ROSS WOODS ARCHITECTS
ARCHITECTURE • PLANNING SUPERVISION • FACILITIES MANAGEMENT

DESIGN STATEMENT 23.11.18

RE: PROPOSED PLANNING IN PRINCIPLE, 90 HOUSES & VILLAGE SHOP, OFF SLAMANNAN ROAD, LIMERIGG, FALKIRK.

As within the current Falkirk Local Development Plan 2015 – Rural South – Limerigg – H66 – Slamannan Road 1, Limerigg, we are formally lodging a ***Planning in Principle Application for 90 houses and a Village shop*** (site area of 6 hectares)***.***

Pre-Application Consultation

We have now worked through the Pre-Application Notice period (PRE/2018/0013/PAN) and had the public meeting (see minute below) and incorporated the villagers views where applicable.

Drawings and Reports Submitted.

1_P001_rE – OS/Site Plan – A1 – 1:1250
2_Fairhurst Engineers Roundabout Layout – 126811-ST-7001
3_A Flood Risk Analysis.
4_A Peat Management Assessment.
5_A Coal Mining Risk Assessment.
6_A full Traffic Statement

Minutes and Acknowledgements Submitted.

7_Pre-Application Notice Public Meeting 31.10.18
8_Planning, Roads and Pathways Meeting 01.11.18
9_New Local Plan Representation Acknowledgement 27.11.18

Layout Design.

The formal internal housing and road layout design will be done at a Full Planning application stage and will demonstrate its accordance with “Designing Streets Policy” and the “Design Streets Toolkit”.

Road Access.

The new road access will be via a new roundabout as specified in the Traffic Report produced by Fairhurst Engineering. This will provide the main access into the housing site, keep an option open for an access into the field opposite, a pedestrian crossing from the existing pathway to the west of the site and act as a natural speed calming measure along the main road.

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Pathways.

A notional route through the site has been indicated on the site drawing P001, from the existing pathway to the west of the site across the site to the existing pathways to the east and south of the site boundaries.

New Local Plan Representation

We have formally lodged representation against the new Local Plan proposals to remove this site from the plan (see "Local Plan Representation Acknowledgement 27.11.18" attached).

Conditioning.

We would request that the following be Conditioned for this Planning in Principle application:

1. An energy statement as per Policy D04 of the Falkirk Local Development Plan (FLDP) "Low and Zero Carbon Development and supporting supplementary guidance SG15.
2. An agreement on developer contributions to education in accordance with Policy 1NF05 of the FLDP and supplementary guidance SG10 "Education and New Housing Development".
3. Open space to be to Council's specification.
4. A full landscape proposal including 6m buffer planting to the watercourse edge.
5. Full drainage details including SUDS (location of the SUDS pool indicated on the site plan (P001_rE) at the lowest point of the site).
6. An agreement of the provision of 25% affordable housing on site.

Please contact me directly on the details below if further clarification or information is required.

Regards,

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Slamannan Road, Limerigg

Flood Risk Assessment

May 2019









FAIRHURST

CONTROL SHEET

CLIENT: Robert MacDonald Clarkston

PROJECT TITLE: Slamannan Road, Limerigg

REPORT TITLE: Flood Risk Assessment

PROJECT REFERENCE: 126811

DOCUMENT NUMBER: 126811/G/W/01

STATUS: **FINAL**

Issue & Approval Schedule	Issue 1	Name	Signature	Date
	Prepared by	Jonathan Mullen	Signed copy held on file	16/05/19
	Checked by	Jennifer MacDonald	Signed copy held on file	16/05/19
	Approved by	Kenneth Barr	Signed copy held on file	16/05/19

Revision Record	Rev.	Date	Status	Description	Signature	
	1				By	
					Check	
					Approve	
	2				By	
					Check	
					Approve	

This document has been prepared in accordance with procedure OP/P02 of the *Fairhurst Quality and Environmental Management System*

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1. Introduction

Fairhurst was appointed by Robert MacDonald Clarkston to carry out a Flood Risk Assessment (FRA) for a residential development site at Slamannan Road, Limerigg. The site is currently undeveloped with an OS grid reference NS 856 713.

A plan of the location of the development site in relation to the local area is provided in Figure 1.

