completion for developments which are phased over 3 or more years"

Let's Get Scotland Walking - The National Walking Strategy

3.15. Let's Get Scotland Walking is a strategy to increase the number of Scots who are physically active and build on Scotland's outstanding opportunities for walking both in urban and rural areas. The foreword of the document states:

"There are many benefits from getting Scotland walking, including: more people will use active travel more often and will walk more for pleasure and for recreation; children will have safer routes to school and local facilities; older people will feel more connected with their communities; employers will have a healthier and more productive workforce; Scotland will reduce its use of carbon; and local economies will benefit from increased footfall."

3.16. The vision and aims of the document are as follows:

"A Scotland where everyone benefits from walking as part of their everyday journeys, enjoys walking in the outdoors and where places are well designed to encourage walking."

3 Strategic Aims are:

- *Create a culture of walking where everyone walks more often as part of their everyday travel and for recreation and well-being*
- *Better quality walking environments with attractive, well designed and managed built and natural spaces for everyone*
- *Enable easy, convenient and safe independent mobility for everyone*

Cycling Action Plan for Scotland

3.17. The actions in this document aim to increase cycling across Scotland, supporting both new and experienced cyclists. It outlines a framework for delivering the vision, setting out what the Scottish Government will do, what they expect others to do and what outcomes they expect that action will achieve.

3.18. The Scottish Government's purpose is to focus government and public services on creating a more successful country, with opportunities for all of Scotland to flourish, through increasing sustainable economic growth. This first ever Cycling Action Plan for Scotland (CAPS) sets out how cycling, within the wider context of walking and active travel, contributes to this purpose, particularly through improving health, reducing congestion, reducing carbon emissions and providing a good transport alternative to persuade people out of cars.

3.19. Currently 1% of all journeys by Scottish residents are made by bicycle (Scottish Household Survey Travel Diary, 2008), and the Scottish Government would like to see this increased tenfold to 10% by 2020. Although this is an ambitious vision, the Scottish Government believe it is achievable. Around half the short journeys made (under 2 miles) are made by car; many of these could be switched to bike. This Action Plan aims to provide a framework to help create an environment which is attractive, accessible and safe for cycling.

Local Transport Planning Policy

Local Transport Strategy

3.20. Local Transport Strategies (LTS) are intended to set out a local authority's objectives, strategies and implementation plans for the development of an integrated transport system. West Lothian Council's Local Transport Strategy was last released in 2000 and is not viewed as representing current transportation trends or initiatives. The updated LTS was not available for review at the time of writing this report.

Local Development Plan

3.21. The Local Development Plan (LDP) sets out the Local Authority's objectives, strategies and implementation plans for development. The LDP Proposed Plan is a material consideration in the determination of any planning application for development in West Lothian and will in time, when adopted by the council, replace the West Lothian Council Local Plan.

3.22. The Proposed Plan details sites for development throughout West Lothian and identifies a vision for the West Lothian area for development over the next 9 years. The vision includes a greater choice of housing options, better transportation connectivity, more options for sustainable travel choices and more attractive travel routes. To assist with achieving these ambitions, policies have been developed for consideration when assessing planning applications. There are 4 transportation policies which have been identified within the document, as follows:-

- *Policy TRAN 1 – Transport Infrastructure*
- *Policy TRAN 2 – Transportation contribution and associated works*
- *Policy TRAN 3 – Core Paths and Active Travel*
- *Policy TRAN 4 – Advertisements within Key Transport Corridors*

3.23. Consideration has been given to key elements within each of the first 3 transportation policies throughout the production of this report. However, it is considered that TRAN 4 is not applicable in this instance.

3.24. Policy TRAN 1 appears to reflect West Lothian Council's Local Plan Policies TRANS 2, 8, 32 and highlights the importance of development only being permitted where transport impact is acceptable, which requires to be established through an appropriate Transport Assessment.

3.25. Policy TRAN2 focuses on the contribution towards the upgrade of external travel provisions, particularly where there are shortfalls associated with the development. Focus is given to encouraging sustainable travel and the requirement of Travel Plans to support new developments.

3.26. Policy TRANS 3 highlights the need to consider active and sustainable travel within development layouts. Particular focus is given to Designing Streets and Active Travel Plans to introduce safe layouts for all modes of travel.

3.27. West Lothian Council's Local Plan 'West Lothian Local Plan 2009-2015' has been referred to in the preparation of this Transport Statement. The Local Plan recognises the need to implement a modern infrastructure and intends to do so by placing emphasis on encouraging environmentally friendly forms of transport and reducing reliance on private car use. Policy TRAN 2 of the Local Plan covers 'New Developments' and states the following;

"Development will only be permitted where transport impacts are acceptable. This will be established through a Transport Assessment which covers all modes of transport and has been approved by the council."

3.28. In addition, Policies TRAN 8 and 32 respectively of the Local Plan state:

"Developments must give priority to pedestrian and cycle access and provide facilities including traffic calming, controlled crossings, new paths and secure cycle parking.",

"Parking levels for development shall conform to the maximum parking standards set out for different land uses in SPP 17 Planning for Transport (table 2.)(now superseded) Levels below the maximum will be encouraged in line with sustainable objectives where modal evidence supports a reduction."

Summary

3.29. Both Local and National Government policy highlight the need to consider sustainable transportation modes when assessing the likely impacts of the development proposals.

3.30. The promotion of public transport is seen as key to providing an access strategy for new development, with walking and cycling taking an important role. The policies all highlight transport sustainability in terms of social inclusion, environmental impact, successful integration and safety.

3.31. In addition, the Scottish Government document "Transport Assessment Guidance" supports the need for consideration of a sustainable approach to transportation planning.

4. Accessibility

4.1. This section examines the existing sustainable transport network and considers if the proposed development will offer a genuine choice of transport mode; facilitate a reduction in car use and support greater use of walking, cycling and public transport leading to social inclusion, whilst supporting the local economy and promoting better health and fitness.

4.2. The following also provides an overview of the likely travel demand for sustainable modes of travel created by the proposed development. The predicted uplift in walking, cycling and public transport trips is assessed in line with the existing provision and facilities in the surrounding area, with improvements to enhance accessibility by each mode considered, where necessary.

4.3. In line with PAN 75, when assessing a development site, it is good practice to set maximum travel distances for walking and cycling, as well as establishing how far people would be prepared to walk to access public transport. The acceptable walking distances to public transport interchanges and local facilities are as follows:-

- 400m to bus services;
- 800m to rail services; and,
- 1,600m to local facilities / amenities.

4.4. It should be noted that the distances detailed above are recommended acceptable walking distances from a development site to surrounding facilities. However, these distances are often exceeded where services / facilities are attractive and in plentiful supply.

Multi-Modal / People Trip Assessment

4.5. In accordance with the Scottish Government's Document "Transport Assessment Guidance", a people trip assessment has been undertaken to determine the likely travel characteristics of the proposed development, which can be assessed in line with current sustainable travel opportunities.

4.6. To predict the likely travel characteristics of people residing in the proposed development, reference has been made to the 2011 Scottish Census 'Journey to Work' data based on the current travel choice of residents within the west of Linlithgow, namely, areas bordering Mill Road and Kettil'Stoun Mains. The Census output and subsequent multi-modal generation is included within **Appendix C**.

4.7. In generating these travel figures the proposed vehicle generation, was used to reflect the percentage modal split for 'Car Drivers'. The TRICS data used to generate vehicle trips was checked against the census information for the area to ensure a robust scenario. The remaining travel modes were established by proportioning each mode to the 'Car Driver' figures, with the corresponding total (two-way) people mode share trip generation indicated in *Table 1* overleaf:-

Table 1: Proposed Residential Development Modal Split and Mode Share (Two-Way)

Mode of Travel	Modal Split	AM Peak	PM Peak
Underground	0.00%	0	0
Train	9.78%	24	28
Bus / Coach	6.15%	15	17
Taxi / Minicab	0.25%	1	1
Driver Car / Van	**49.34%**	**122**	**140**
Passenger Car / Van	7.51%	19	21
Motorcycle / scooter	0.10%	0	0
Bicycle	0.50%	1	1
Walking	25.40%	63	72
Other	0.96%	2	3
Total	**100%**	**248**	**284**

Minor discrepancies are associated with rounding

4.8. As the mix of housing types and unit sizes is unknown at this stage, people mode share generation detailed above is based on the anticipated upper limit of the site i.e. 210 residential units.

4.9. The census information indicates that approximately 9% of adults work from home in and around the west Linlithgow area which has not been accounted for in the above calculations, ensuring the assessment of each mode is robust. Clearly, those working from home would not impact on the commuter peak periods which would limit the impact on existing transport infrastructure.

Sustainable Travel Opportunities

Walking

4.10. From **Table 1** above, the proposed residential site could generate in the region of 63 and 72 (two-way) trips on foot during both the AM and PM peak periods, respectively. However, it is expected that the level of walking trips could be increased with the location of local amenities, namely, leisure and retail offers.

4.11. Pedestrian access to the site can be provided via various dedicated footway connections that will link to Mill Road, allowing connections to the wider footway network, community facilities and public transport interchanges. Provision of a new footway on the A706 along the site frontage, will be considered through the development phasing, allowing further enhancement of the pedestrian connectivity to the site from the surrounding footway network.

4.12. The scale of the proposed site will result in a moderate vehicle trip generation. However, the introduction of design principles detailed in Designing Streets will promote a permeable development which is considered safe for pedestrians and cyclists, and will encourage the use of sustainable means of travel.

The concept masterplan layout highlights the possibilities that exist to provide a high quality pedestrian and cyclist environment.

4.13. Pedestrian and cycle linkage with the surrounding existing network will be achieved through direct connections to the aforementioned streets, and will satisfy likely desire lines between the development and various local facilities and public transport interchanges.

4.14. Footway connections are available adjacent to the site, with links present along the eastern edge of Mill Road, which are of a good standard and benefit from street lighting, providing access to the various residential areas and retail facilities to the north. There are currently no footway links along the A706 at the site frontage, as would be expected on a rural access road.

4.15. There are existing bus stops located within the acceptable walking distance of 400m from the eastern most section of the proposed site on the A706, adjacent to the A706 / Mill Road / Kettil'Stoun Mains Roundabout and on Mill Road.