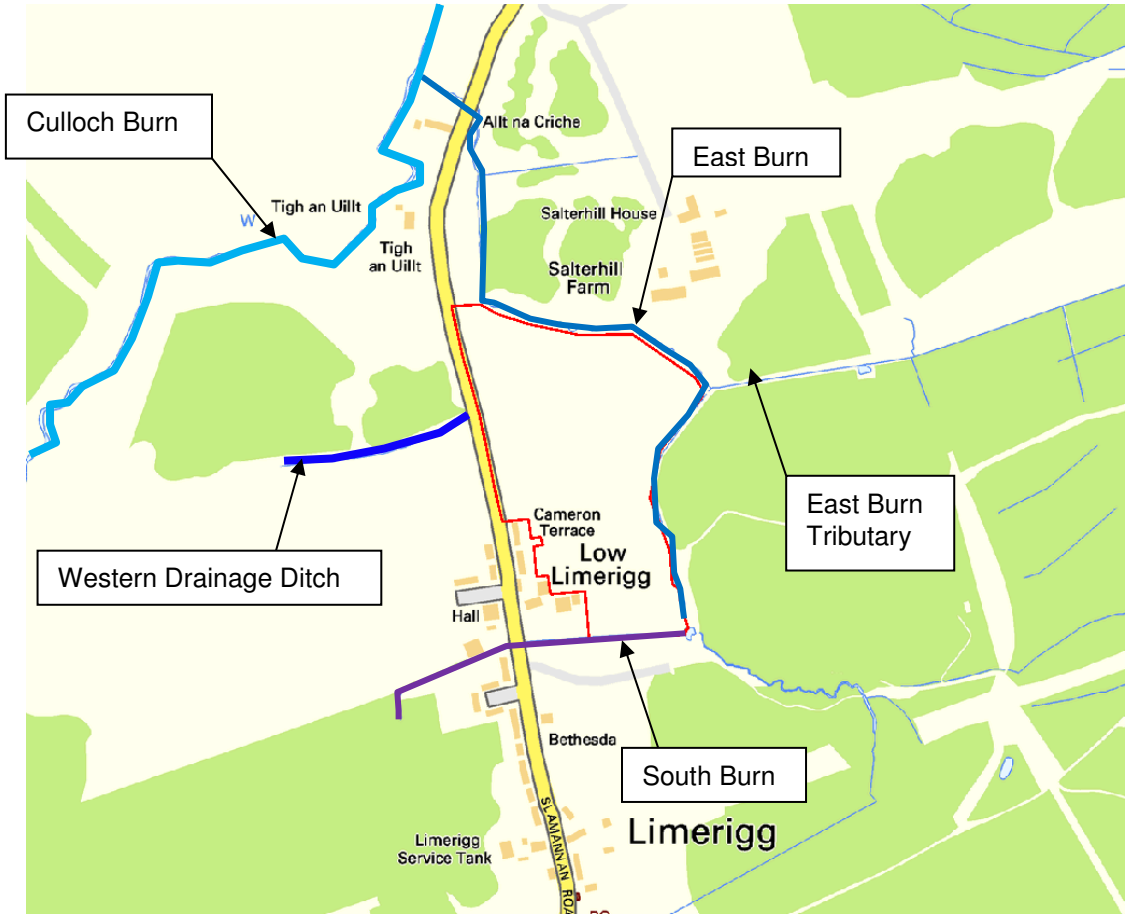


Figure 1: Site Location Plan

This report forms a qualitative assessment of flood risk to the proposed development of the site as required by Scottish Planning Policy (SPP). Flood risk at the site has primarily been assessed in relation to fluvial flow and overland flow; other potential sources of flood risk have also been considered.

2. Planning Policy

2.1 National Planning Policy

In consideration of planning applications, planning authorities require to be satisfied that due account has been taken of Scottish Planning Policy (SPP). It is necessary to show that adequate protection against flooding exists or can be provided for a proposed development and that the development does not increase any existing flood risk to persons or property upstream and downstream.

The flood risk framework guiding development sets out three categories of coastal and watercourse flood risk, together with guidance on surface water flooding, and the appropriate planning approach for each (the annual probabilities referred to in the framework relate to the land at the time a plan is being prepared or a planning application is made).

- ***Little or No Risk*** *- annual probability of coastal or watercourse flooding is less than 0.1% (1:1000 years)*
    - *No constraints due to coastal or watercourse flooding.*
- ***Low to Medium Risk*** *- annual probability of coastal or watercourse flooding is between 0.1% and 0.5% (1:1000 to 1:200 years)*
    - *Suitable for most development. A flood risk assessment may be required at the upper end of the probability range (i.e. close to 0.5%), and for essential infrastructure and the most vulnerable uses. Water resistant materials and construction may be required.*
    - *Generally not suitable for civil infrastructure. Where civil infrastructure must be located in these areas or is being substantially extended, it should be designed to be capable of remaining operational and accessible during extreme flood events.*
- ***Medium to High Risk*** *- annual probability of coastal or watercourse flooding is greater than 0.5% (1:200 years)*
    - *May be suitable for:*
        - *residential, institutional, commercial and industrial development within built-up areas provided flood protection measures to the appropriate standard already exist and are maintained, are under construction, or are a planned measure in a current flood risk management plan;*
        - *essential infrastructure within built-up areas, designed and constructed to remain operational during floods and not impede water flow;*
        - *some recreational, sport, amenity and nature conservation uses, provided appropriate evacuation procedures are in place; and*
        - *Job-related accommodation, e.g. for caretakers or operational staff.*
    - *Generally not suitable for:*
        - *civil infrastructure and the most vulnerable uses;*
        - *additional development in undeveloped and sparsely developed areas, unless a location is essential for operational reasons, e.g. for navigation and water-based recreation, agriculture, transport or utilities infrastructure (which should be*

designed and constructed to be operational during floods and not impede water flow), and an alternative, lower risk location is not available; and