4.16. To assist pedestrians with crossing Mains Road, refuge islands are available adjacent to the site frontage as shown in ***Figure 4***. Mill Road hosts a 2m footway on the east side of the carriageway which links to a nearby bus stop and onwards to Main Street, as shown in ***Figure 5***.

Figure 4: Crossing Facilites Mains Rd (A706)

Figure 5: Existing Footway on Mill Road

4.17. The nearest local retail facilities are located on the Mill Road at the junction of Telford Place, approximately 750m from the development site, where there is a small general store and restaurant. There are also further retail facilities available on the A803 Main Street in the form of supermarkets, petrol filling station and retail park, which are within approximately 1km walking distance via Cellar Road public path or Belsyde Crescent to the north. All of the aforementioned retail sites are within the recognised acceptable walking distance of 1,600m to local facilities indicated within PAN 75.

4.18. Linlithgow Primary School and Linlithgow Academy are both located within acceptable walking distance of the eastern most section of the proposed site, approximately 1500m to the east.

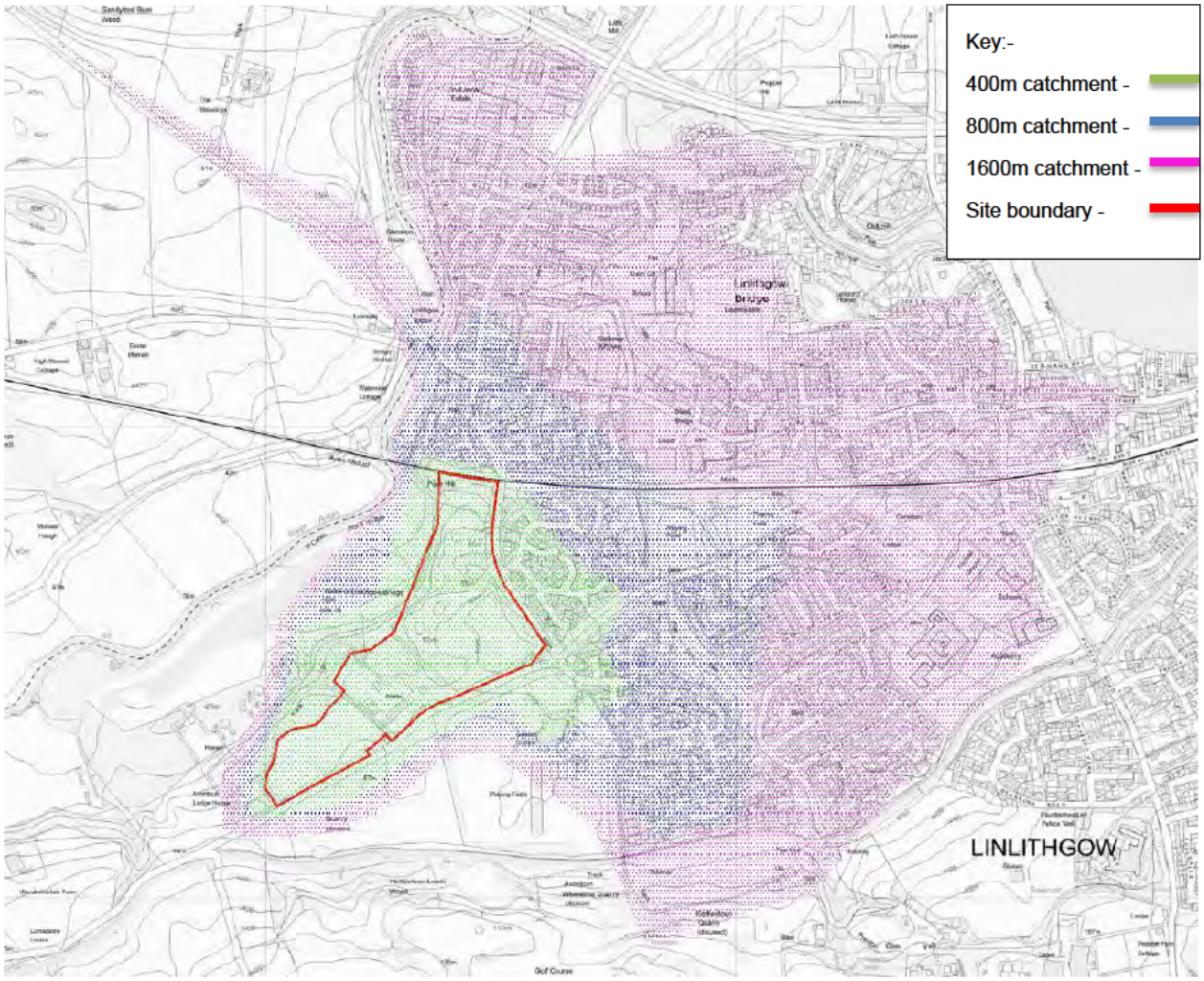
4.19. The surrounding area also benefits from a well-established series of core paths which provide access to the wider Linlithgow area, as follows:

- WL2a – Union Canal Water Path – This 14.5 mile section of the canal goes from the River Avon Aqueduct adjacent to the site through Linlithgow, Winchburgh and Broxburn to Linn's Mill Aqueduct across the River Almond at Loup o Lees near East Calder. The route is readily accessible from the site via paths linking to Kettil'Stoun Mains.
- WL35 – Linlithgow Loch to Union Canal Link – This series of paths and pavements starts from the western end of Linlithgow Loch passing through Linlithgow Bridge to join the canal near to Linlithgow Golf Club. The path is 1.6miles long and is located only 300m from the site boundary.
- WL6 – River Avon Heritage Trail – This 10mile long path starts in Avonbridge and follows the river downstream to Inveravon. The route touches the northern boundary of the site.

4.20. The above core paths provide excellent linkage to the wider settlement of Linlithgow including the town centre and recreation areas such as Linlithgow Loch. The core path plans are included in **Appendix D**.

4.21. In recognition of PAN75, ***Figure 6***, below highlights various walking isochrones relative to the development site and demonstrates the areas that can potentially be reached on foot in relation to a 5 (400m), 10 (800m) and 20 (1,600m) minute walk times.

Figure 6: Walking Isochrones



4.22. **Figure 6** demonstrates that existing east and westbound bus stops on Mains Road and northbound stops on Mill Road are well within the recommended walking distance of 400m to public transport facilities as detailed within PAN75.

Cycle Infrastructure

4.23. The proposed residential development is likely to increase the number of cycling trips on the local road network with up to 1 cycle based trip per commuter peak hour. The key cycle destinations from the residential site will be to education, amenities or public transport facilities for multi-modal travel.

4.24. The majority of the local roads surrounding the development site host speed restrictions of 30mph which is conducive to cycling. The development proposes to alter the A706 to 30mph along the site frontage which will improve the current road environment for cycling. However, there will also be a series of path networks

within the site which will link to Mill Road and Mains Road as alternative routes. In the main, the layout of the existing street network and the low traffic speeds are conducive for cycling.

4.25. Linlithgow Town Centre is located approximately 2km (10minute cycle) north-east of the development site and will host employment opportunities and transport connections for people residing at the proposed development site. A plentiful supply of cycle storage facilities are available at Linlithgow Railway Station supporting multi-modal travel.

4.26. National Cycle Route 754 is located to the south of the proposed allocation site and can be accessed from the A706 at the south-west corner of the site. This route operates along the Union Canal and provides links to Linlithgow Town Centre, Polmont to the north-west, Broxburn to the south, and eventually into Edinburgh.

4.27. The Core Paths network described previously will provide a comprehensive network of recreational cycling routes which will ensure that the proposed development is linked to neighbouring residential and amenity areas.

4.28. Drawing 15065_003 showing the cycle routes in the vicinity of the site is included in **Appendix E** for reference.

4.29. Based on the existing cycle opportunities, connections to cycle routes in the area, and the nature of the local road network, it is considered that the anticipated demand for cycling can be adequately accommodated.

Public Transport

4.30. The proposed development is expected to increase demand for public transport travel with up to 15 (two-way) trips per hour expected during a typical weekday. As a result, it is essential that connections to / from public transport facilities are available to the site. The following reviews the current public transport provision in the area and considers whether or not it will support demand.

4.31. There are existing formal bus stops located on Mill Road and Mains Road, adjacent to the site boundary, which is well within the acceptable walking distance of 400m. At these locations, there are currently 3 bus services that operate linking to local facilities, such as local schools, supermarket, and the town centre. Bus routes are also available which connect to locations outside Linlithgow, including the employment centres of Bathgate, Broxburn, Livingston, and Edinburgh.

4.32. Bus services available on Main Street to the north are approximately 650m from the site which, although in excess of the recommended distance of 400m, would be attractive given the frequency and strategic nature of the routes. First Bus Route 38 provides a regular direct service to Edinburgh and Falkirk which will be key employment areas for residents of the site.

4.33. Details of bus provision available at these stops and surrounding the site is summarised within *Table 2* overleaf, detailing the bus routes and frequency of the buses serving the nearest bus stops.

Table 2: Existing Bus Services

Service	Operator	Route	Frequency (two-way)	
			AM Peak	PM Peak
1	E + M Horsburgh	Linlithgow Town Service	2	2
23	E + M Horsburgh	Queensferry – Newton –Linlithgow – Bathgate	2	2
34	E + M Horsburgh	Broxburn – Uphall – Linlithgow – Bathgate – Birniehill	2	2
38	First	Edinburgh - Falkirk	7	7

4.34. ***Table 2*** above indicates that there are currently 13 services operating at existing bus stops in the vicinity of the site during the AM and PM peak periods. Drawing 15065_004 contained within ***Appendix F*** highlights bus routes and stops within the vicinity of the site.

4.35. The E+M Horsburgh Linlithgow town service provides a looped route of the town which connects the bus stops adjacent to the leisure centre with Linlithgow Cross in 9minutes ensuring the site is accessible to the town centre and the railway station.

4.36. Linlithgow Railway Station is located to the east of the development site within Linlithgow Town Centre. The station is situated on the Glasgow to Edinburgh via Falkirk Line and is served by First ScotRail services from Edinburgh Waverly to Dublane and the services between Glasgow Queen Street and the Fife Circle Line. There are generally 2 services an hour eastbound and westbound during peak periods providing a viable multi-modal trip choice and can be accessed by bus from stops adjacent to the development site.