- *new caravan and camping sites.*

- *Where built development is permitted, measures to protect against or manage flood risk will be required and any loss of flood storage capacity mitigated to achieve a neutral or better outcome.*
- *Water-resistant materials and construction should be used where appropriate. Elevated buildings on structures such as stilts are unlikely to be acceptable.*

Surface Water Flooding

- *Infrastructure and buildings should generally be designed to be free from surface water flooding in rainfall events where the annual probability of occurrence is greater than 0.5% (1:200 years).*
- *Surface water drainage measures should have a neutral or better effect on the risk of flooding both on and off the site, taking account of rain falling on the site and run-off from adjacent areas.*

2.2 Local Planning Policy

Falkirk Council's "Flooding and Sustainable Urban Drainage Systems - Supplementary Planning Guidance Note" provides extensive guidance on development and flood risk. The extract provided below details when and how a flood risk assessment should be undertaken:

> *"If any part of the proposed development site lies within a natural flood plain and/or is close to a burn, stream, river, estuary or open coast which has a history of over-topping and flooding, or even if there is a hint or a doubt about local incidences of flooding within the vicinity both downstream and immediately upstream of the proposed development, there should be justification if a properly formulated flood risk assessment is not to be prepared. A flood risk assessment should be submitted as part of the outline planning application for the proposed development. A further assessment may be required to accompany detailed proposals. A flood risk assessment should be undertaken in accordance with the recently revised "Technical Flood Risk guidance for Stakeholders" available on SEPA's website at: http://www.sepa.org.uk/flooding/flood_risk.aspx*
>
> *Consideration should also be given to the possibility of flood risk from sources such as ground water, reservoirs and dams, canals, cessation of mine-water pumping and the inadequate capacity of culverts, which convey watercourses - no possible source of flooding should be ignored."*

This flood risk assessment has been carried out in accordance with this guidance in addition to SPP.

3. Development Site

3.1 Existing Conditions

3.1.1 General Background

The proposed development site covers an area of approximately 6.1ha and is located on the east side of Slamannan Road immediately north of the village of Limerigg, Falkirk. The proposed site is currently undeveloped and aerial imagery shows it to be vegetated in line with rough grazing. To the east of the development site there is a small watercourse that discharges to the Culloch Burn approximately 160m to the north of the site.

Phase 1 LIDAR is available for the site and the surrounding areas, and a topographic survey of the site was carried out in December 2018 (see Appendix A). Levels on the site are found to vary between around 198mAOD in the south and 177mAOD in the north of the site with the site generally sloping down to the north.

3.2 Water Features

East Burn

The watercourse to the east of the site flows adjacent to the site boundary. It drains a catchment which extends to the south and east of the site. At the north-east corner of the site a small tributary, referred to here as the East Burn Tributary, discharges to the East Burn via a 750mm dia. culvert. Downstream of the site, the watercourse makes its way north via a shallow, straight channel before flowing under Slamannan Road via a 1150mm diameter culvert. Based on Phase 1 LiDAR Contours the East Burn has a total catchment area of 1.29km^2 at the Slamannan Road culvert.

South Burn

A small watercourse is shown on OS mapping to run along the southern boundary of the site, discharging to the East Burn at the south-east corner of the site. It is culverted under Slamannan Road to the south west of the site. The outfall of the culvert could not be identified during a site visit conducted by Fairhurst in March 2019, nor could it be identified by Phoenix Surveys at the time of the topographic survey. Downstream of Slamannan Road, channel definition is poor and flow crosses an overgrown and marshy area before entering a small culvert of recent construction which routes the watercourse under a residential property. The culvert discharges to a well-defined channel which runs the length of the southern site boundary before it discharges to the East Burn. The South Burn has a catchment of approximately 20.9ha at the East Burn confluence.

Western Drainage Ditch

A drainage ditch is shown on OS mapping to sink adjacent to the western edge of Slamannan Road opposite and upslope of the development site. It is not known if this ditch enters a culvert under the road however SEPA suggest that it may be culverted beneath the site as discussed in Section 3.4.3 below. The western drainage ditch has a catchment of approximately 4.3ha at the point it is shown to sink. The inlet to the culvert in question could not be identified by Fairhurst at the time of the March 2019 site visit, or by Phoenix Surveys during the topographic survey.

Culloch Burn

The Culloch Burn has a catchment of approximately 3.4km^2 and flows in a north easterly direction approximately 160m from the north-west corner of the development site. Levels in the watercourse adjacent to the site are no less than 2m below the lowest part of the site and the watercourse is separated from the site by a ridge of high ground raised approximately 7m above the bed level of the watercourse.

3.3 Proposed Development

The layout of the proposed development was not confirmed at the time of writing. The Planning in Principle application is for 90no. residential units, 1no. retail unit and associated access roads, footpaths, parking, a SUDS pond and landscaped areas. Vehicle access to the site will be from Slamannan Road.

3.4 Sources of Flood Risk Information

3.4.1 SEPA Flood Maps

SEPA's flood maps provide guidance on the possible extent, depth and velocity for different likelihoods ('High, Medium and Low') of three different sources of flooding (River, Coastal and Surface Water), alongside other associated information.

The SEPA flood map does not show the site to be at risk from fluvial, surface water or coastal flooding.

Whilst the SEPA flood maps can be a useful tool for initially investigating whether a site may be at risk of flooding, the following caveat is attached to their use:

> *"The Flood Maps are indicative and of a strategic nature. Whilst all reasonable effort has been made to ensure that the Flood Maps are accurate for their intended purpose, no warranty is given by SEPA in this regard… It is inappropriate for these Flood Maps to be used to assess flood risk to an individual property."*

More detailed analysis is required to fully understand the flood risk to any development site.

3.4.2 SEPA Reservoirs Map

SEPA's reservoirs map provides an indication of the areas at risk of inundation as a result of failure of water impoundment structures.

The map does not show the site to be at risk of inundation from the failure of any statutory reservoirs.

Analysis of the risk of flooding from other forms of infrastructure failure is required to fully understand the flood risk to the site.

3.4.3 SEPA

A request was made to SEPA regarding flood risk to the proposed development site. Their response received November 2018 provided the following comments:

> *"Review of the SEPA Flood Map 200-year flood outline (i.e. the flood with a 0.5% chance of occurring in any single year) indicates that this area lies out with this envelope. However, the site lies adjacent to a small watercourse, which appears to be culverted through the site, which has a catchment smaller than 3km2. As the SEPA Flood Maps have been produced following a consistent, nationally-applied, methodology for catchment areas equal to or greater than 3km2, the fluvial flood risk from such minor watercourses has not been modelled,*

or shown, on the SEPA Flood Map. Consequently, these areas may also be at risk of flooding. Within the proposed FRA, we would request further information on the culverted watercourse, including location. We would note that we are unable to support built development over an active culvert, and a buffer should be maintained for access and maintenance (and to avoid ownership issues arising).”

They also commented that the “Roads Department of Falkirk Council who, as Flood Prevention Authority, should be able to provide further information regarding flooding, and flood alleviation, in the area.” At the time of writing no response has been received from Falkirk Council.

3.4.4 Falkirk Council

A request was made to Falkirk Council for any information regarding flood risk in the vicinity of the site. At the time of writing no information has been received however an absence of information does not imply no information is available.

4. Potential Sources of Flood Risk

At this location there are several potential sources of flooding that require consideration:

- **Fluvial flows:** Extreme fluvial flood events have the potential to cause rapid inundation of properties whilst posing a threat to the welfare of occupants and potentially preventing emergency access to properties and essential infrastructure.
- **Infrastructure failure:** The failure of conveyance infrastructure such as culverts or bridges, or the failure of any man-made water storage or conveyance infrastructure that could increase the risk of flooding at the site.
- **Overland flow:** Overland flow occurs when the infiltration capacity of the ground is exceeded in a storm event. This could result in water travelling as sheet flow overland or excess water being conveyed from one location to another via local road networks.
- **Sewer flooding:** If the capacity of sewers is exceeded in an extreme event, or a blockage occurs, surcharging of the network can result in surface flooding. The local drainage network should be considered with a view to assessing flood risk to the site.
- **Groundwater:** high groundwater levels could exacerbate flooding occurring at low points on any given site, potentially contributing to flood risk from other sources.

The following potential source of flood risk has been discounted:

- **Coastal flooding:** The elevation of the site means it is not at risk from tidal inundation or coastal waves.

5. Flood Risk Analysis

Potential sources of flood risk identified for consideration in Section 4 are discussed below.

5.1 Fluvial Flows

Hydraulic modelling has been undertaken to provide a quantitative assessment of fluvial flood risk to the proposed development. Flood risk from each of the identified watercourses in section 3.1 has been assessed for a 1 in 200 year flood event. An additional analysis has been undertaken to check potential impacts of climate change. The following section presents the findings of the hydraulic modelling study. The methods used to derive flood flows are presented in Appendix B. A technical discussion of the hydraulic modelling methodology is presented in Appendix C.

The results of the hydraulic modelling study shows that the East Burn is likely to inundate the north-west corner of the development site in a 1 in 200 year event, based on the existing site topography. This area is low lying relative to the rest of the development. Modelled water levels of 177.47mAOD were recorded for the 1 in 200 year + Climate Change flood event. The model does not account for the impact that floodplain storage would have on water levels. Conservatively adopting the water level 177.47mAOD as the inundation level, the maximum depth of flooding in the north-west corner would be around 0.46mAOD.

The upstream channel is well incised and is shown to have the capacity to convey the full 1 in 200 year + Climate Change flow, therefore flood impacts as a result of the East Burn are limited to the north-west corner of the development. The affected area, currently designated for SUDS use, is marked on Figure 2.