4.37. The station benefits from 96 car parking spaces and 38 cycle storage facilities, further enhancing multi-modal options.

4.38. It is considered that the available public transport within the area will provide residents with an alternative option to the private car, with timetables accommodating key commuter demand times.

Travel Plan Framework

4.39. The value of school and workplace Travel Plans is now widely accepted, and the majority of local authorities recognise the influence these can have on ensuring efficient travel planning in such environments. This concept can also be applied to residential developments and Travel Plans are becoming increasingly more common. They have evolved from school and work place Travel Plans and become a vital tool in delivering sustainable communities.

4.40. The focus of the Travel Plan is to help deliver a sustainable community and provide informed transport choices for residents and one such method of providing residents with this information is through the production of a Travel Pack or Leaflet. The preparation of such a package will be the responsibility of the developer, however, to ensure that the opportunities for modal shift can be realised, there is a variety of information that could be included in the Travel Pack to residents such as:-

- Information on the 'on and off highway' pedestrian network routes and associated maps;

- Information on the local cycle network routes and associated maps; and,
- Provide up-to-date public transport information including timetables and bus company contact information.

4.41. It is anticipated that by making residents more aware of local public transport facilities the Travel Pack will encourage a modal shift from the private car to more sustainable forms of transport. The provision of a Travel Pack through the planning process for the proposed site, and also by inclusion of a Travel Plan Framework within an accompanying Transport Assessment, would establish the sustainable credentials of the site and ensure appropriate policy compliance once the development was operational.

Summary

4.42. In accordance with local and national transport policy, an assessment of the development proposals has been undertaken for all sustainable modes of travel. This indicates that the current walking and cycling provision in the area is sufficient to accommodate the expected future demand from the site.

4.43. As part of the future internal site design, connections to the existing cycle and footway networks will be provided and links with existing public transport facilities promoted to enhance connectivity with the surrounding area. Finally, a residential travel pack will be distributed to residents upon occupation of each property to highlight sustainable travel options and encourage a shift in mode choice.

4.44. The site is accessible to a range of sustainable modes of transport, integrates well with the surrounding residential area and, is compliant with the principles of Designing Streets, thereby ensuring that it is consistent with the national and local policies highlighted in section 3 of this report.

5. Vehicle Accessibility

5.1. The following presents a review of the surrounding road network and details how the likely level of private car use will be generated.

Surrounding Road Network

5.2. This section of the report describes the most likely routes vehicles will travel to / from the development site to places of settlement, education, work and recreation. The following provides an overview of the key route corridors comprising the agreed study network.

5.3. **Figure 1**, Site Location, identifies the site, surrounding road network and its environs. The site is ideally located for accessing strategic transport links such as the A706, A803 and M9.

5.4. The A706 is a single carriageway of rural standard and provides a route through the south-west of Linlithgow, linking the development site to the town centre in the north, and providing an alternative route to Bathgate and the M8 to the south. The A706 forms the southern boundary of the site and in this location is subject to a 60mph speed limit.

5.5. As described within section 2 of this report, the development will be accessed from two locations off the A706. The access junctions will be three arm priority controlled and will benefit from the proposed relocation of the 30mph to the western edge of the proposed site.

5.6. The A706 joins with Mains Road which is a single lane distributor road linking the south-west area of Linlithgow with the town centre via High Street. The route is of a modern standard throughout the majority of its length. However, it does narrow to single lane with traffic signal control as it passes under the railway line.

5.7. The B8029 Mill Road, which forms the eastern boundary of the site, is a single carriageway serving as a local distributor route and is subject to a 30mph speed limit, benefiting from footways along the eastern edge of the carriageway. This route provides connections to the surrounding residential properties and also retail facilities to the north.

5.8. As with Mains Road, Mill Road passes under the railway line and narrows to a single lane. However, it is subject to priority control given the lower traffic volumes.

5.9. Main Street is the main east – west distributor link in the west of the town, linking Junction 4 of the M9 with the town centre. The street is designed to carry strategic traffic while also providing access to various amenities such as supermarkets and petrol filling stations.

5.10. The strategic nature of the surrounding road network and proposed access arrangements will benefit trips to and from the development site and minimise delay of existing road users. The site is located within the vicinity of Scotland's key arterial road network design to accommodate the daily distribution of traffic across the country.

Development Traffic

5.11. To establish the likely trip rates and subsequent traffic generation associated with the proposals, the TRICS database was utilised. This considered a number of similar residential developments to determine vehicle travel characteristics. ***Table 3*** below summarises the estimated peak hour trip rates and traffic generation for the proposed development, with the full TRICS output data included within ***Appendix C***.

5.12. It is estimated that the site, if fully developed with 210 residential units, will generate a maximum of 122 and 140 (two-way) vehicle movements during the weekday AM (08:00-09:00) and PM (17:00-18:00) peak hours, respectively, which are expected to coincide with the peak background traffic periods.

Table 3: Residential Development Trip Rates &Traffic Generation

210 Residential Units	AM Peak (0800 – 0900)			PM Peak (1700 – 1800)		
	In	Out	Total	In	Out	Total
Trip Rate	0.151	0.432	0.583	0.414	0.254	0.668
Traffic Generation	32	91	122	87	53	140

5.13. As highlighted within **Table 3**, two-way traffic generation associated with the development site is estimated to be approximately 2.4 vehicles per minute during the peak period. Whilst traffic generation is relatively low, a Transport Assessment is likely to be requested by West Lothian Council to support any future planning application and this would provide a detailed review of the operation of the local road network and, be undertaken in conjunction with the Council's Roads and Planning Officers. Given initial observations, coupled with the scale of the proposed development, it is anticipated that the resultant vehicular trip generation could easily be accommodated on the local road network, with any mitigation measures required to support the development identified through the Transport Assessment process.

Vehicular Accessibility Summary

5.14. In summary, the nature of the surrounding road network is considered sufficient to accommodate the likely traffic demands associated with the development proposals. As a result, it is considered that the development site and proposals are in line with current transport planning policy.

6. Summary & Conclusions

Summary

6.1. ECS Transport Planning Limited (ECS) has been commissioned by AWG Property Ltd & Cemex UK Property Ltd (the Applicants) to produce a Transport Statement (TS) in support of a proposed residential development on land adjacent to the A706 and Mill Road, Linlithgow.

6.2. The findings of this study are based on a review of the existing site / local traffic conditions, potential connections to the existing transport infrastructure and have been produced in accordance with the Scottish Government document 'Transport Assessment Guidance'. Consideration has also been given to the requirements of local and national government transport planning policies, including SPP and PAN 75.

6.3. The site can accommodate a phased residential development of up to 210 units, with access proposed via the A706. The development is likely to consist of a mixture of housing types, which will be defined by market demand at the time of any future detailed planning application

6.4. A people trip assessment of the development proposals has been undertaken for all modes of travel which confirms that the walking, cycling and public transport provision in the area is sufficient to accommodate the expected future demand from the site with minor improvements to the footway network. A footway will be introduced on the A706 which will be linked with the internal site infrastructure and ensure direct connections to the existing infrastructure on Mill Road and Mains Road.

6.5. The internal development layout will be designed to link to the existing transport infrastructure and ensure the layout is porous and encourages access by all modes which is consistent with Designing Streets and national / local transport policy.

6.6. The proposed development will extend the urban edge of Linlithgow west which will alter the characteristics of the A706, changing it from rural to urban along the site frontage. Housing would be visible from the road which will introduce a natural traffic calming effect and support the relocation of the 30mph speed limit to the western boundary of the site.

6.7. The proposed access junctions have been designed as simple priority controlled junctions. However, should they require to be improved to ghost island right turn junctions through the planning process, the landowners have the available land on the A706 frontage to ensure delivery.

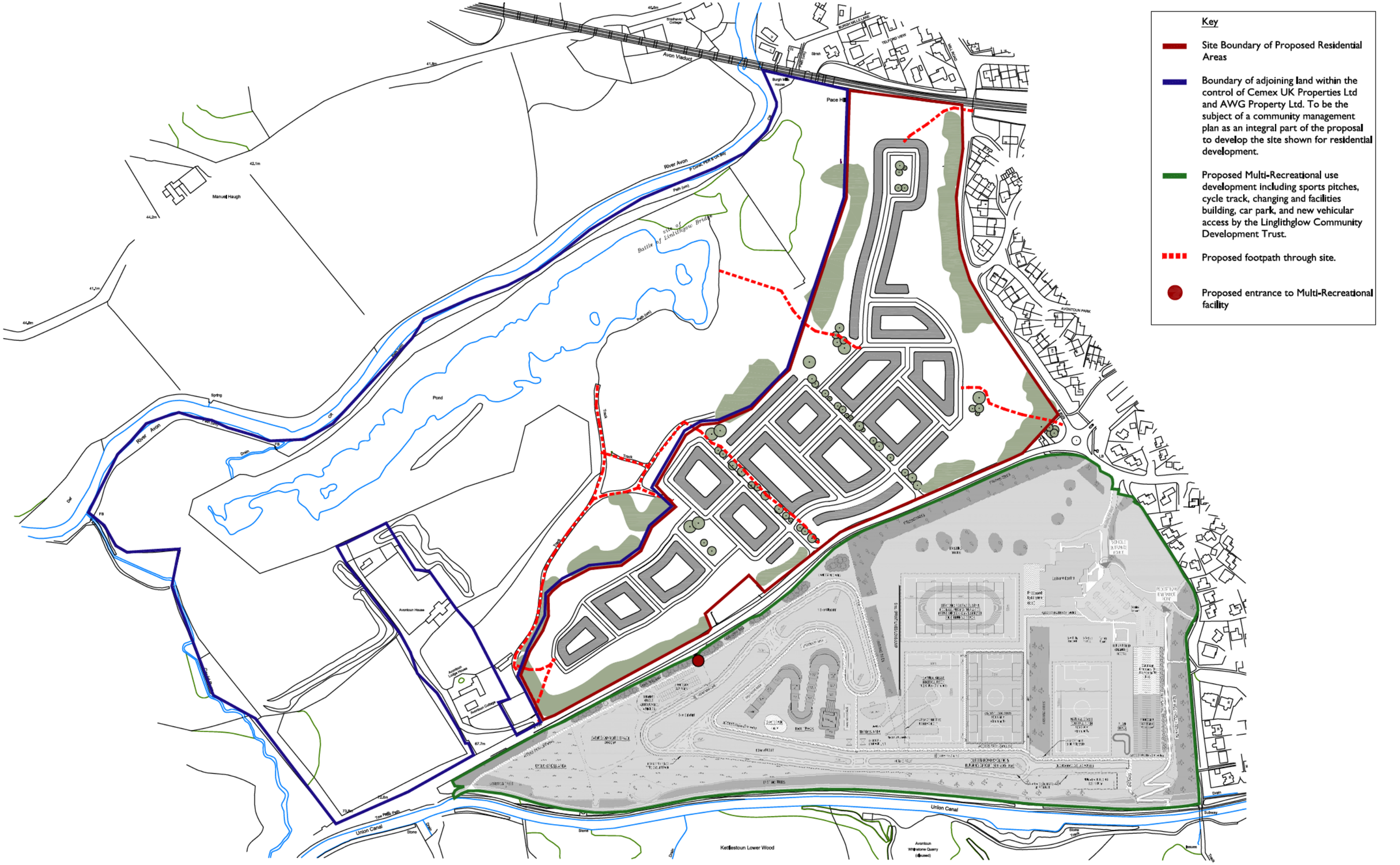
6.8. The western access junction will utilise the existing access junction to the metalworks which will be amended to ensure it is appropriate for residential use. The eastern junction will be formed on the straight section of the A706 on approach to the Mill Road / Kettil'Stoun Mains / A706 roundabout.

Conclusions

6.9. This Transport Statement demonstrates that the development site will be accessible by sustainable modes of travel and integrate effectively with the existing transport network following the introduction of additional non-car promoting measures. In addition, the site can be accessed safely from the adjacent road network by private vehicles without compromising the safety or efficiency of existing road users, therefore, in transportation terms, the proposed development satisfies all policy requirements.

APPENDICES

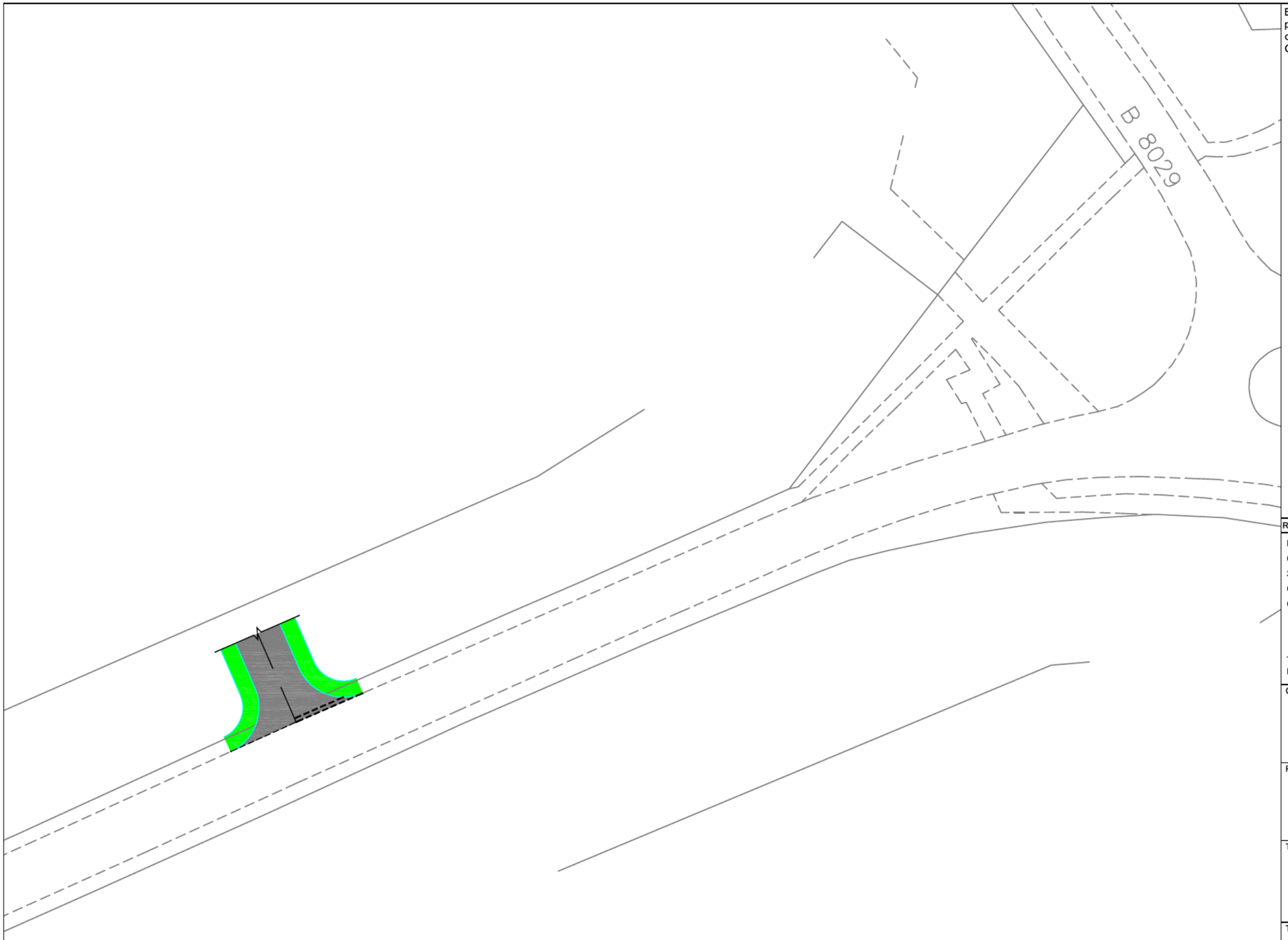
A. Proposed Site Layout



Represenation to the West Lothian Local Development PLan Main Issues Report- Land at Avontoun, Linlithgow

project: Avontoun, Linlithgow		job no: E1440	dwg no: (SK)006	revision: A
client: AWG Property Ltd / CEMEX UK Properties Ltd	status: Site Location Plan	scale: NTS @A3	date: 27.10.15	drawn: SM

B. Indicative Access Arrangement



Note:

New Carriageway

New Verge

REV	DATE	AMENDMENTS	DRAWN	CHK	APP

ECS Transport Planning Ltd
Centrum Offices
38 Queen Street
Glasgow
G1 3DX

ECS TRANSPORT PLANNING LIMITED

Telephone: 0844 443 0934
Email: info@ecstransport.co.uk

Client

AWG PROPERTY LTD & CEMEX UK PROPERTY LTD

Project

PROPOSED RESIDENTIAL ALLOCATION, AVONTOUN, LINLITHGOW

Title

INDICATIVE PRIMARY SITE ACCESS

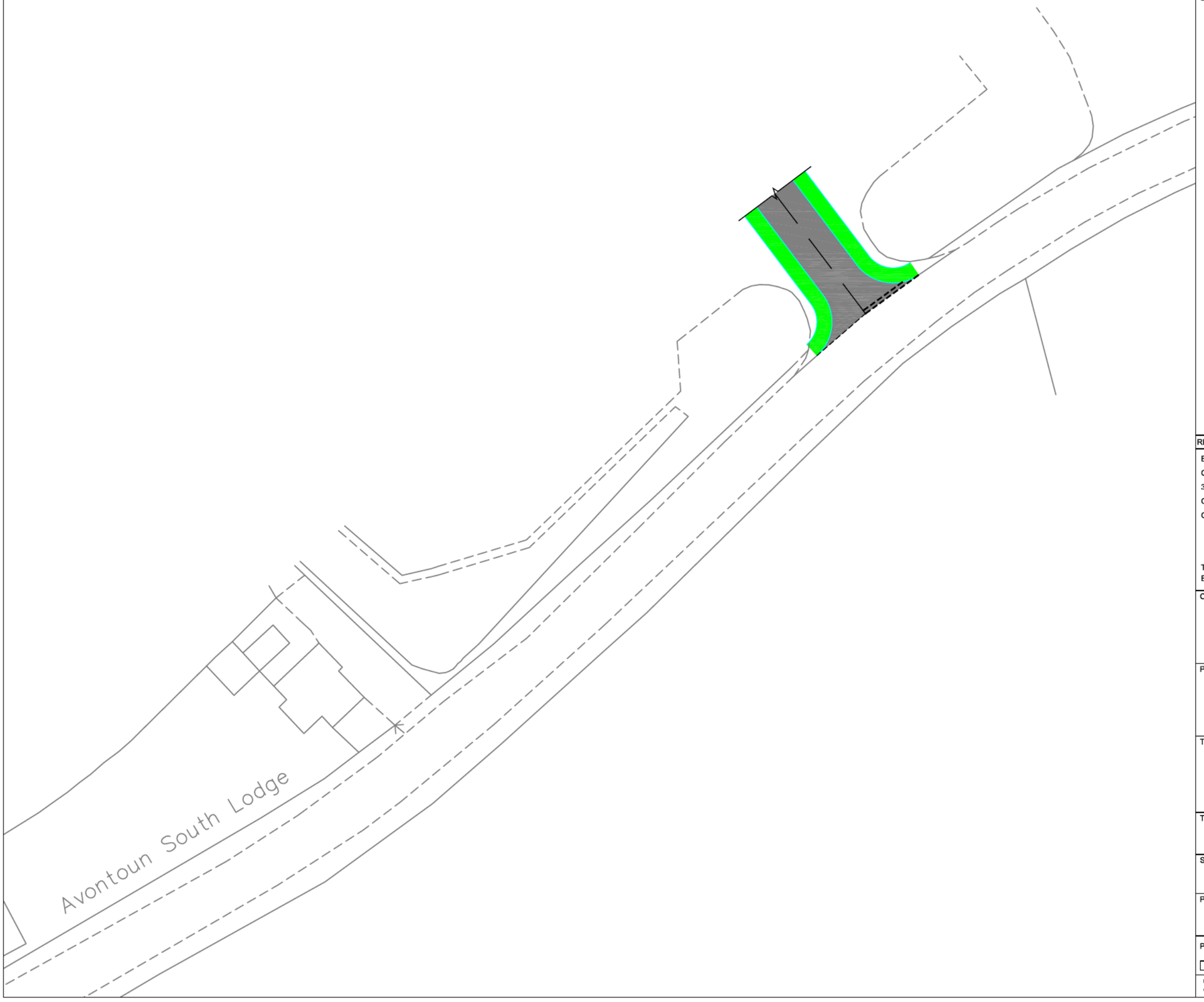
Team	Drawn	Checked	Approved
-	SS	MS	MS

Scale @ A3	Date
1:500	15.11.15

Project No.	Drawing No.	Rev
15065	15065_001	-

Purpose of Issue

☐ Preliminary ☐ For Tender ☐ For Construction
☐ _____ ☑ For Information ☐ For Approval ☐ As Built