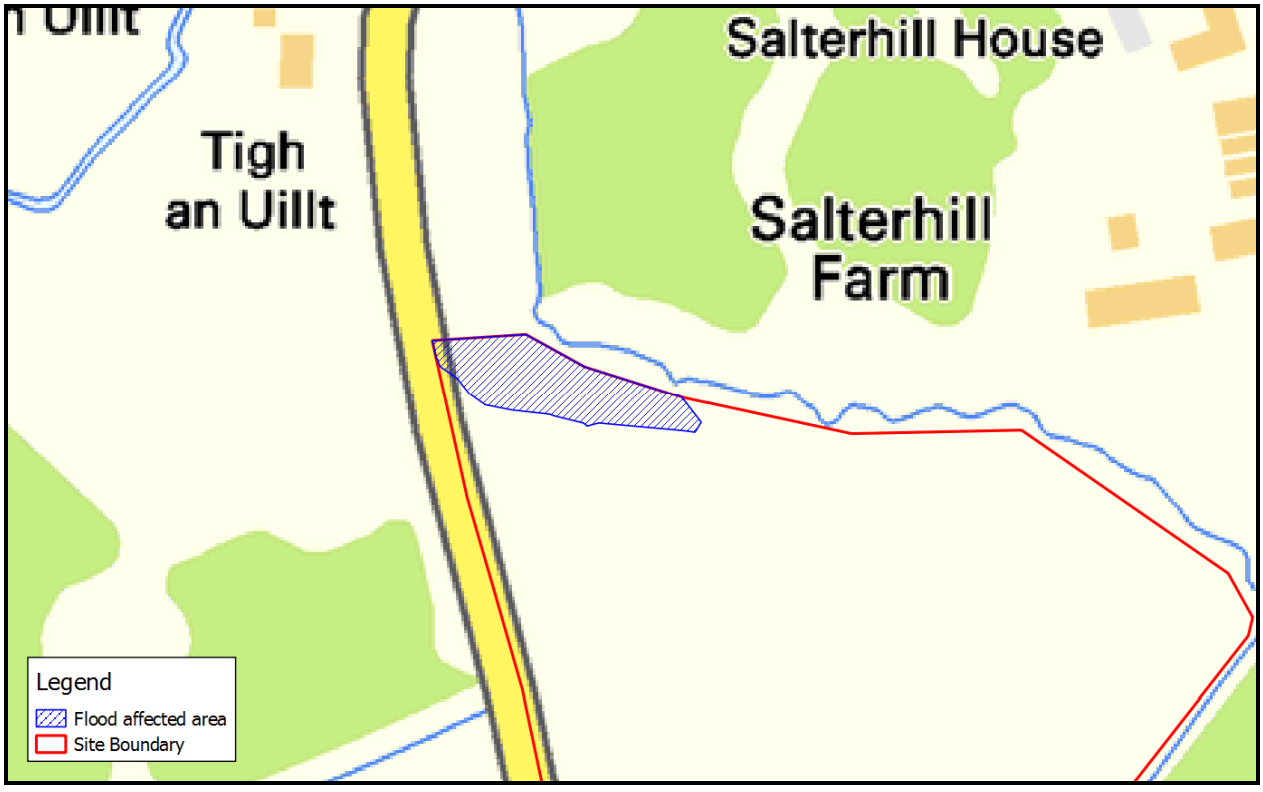


Figure 2: Northern flood affected area

To the south of the development, the South Burn is expected to overtop Slamannan Road at the constricted culvert in a 1 in 200 year flood. Overtopping waters will flow overland, across Slamannan Road and to the east. The overland flow will cross the area to the south-west of the southern site boundary, towards the 590mm dia. culvert marked on Figure 3. This area is marshy overgrown land, erroneously marked on OS mapping as a watercourse channel. The culvert is undersized for the 1 in 200 year flow resulting in a flow restriction. There is the potential that backwater flooding will occur, resulting in overland flow to the north-east, entering the development site at the south-west corner and flowing towards an existing drainage ditch, as shown on Figure 3. A peak overtopping rate of 0.86m^3/s was observed in the 1 in 200 year + Climate Change simulation.