Note:

New Carriageway

New Verge

REV	DATE	AMENDMENTS	DRAWN	CHK	APP

ECS Transport Planning Ltd
Centrum Offices
38 Queen Street
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G1 3DX

ECS TRANSPORT PLANNING LIMITED

Telephone: 0844 443 0934
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Client

AWG PROPERTY LTD & CEMEX UK PROPERTY LTD

Project

PROPOSED RESIDENTIAL ALLOCATION, AVONTOUN, LINLITHGOW

Title

INDICATIVE SECONDARY SITE ACCESS

Team	Drawn	Checked	Approved
-	SS	MS	MS

Scale @ A3	Date
1:500	15.11.15

Project No.	Drawing No.	Rev
15065	15065_002	-

Purpose of Issue

☐ _____ ☐ Preliminary ☐ For Tender ☐ For Construction
☑ For Information ☐ For Approval ☐ As Built

C. Census Information, Multi Modal Analysis & TRICS Output

Census 2011

Scotland's Census 2011 - National Records of ScotlandTable QS702SC - Method of travel to work or study (1)All people aged 4 and over who are studying or aged 16 to 74 in employment in th

Datazone 2011 by Transport to place of work or study by Term-time Address (Indicator) and In education or employment

Counting: Person

Filters:

Default Summatior Person
Term-time Address Resident
In education or em In education or employment - Part time students

Transport to place of work or study	All people	Work or study mainly at or from	Underground, metro, light rail or	Train	Bus, minibus or coach	Taxi or minicab	Driving a car or van	Passenger in a car or van	Motorcycle, scooter or moped	Bicycle	On foot	Other
Datazone 2011												
S01013435	544	55	0	61	27	2	234	24	0	3	132	6
S01013436	621	49	0	51	39	2	266	36	1	2	170	5
S01013442	554	46	0	56	35	1	263	53	1	3	92	4
S01013446	455	40	0	26	21	0	216	36	0	2	110	4

(1) Excludes some 4 and 5 year olds (a total of 11,867 in Scotland) who were reported as being in full-time education but for whom no information on their place of study or method of travel to study was provided.

For further information on variables, see www.scotlandscensus.gov.uk/variables

In order to protect against disclosure of personal information, some records have been swapped between different geographic areas. Some cell values will be affected, particularly small values at the most detailed geographies.

15056

Linlithgow (west) - All people aged 4 and over who are studying or aged 16 to 74 in employment in the week before the censu:

Total People	Works or studies mainly at or from home	Not currently working or studying	Underground, tube, metro or light rail	Train	Bus, minibus or coach	Taxi or minicab	Driving a car or van	Passenger in a car or van	Motorcycle, scooter or moped	Bicycle	On foot	Other	TOTAL
2174	190		0	194	122	5	979	149	2	10	504	19	1984
			0.00%	9.78%	6.15%	0.25%	49.34%	7.51%	0.10%	0.50%	25.40%	0.96%	100.00%

Residential Vehicle Trips Only

	IN	OUT	TOTAL
AM	32	91	122
PM	87	53	140

Residential People Trips Only

	IN	OUT	TOTAL
AM	64	184	248
PM	176	108	284

		Underground	Train	Bus	Taxi	Car Driver	Passenger	M/cycle	Bicycle	Foot	Other	Total
AM	IN	0	6	4	0	32	5	0	0	16	1	**64**
	OUT	0	18	11	0	91	14	0	1	47	2	**184**
	TOTAL	**0**	**24**	**15**	**1**	**122**	**19**	**0**	**1**	**63**	**2**	**248**
PM	IN	0	17	11	0	87	13	0	1	45	2	**176**
	OUT	0	11	7	0	53	8	0	1	27	1	**108**
	TOTAL	**0**	**28**	**17**	**1**	**140**	**21**	**0**	**1**	**72**	**3**	**284**

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 03 - RESIDENTIAL
Category : A - HOUSES PRIVATELY OWNED
MULTI-MODAL VEHICLES

Selected regions and areas:

04	EAST ANGLIA		
	SF	SUFFOLK	1 days
05	EAST MIDLANDS		
	LN	LINCOLNSHIRE	2 days
	NT	NOTTINGHAMSHIRE	1 days
06	WEST MIDLANDS		
	SH	SHROPSHIRE	1 days
	WO	WORCESTERSHIRE	1 days
07	YORKSHIRE & NORTH LINCOLNSHIRE		
	NY	NORTH YORKSHIRE	1 days
08	NORTH WEST		
	CH	CHESHIRE	1 days
10	WALES		
	CF	CARDIFF	1 days
11	SCOTLAND		
	FA	FALKIRK	1 days
	FI	FIFE	1 days
	SR	STIRLING	1 days

This section displays the number of survey days per TRICS® sub-region in the selected set

Filtering Stage 2 selection:

This data displays the chosen trip rate parameter and its selected range. Only sites that fall within the parameter range are included in the trip rate calculation.

Parameter: Number of dwellings
Actual Range: 101 to 196 (units:)
Range Selected by User: 100 to 200 (units:)

Public Transport Provision:
Selection by: Include all surveys

Date Range: 01/01/06 to 29/05/13

This data displays the range of survey dates selected. Only surveys that were conducted within this date range are included in the trip rate calculation.

Selected survey days:

Monday	4 days
Tuesday	2 days
Wednesday	2 days
Thursday	1 days
Friday	3 days

This data displays the number of selected surveys by day of the week.

Selected survey types:

Manual count	12 days
Directional ATC Count	0 days

This data displays the number of manual classified surveys and the number of unclassified ATC surveys, the total adding up to the overall number of surveys in the selected set. Manual surveys are undertaken using staff, whilst ATC surveys are undertaking using machines.

Selected Locations:

Suburban Area (PPS6 Out of Centre)	7
Edge of Town	5

This data displays the number of surveys per main location category within the selected set. The main location categories consist of Free Standing, Edge of Town, Suburban Area, Neighbourhood Centre, Edge of Town Centre, Town Centre and Not Known.

Selected Location Sub Categories:

This data displays the number of surveys per location sub-category within the selected set. The location sub-categories consist of Commercial Zone, Industrial Zone, Development Zone, Residential Zone, Retail Zone, Built-Up Zone, Village, Out of Town, High Street and No Sub Category.

Filtering Stage 3 selection:

Use Class:

C3	12 days

This data displays the number of surveys per Use Class classification within the selected set. The Use Classes Order 2005 has been used for this purpose, which can be found within the Library module of TRICS®.

Population within 1 mile:

1,001 to 5,000	1 days
5,001 to 10,000	1 days
10,001 to 15,000	1 days
15,001 to 20,000	6 days
20,001 to 25,000	2 days
25,001 to 50,000	1 days

This data displays the number of selected surveys within stated 1-mile radii of population.

Population within 5 miles:

5,001 to 25,000	1 days
50,001 to 75,000	2 days
75,001 to 100,000	3 days
100,001 to 125,000	4 days
125,001 to 250,000	2 days

This data displays the number of selected surveys within stated 5-mile radii of population.

Car ownership within 5 miles:

0.6 to 1.0	4 days
1.1 to 1.5	8 days

This data displays the number of selected surveys within stated ranges of average cars owned per residential dwelling, within a radius of 5-miles of selected survey sites.

Travel Plan:

No	12 days

This data displays the number of surveys within the selected set that were undertaken at sites with Travel Plans in place, and the number of surveys that were undertaken at sites without Travel Plans.

LIST OF SITES relevant to selection parameters

1 CF-03-A-02 MIXED HOUSES CARDIFF
DROPE ROAD

CARDIFF
Edge of Town
Residential Zone
Total Number of dwellings: 196
Survey date: FRIDAY 05/10/07 Survey Type: MANUAL

2 CH-03-A-06 SEMI-DET./BUNGALOWS CHESHIRE
CREWE ROAD

CREWE
Suburban Area (PPS6 Out of Centre)
No Sub Category
Total Number of dwellings: 129
Survey date: TUESDAY 14/10/08 Survey Type: MANUAL

3 FA-03-A-02 MIXED HOUSES FALKIRK
ROSEBANK AVENUE & SPRINGFIELD DRIVE

FALKIRK
Suburban Area (PPS6 Out of Centre)
Residential Zone
Total Number of dwellings: 161
Survey date: WEDNESDAY 29/05/13 Survey Type: MANUAL

4 FI-03-A-03 MIXED HOUSES FIFE
WOODMILL ROAD

DUNFERMLINE
Edge of Town
Residential Zone
Total Number of dwellings: 155
Survey date: MONDAY 30/04/07 Survey Type: MANUAL

5 LN-03-A-01 MIXED HOUSES LINCOLNSHIRE
BRANT ROAD
BRACEBRIDGE
LINCOLN
Edge of Town
Residential Zone
Total Number of dwellings: 150
Survey date: TUESDAY 15/05/07 Survey Type: MANUAL

6 LN-03-A-02 MIXED HOUSES LINCOLNSHIRE
HYKEHAM ROAD

LINCOLN
Suburban Area (PPS6 Out of Centre)
Residential Zone
Total Number of dwellings: 186
Survey date: MONDAY 14/05/07 Survey Type: MANUAL

7 NT-03-A-03 SEMI DETACHED NOTTINGHAMSHIRE
B6018 SUTTON ROAD

KIRKBY-IN-ASHFIELD
Edge of Town
Residential Zone
Total Number of dwellings: 166
Survey date: WEDNESDAY 28/06/06 Survey Type: MANUAL

LIST OF SITES relevant to selection parameters (Cont.)

8 NY-03-A-06 BUNGALOWS & SEMI DET. NORTH YORKSHIRE
HORSEFAIR

BOROUGHBRIDGE
Suburban Area (PPS6 Out of Centre)
Residential Zone
Total Number of dwellings: 115
Survey date: FRIDAY 14/10/11 Survey Type: MANUAL

9 SF-03-A-03 MIXED HOUSES SUFFOLK
BARTON HILL
FORNHAM ST MARTIN
BURY ST EDMUNDS
Edge of Town
Out of Town
Total Number of dwellings: 101
Survey date: MONDAY 15/05/06 Survey Type: MANUAL

10 SH-03-A-04 TERRACED SHROPSHIRE
ST MICHAEL'S STREET

SHREWSBURY
Suburban Area (PPS6 Out of Centre)
No Sub Category
Total Number of dwellings: 108
Survey date: THURSDAY 11/06/09 Survey Type: MANUAL

11 SR-03-A-01 DETACHED STIRLING
BENVIEW

STIRLING
Suburban Area (PPS6 Out of Centre)
Residential Zone
Total Number of dwellings: 115
Survey date: MONDAY 23/04/07 Survey Type: MANUAL

12 WO-03-A-03 DETACHED WORCESTERSHIRE
BLAKEBROOK
BLAKEBROOK
KIDDERMINSTER
Suburban Area (PPS6 Out of Centre)
Residential Zone
Total Number of dwellings: 138
Survey date: FRIDAY 05/05/06 Survey Type: MANUAL

This section provides a list of all survey sites and days in the selected set. For each individual survey site, it displays a unique site reference code and site address, the selected trip rate calculation parameter and its value, the day of the week and date of each survey, and whether the survey was a manual classified count or an ATC count.

TRIP RATE for Land Use 03 - RESIDENTIAL/A - HOUSES PRIVATELY OWNED
MULTI-MODAL VEHICLES
Calculation factor: 1 DWELLS
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	12	143	0.075	12	143	0.300	12	143	0.375
08:00 - 09:00	12	143	0.151	12	143	0.432	12	143	0.583
09:00 - 10:00	12	143	0.174	12	143	0.238	12	143	0.412
10:00 - 11:00	12	143	0.153	12	143	0.187	12	143	0.340
11:00 - 12:00	12	143	0.172	12	143	0.174	12	143	0.346
12:00 - 13:00	12	143	0.207	12	143	0.185	12	143	0.392
13:00 - 14:00	12	143	0.205	12	143	0.181	12	143	0.386
14:00 - 15:00	12	143	0.181	12	143	0.190	12	143	0.371
15:00 - 16:00	12	143	0.285	12	143	0.198	12	143	0.483
16:00 - 17:00	12	143	0.351	12	143	0.200	12	143	0.551
17:00 - 18:00	12	143	0.414	12	143	0.254	12	143	0.668
18:00 - 19:00	12	143	0.252	12	143	0.224	12	143	0.476
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			2.620			2.763			5.383

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP*FACT. Trip rates are then rounded to 3 decimal places.

Parameter summary

Trip rate parameter range selected:	101 - 196 (units:)
Survey date date range:	01/01/06 - 29/05/13
Number of weekdays (Monday-Friday):	12
Number of Saturdays:	0
Number of Sundays:	0
Surveys manually removed from selection:	0

This section displays a quick summary of some of the data filtering selections made by the TRICS® user. The trip rate calculation parameter range of all selected surveys is displayed first, followed by the range of minimum and maximum survey dates selected by the user. Then, the total number of selected weekdays and weekend days in the selected set of surveys are show. Finally, the number of survey days that have been manually removed from the selected set outside of the standard filtering procedure are displayed.

D. Core Paths

WL2a Union Canal Water Path

Start, route and finish

This 14.5 mile (23km) section of the canal goes from the River Avon Aqueduct through Linlithgow, Winchburgh and Broxburn to Linn's Mill Aqueduct across the River Almond at Loup o Lees near East Calder.

Surfaces and features

The canal varies in width with the aqueducts and the over bridges being the narrowest points. There are a number of weirs which take water from the canal into rivers and burns below. Paddlers share the water with a growing number of canal boats and cruisers as the canal is now open from the Falkirk Wheel to the centre of Edinburgh.

The experience

The canal is a Scheduled Ancient Monument as well as an important linear wildlife habitat. With two magnificent aqueducts and good views of Linlithgow and the scheduled shale bings between Winchburgh and Broxburn the canal has a lot to offer as a tourism attraction as well as being valued by local people.

Opportunities and constraints

With the canal used by motor vessels and anglers as well as paddlers there is a potential for conflict. The paddlers enjoy the right of responsible access under the SOAC whilst the others need a licence.

WL2b Union Canal Towpath

Start, route and finish

This 14.5 mile (23km) section of the canal towpath goes from the River Avon Aqueduct through Linlithgow, Winchburgh and Broxburn to Linn's Mill Aqueduct at Loup o Lees.

Surfaces and features

The towpath and some links to it were upgraded as part of the Millennium Link Project. It is a whindust path, generally between 1 – 1.5 metres wide.

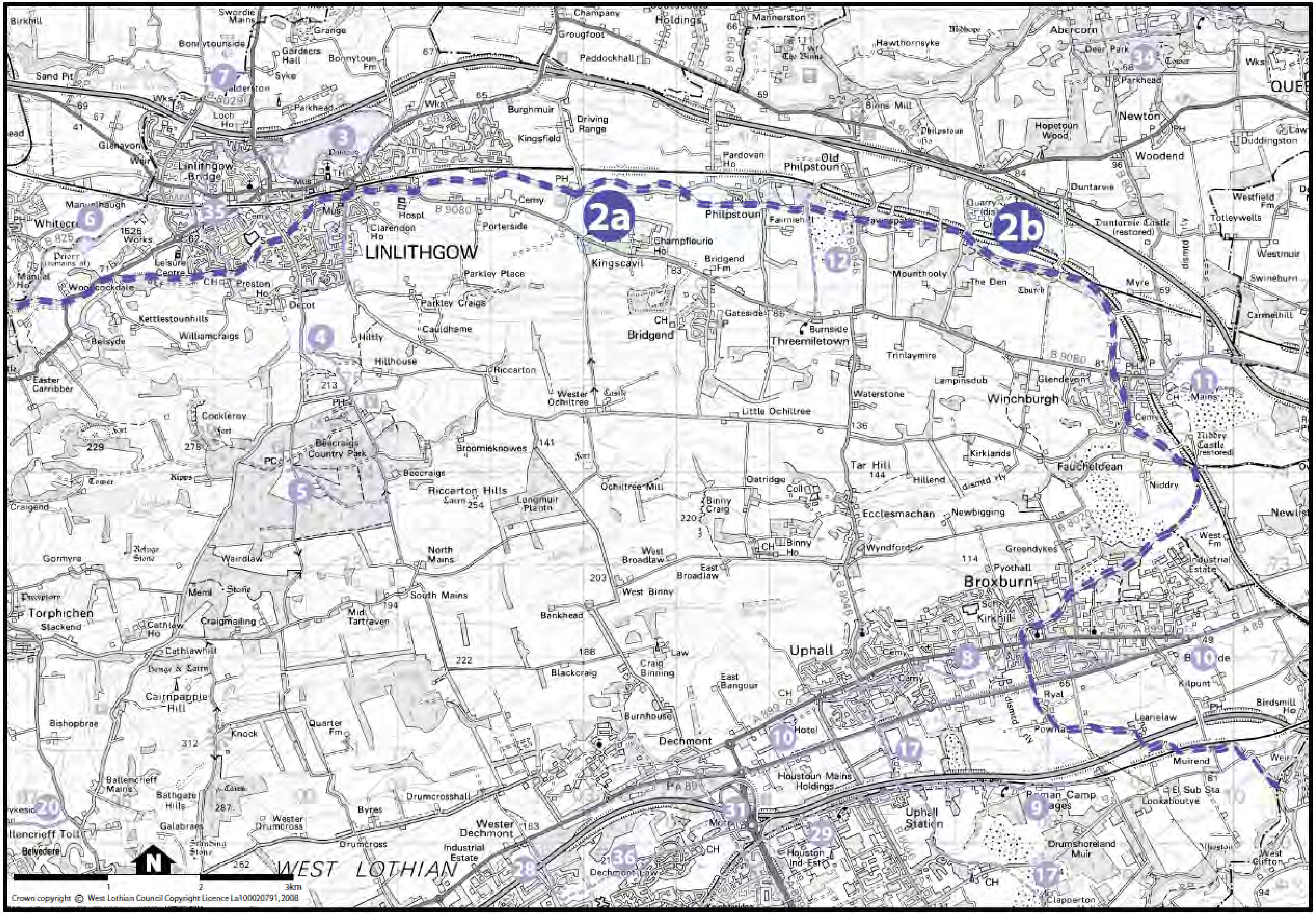
The experience

The canal is a Scheduled Ancient Monument as well as an important linear habitat. With two magnificent aqueducts and good views of Linlithgow and the scheduled shale bings between Winchburgh and Broxburn the canal has a lot to offer as a tourism attraction as well as being valued by local people.

Opportunities and constraints

A recent study, commissioned by SNH, determined that the towpath width and the limited clearance under the many bridges are too narrow and low to allow horse access. However, the popularity of the path for walkers, runners and cyclists has led to incidents and complaints. The development of the Winchburgh/ East Broxburn CDA, with between 3-5,000 new houses, will bring even greater pressure that must be managed or diverted elsewhere. There is also a problem with motor bikes using the towpath, particularly in the vicinity of Broxburn.

There is still a need for some path links to the towpath to be developed or upgraded. This is particularly important in settlements through which the canal passes.



WL3 Linlithgow Loch Circular

Start, route and finish

A 2.3 mile (3.7km) long circular path that can be accessed at a number of points.

Surfaces and features

The western and southern shore sections are tarmaced and in places quite narrow. The south eastern section links the Peel with the A803 and then follows the roadside pavement to rejoin the loch at Fiddler's Croft. The northern shore is generally whindust. The eastern side, through Fiddler's Croft, is currently unsurfaced and can be muddy at times.

There are kissing gates at the entrance to Fiddler's Croft. There are information boards and interpretive boards at points around the loch.

The experience

The southern path through the Peel is often very busy during the summer and at weekends. The northern shore provides stunning views of Linlithgow Palace, the town and the Bathgate Hills beyond. The loch is popular with visitors, birdwatchers and photographers throughout the year.