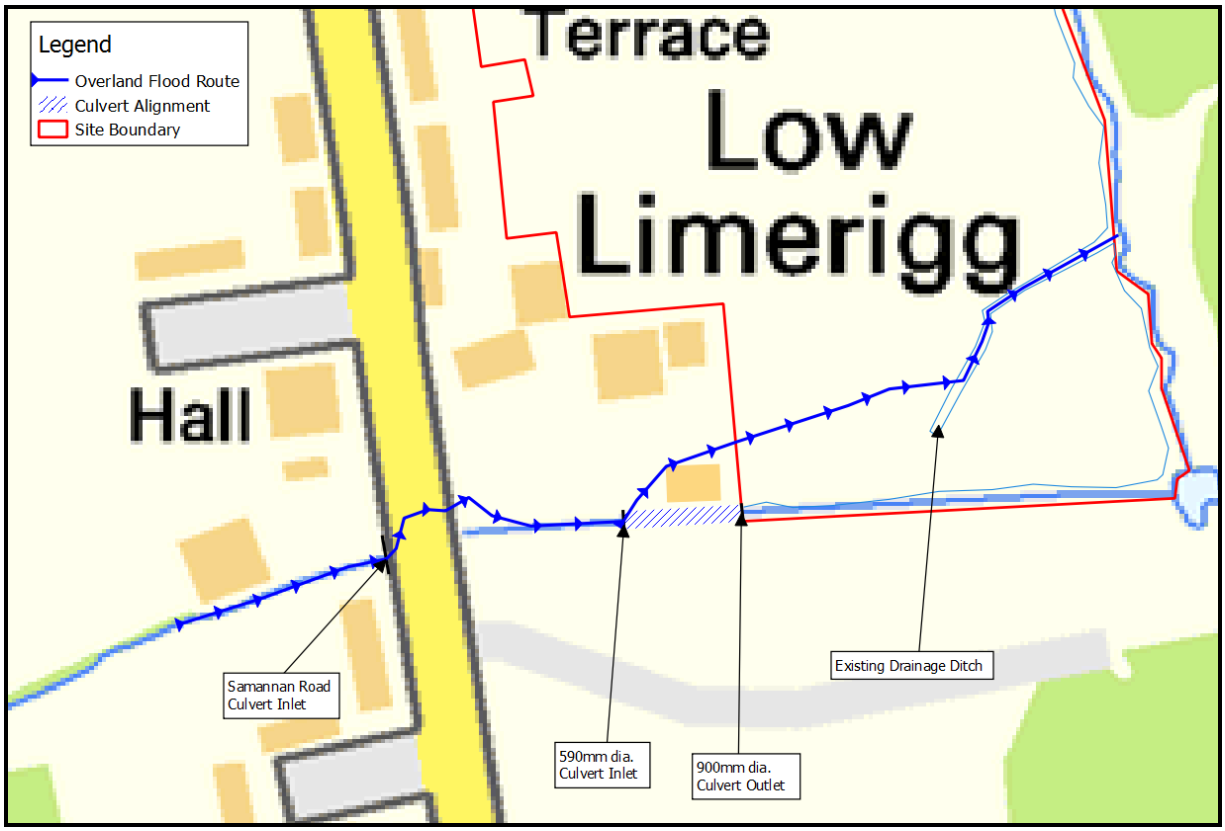


Figure 3: South-west overland flow route

The Culloch Burn to the north west of the site is deeply incised and the lowest existing level on the site is at least 2m above the bed level of the watercourse. The watercourse was observed on a site visit carried out by Fairhurst. The site is separated from the watercourse by a ridge of high ground which is approximately 7m above the bed level of the watercourse. The flood extents for the Culloch Burn displayed on the SEPA flood map corroborate this assessment as they are confined to a narrow strip around the channel and do not come closer than 150m from the boundary of the site. The fluvial flood risk to the site from this source is considered to be low.

To comply with Scottish Planning Policy, development and land raising are not generally permitted within the 1 in 200 year flood extents (functional floodplain). The development should therefore be located outwith the functional floodplain as identified by the hydraulic modelling study. Figures 2 and 3 provide an indicative floodplain only. A larger floodplain drawing is included in Appendix A.

Finished floor levels should be set to include a freeboard allowance above the 1 in 200 year + Climate Change flood level in accordance with the planning policy of Falkirk Council. A minimum freeboard of

600mm for floor levels is required. In addition, a 300mm allowance for residential gardens is required. Recommended FFLs and minimum garden levels have been specified in relation to the modelled water levels in Appendix C.

5.2 Infrastructure Failure

There are no reservoirs in the area that may pose a risk to the site.

The presence or location of water distribution infrastructure in the area is unknown, but is likely to be located along Slamannan Road if present. In the event of failure of any such infrastructure, water would likely be contained by the road verges and follow the line of the road before spilling into the eastern watercourse or the Culloch Burn downstream of the site. If the road verges did not contain all of the flow, topographic contours suggest that water may flow across the site and into the eastern watercourse.

Residual risk from this source of flooding can be mitigated by setting finished floor levels above surrounding ground and profiling ground levels to route flood water around and away from buildings.

The hydraulic modelling study has shown that all but one of the culverts within the vicinity of the development is currently undersized relative to the 1 in 200 year flow. Figure 4 shows the culverts that were included within the hydraulic model.