Opportunities and constraints

The majority of this path passes over a Scheduled Ancient Monument and the northern shore is a Site of Special Scientific Interest. Therefore, any improvements will need to be carefully designed. Historic Scotland, with council support, plans to undertake some widening of the north shore path with some associated drainage and vegetation management. It is planned to undertake work in 2008 to upgrade the Fiddler's Croft section to provide users with a better path and reduce pressure across the area as people currently try to find a dry route through.

WL7 Fisher's Brae

Start, route and finish

This path heads north from the B8028. Only the initial 100 mteres is in West Lothian before it crosses into Falkirk District. The path finishes on the southern outskirts of Bo'ness in Falkirk District.

Surfaces and features

A recently upgraded stone path – work undertaken by Falkirk Council.

The experience

An historic route which is now well used by walkers, cyclists and horse riders and is popular with residents of Linlithgow and Linlithgow Bridge.

Opportunities and constraints

The southern end of the paths is on a narrow road which is busy at peak times. Consideration may need to be given to establish roadside path to give a safe link to Linlithgow Bridge but any work may be beyond the period of this first plan.

WL35 Linlithgow Loch to Union Canal Link

Start, route and finish

This series of paths and pavements starts from the western end of Linlithgow Loch passing through Linlithgow Bridge to join the canal near to Linlithgow Golf Club. This path is 1.6 miles (2.6km) long and links WL3 with WL2b.

Surfaces and features

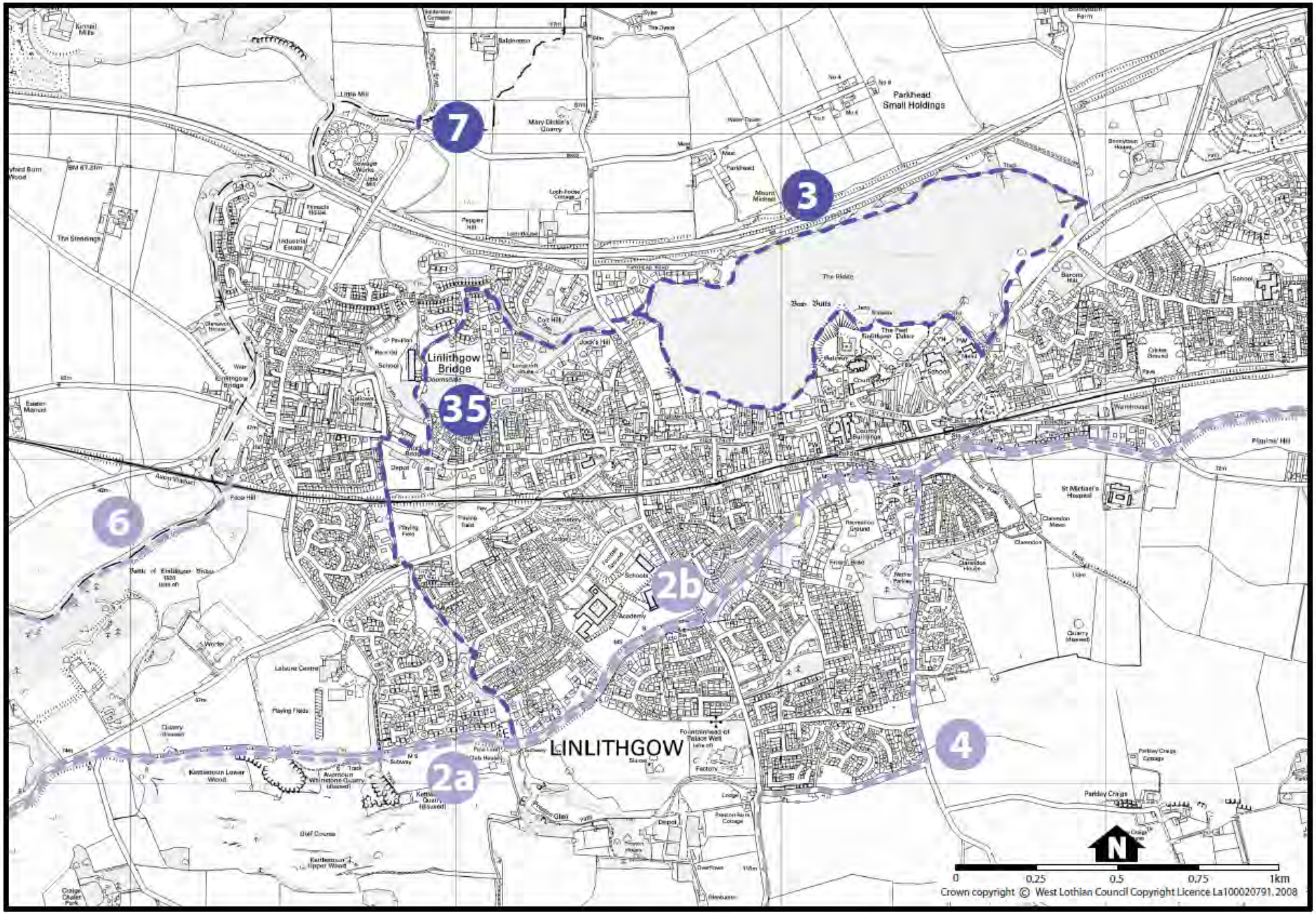
The path is variable in width and surface. Although generally paved or tarmaced there is a section from the railway line underpass to Mains Road which is an ash track.

The experience

Generally an urban route and therefore popular for providing short cuts to public transport, shops, work and school. However, with the loch and canal being the most attractive and accessible areas around Linlithgow, people use it for walking and cycling for pleasure and health.

Opportunities and constraints

It is variable in width and surface. More signposting is required and the surface upgraded in places and this will be done within the plan period.


7
3
35
6
2b
2a
4
LINLITHGOW
Linlithgow Bridge
Parkhead Small Holdings
N
0
0.25
0.5
0.75
1km
Crown copyright © West Lothian Council Copyright Licence La100020791, 2008

WL6 River Avon Heritage Trail

Start, route and finish

This 10 mile (16km) long path, of which three sections of path totalling 3.3 miles (5.3km) are in West Lothian, starts in Avonbridge, in Falkirk District, and follows the river downstream to Inveravon, which is also in Falkirk. The path crosses the river at four points. The downstream sequence of the three sections of West Lothian are shown on F1, F2 and F3 opposite.

Surfaces and features

On the West Lothian sections the path is generally unsurfaced with some timber boarding over wet areas. The path is narrow and there are some steep gradients. The four bridges across the River Avon working downstream are at Strath Mill, Wallace's Cave, Carriber Bridge, and the Union Canal Aqueduct, there is also a smaller bridge across the Lin Mill Burn.

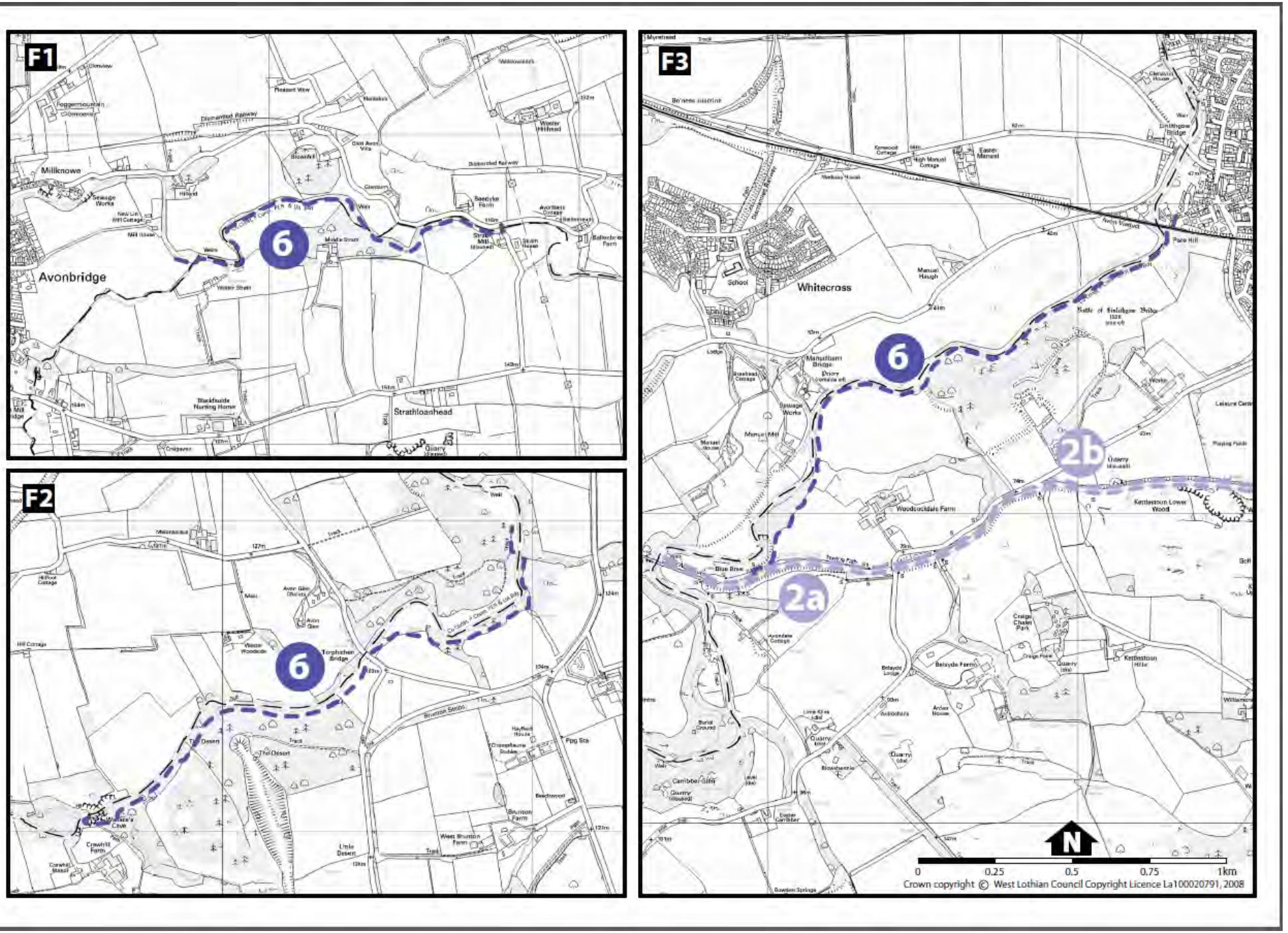
For the last 10 years the council, in conjunction with Falkirk Council, has been upgrading the path to make it more accessible. Signposting and waymarking is provided and a leaflet is available from the councils and local outlets.

The experience

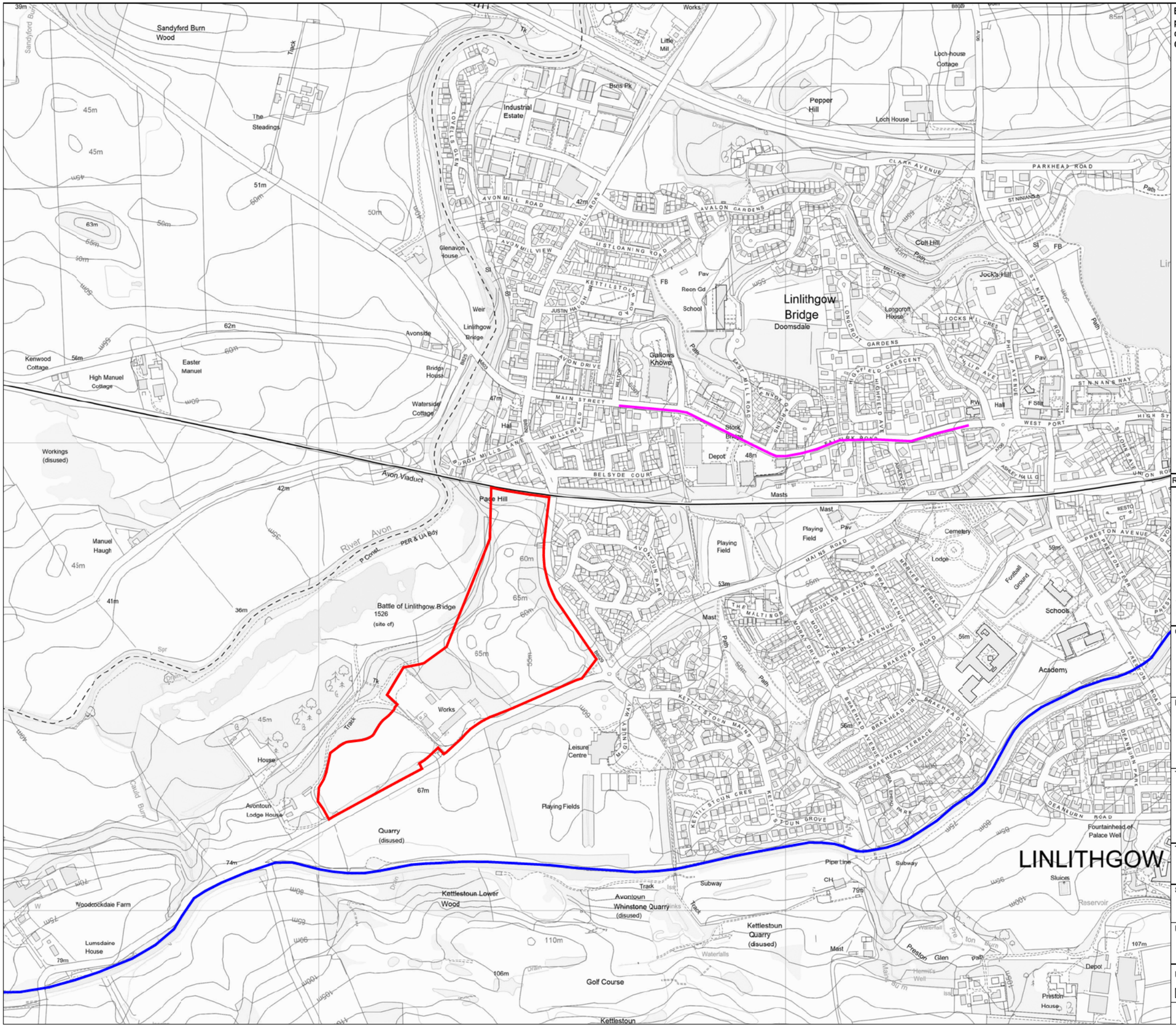
A very attractive walk through gorge woodland. The most spectacular crossing is where the path rises to join the Union Canal towpath to cross the river using the canal aqueduct. The Carriber Bridge, which is between the Torphichen Bridge and Muiravonside Country Park, has been recently constructed and is an innovative and impressive timber structure. This link to the canal also opens up circular walk opportunities from Linlithgow Bridge.

Opportunities and constraints

As the use of the path increases the need for improvement of certain areas may become more apparent. However, the path is difficult to reach to undertake surfacing work as this is very much a rural path some users are likely to resist much upgrading. The major improvements could well focus on providing more path link to the trail particularly from the Bathgate Hills.


F1
Millknowe
Avonbridge
Strathloanhead
6
F2
6
F3
Whitecross
6
2b
2a
N
0
0.25
0.5
0.75
1km
Crown copyright © West Lothian Council Copyright Licence La100020791, 2008

E. Cycle Route Information



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Note:

National Cycle Route 754

Local Cycle Route

REV	DATE	AMENDMENTS	DRAWN	CHK	APP

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Email: info@ecstransport.co.uk

Client

AWG PROPERTY LTD & CEMEX UK PROPERTY LTD

Project

PROPOSED RESIDENTIAL ALLOCATION, AVONTOUN, LINLITHGOW

Title

CYCLE ROUTES

Team	Drawn	Checked	Approved
-	SS	MS	MS

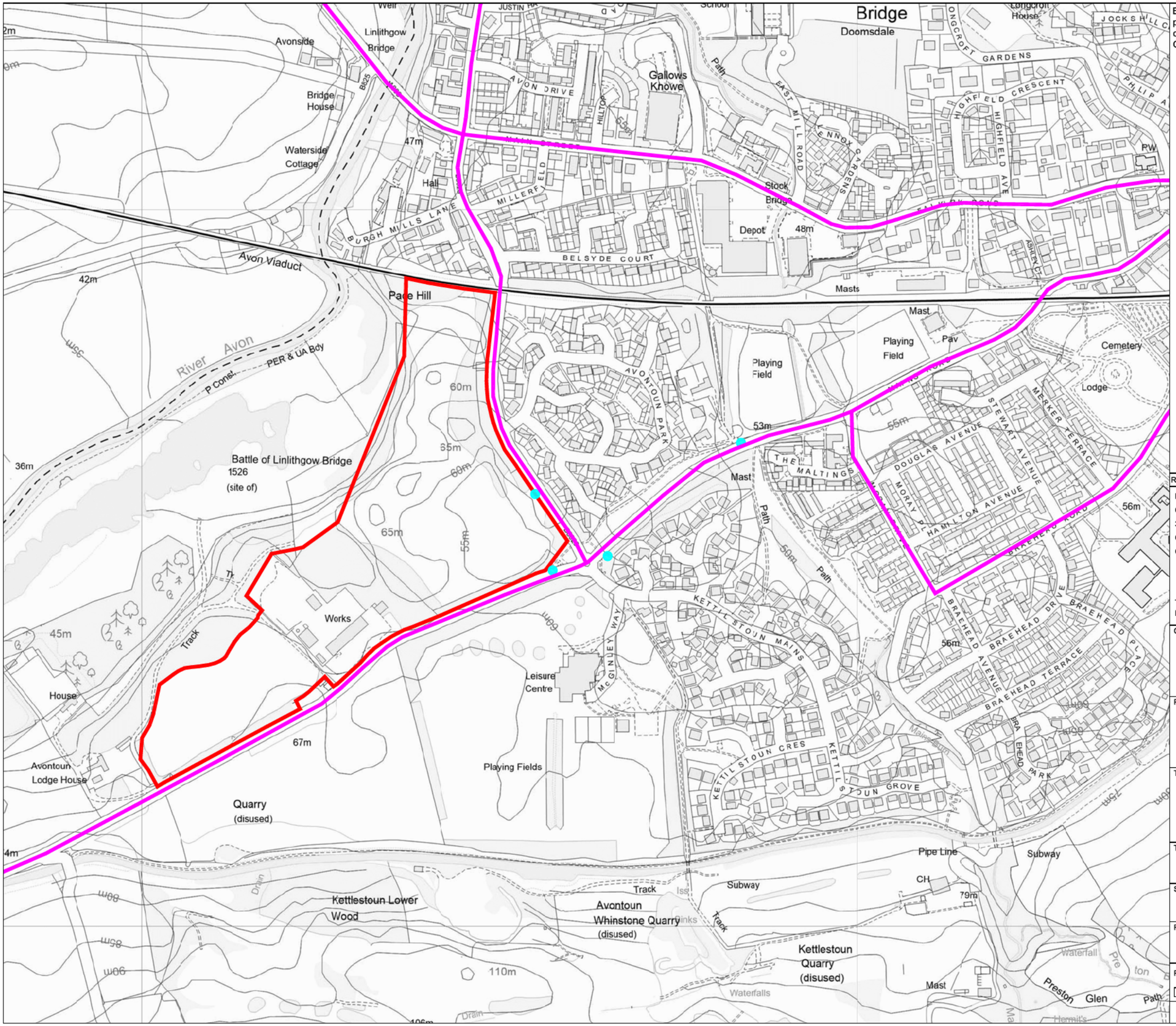
Scale @ A3	Date
1:500	15.11.15

Project No.	Drawing No.	Rev
15065	15065_003	-

Purpose of Issue

☐ Preliminary ☐ For Tender ☐ For Construction
☐ _____ ☑ For Information ☐ For Approval ☐ As Built

F. Public Transport Information



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Note:

Bus Routes

Bus Stops

REV	DATE	AMENDMENTS	DRAWN	CHK	APP

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Project

PROPOSED RESIDENTIAL ALLOCATION, AVONTOUN, LINLITHGOW

Title

PUBLIC TRANSPORT

Team	Drawn	Checked	Approved
-	SS	MS	MS

Scale @ A3	Date
1:500	15.11.15

Project No.	Drawing No.	Rev
15065	15065_004	-

Purpose of Issue

☐ Preliminary ☐ For Tender ☐ For Construction
☐ _____ ☑ For Information ☐ For Approval ☐ As Built