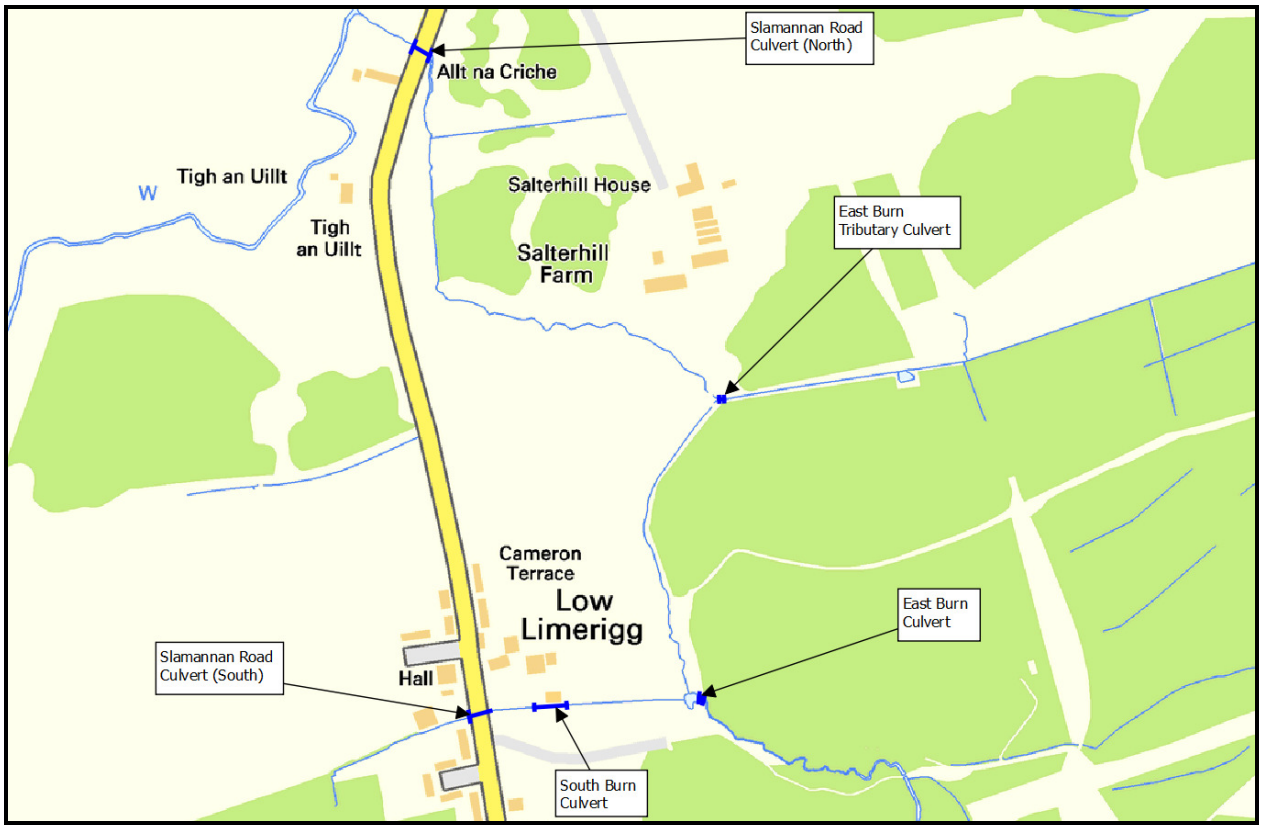


Figure 4: Modelled culvert locations

The East Burn culvert is undersized for the 1 in 200 year flow. Flow is shown to spill over the access track at a rate of 2.73m3/s and re-enter the watercourse downstream of the crossing. The downstream channel is shown to have sufficient hydraulic capacity to convey the full 1 in 200 year flow. In the

event the culvert becomes partially or fully blocked, overtopping rates will increase across the access track, without increasing flood risk to the development.

The East Burn Tributary culvert has sufficient hydraulic capacity to convey the 1 in 200 year and the 1 in 200 year + Climate Change flows. The track topography is such that, should the culvert become blocked, water would overtop the track and return to the channel immediately downstream of the crossing. The baseline hydraulic model has shown that the downstream channel has sufficient hydraulic capacity to contain the full 1 in 200 year + Climate Change flows without risk of overtopping.

The south Slamannan Road culvert is currently partially buried. At the time of the site visit, conducted in March 2019, the culvert inlet was submerged. Given the existing condition of the culvert, a near 100% blockage during flood conditions was considered likely, and therefore the culvert was assumed to be fully blocked in the baseline modelling. Hydraulic modelling of this scenario shows that water would overtop Slamannan Road at a rate of 0.80m^3/s in a 1 in 200 year flood event. Flow would follow the overland flow route indicated in Figure 3.

The South Burn culvert is a source of backwater flooding and flow through the site in the baseline 1 in 200 year flood model. Partial or full blockage would result in a greater volume of flow through the development site. A 50% blockage model showed a 0.14m^3/s increase in flow spilling into the site, rising from 0.6m^3/s in the baseline model to 0.74m^3/s in the blockage scenario.

The north Slamannan Road culvert, with a 1.15m diameter, has been modelled for a 50% blockage scenario to check whether the backwater elevation could impact flood levels at the site. Water levels are shown to increase as far as 70m upstream of the crossing. This is around 140m downstream of the development site. Blockage of the Slamannan Road culvert would therefore have no impact on the 1 in 200 year water level adjacent to the development site.

SEPA have noted that the western drainage ditch is culverted through the site. The inlet of the drainage ditch could not be located by Fairhurst during the site visit, nor could it be located by Phoenix Surveys at the time of the topographic survey. SEPA's assumptions about the culvert alignment could not therefore be confirmed or disproved. It is recommended that further investigation into the presence of a culvert at this location is undertaken prior to works commencing on site.

A topographic assessment using the SAGA hydrological tools in QGIS has been undertaken to identify overland flow paths within the vicinity of the development. Assuming that the drainage ditch culvert is fully blocked, flow within the drainage ditch is expected to overtop Slamannan Road and flow to the north along the northbound verge as shown in Figure 5. Overland flow may then enter the site at the north-west corner of the site, where there is currently field access. Development in this area should be avoided to mitigate the potential risk of fluvial flooding as discussed in Section 5.1.

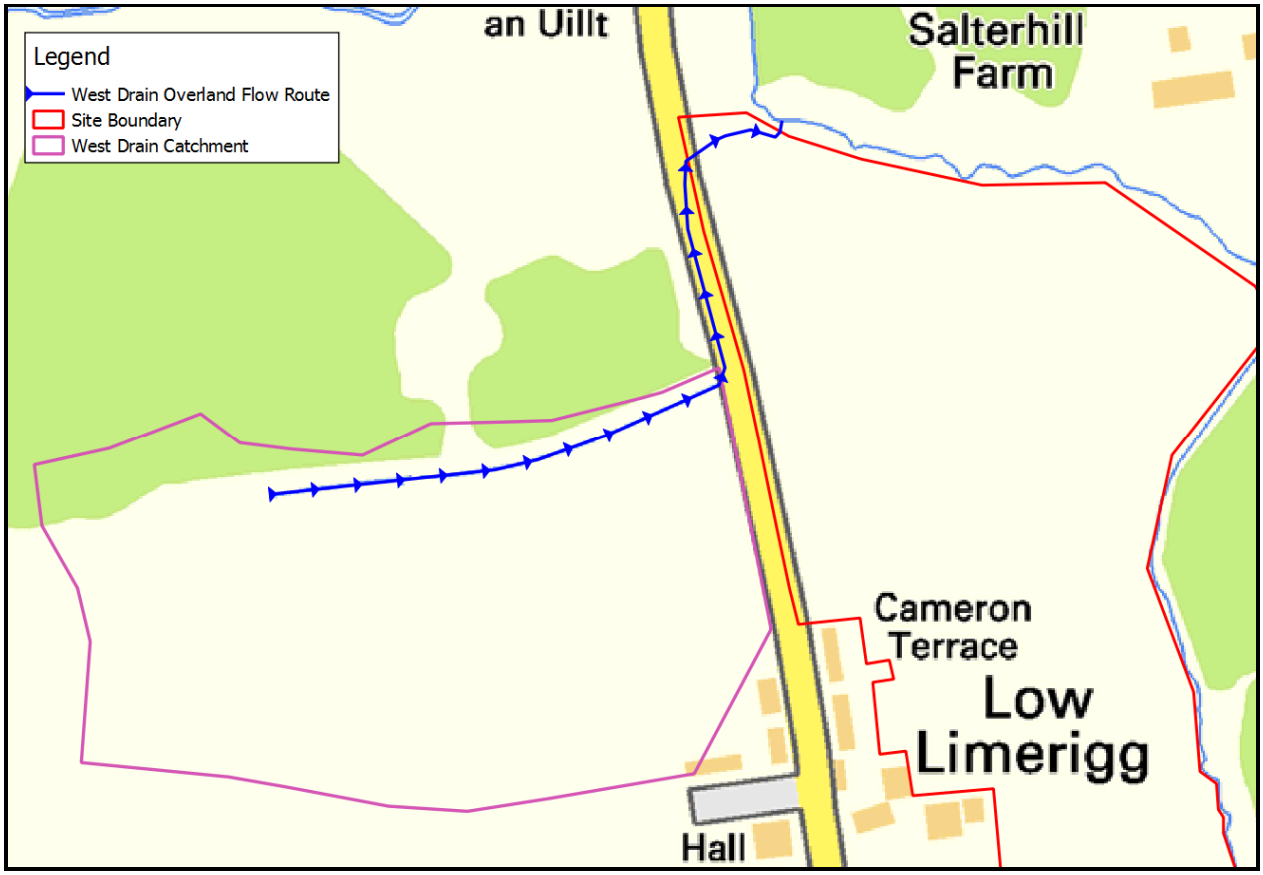


Figure 5: West Drain overland flow route

Flood risk due to infrastructure failure follows the same inundation patterns as described in the fluvial flood risks discussed in Section 5.1. Mitigation of flood risk should therefore be in conjunction with measures taken to alleviate fluvial flood risk, including locating the development outwith functional floodplain (1 in 200 year flood extents) and flow pathways, setting finished floor levels above the adjacent 1 in 200 year + climate change flood levels (including a 600mm freeboard), ensuring that finished floor levels exceed surrounding ground levels, and profiling ground to route water around and away from buildings.

5.3 Overland Flow

Overland flow may occur during extreme rainfall events when the ground is saturated. As previously discussed, the SAGA hydrological assessment tools in QGIS have been used to define drainage paths in the vicinity of the development. The derived flow paths are shown in Figure 6.

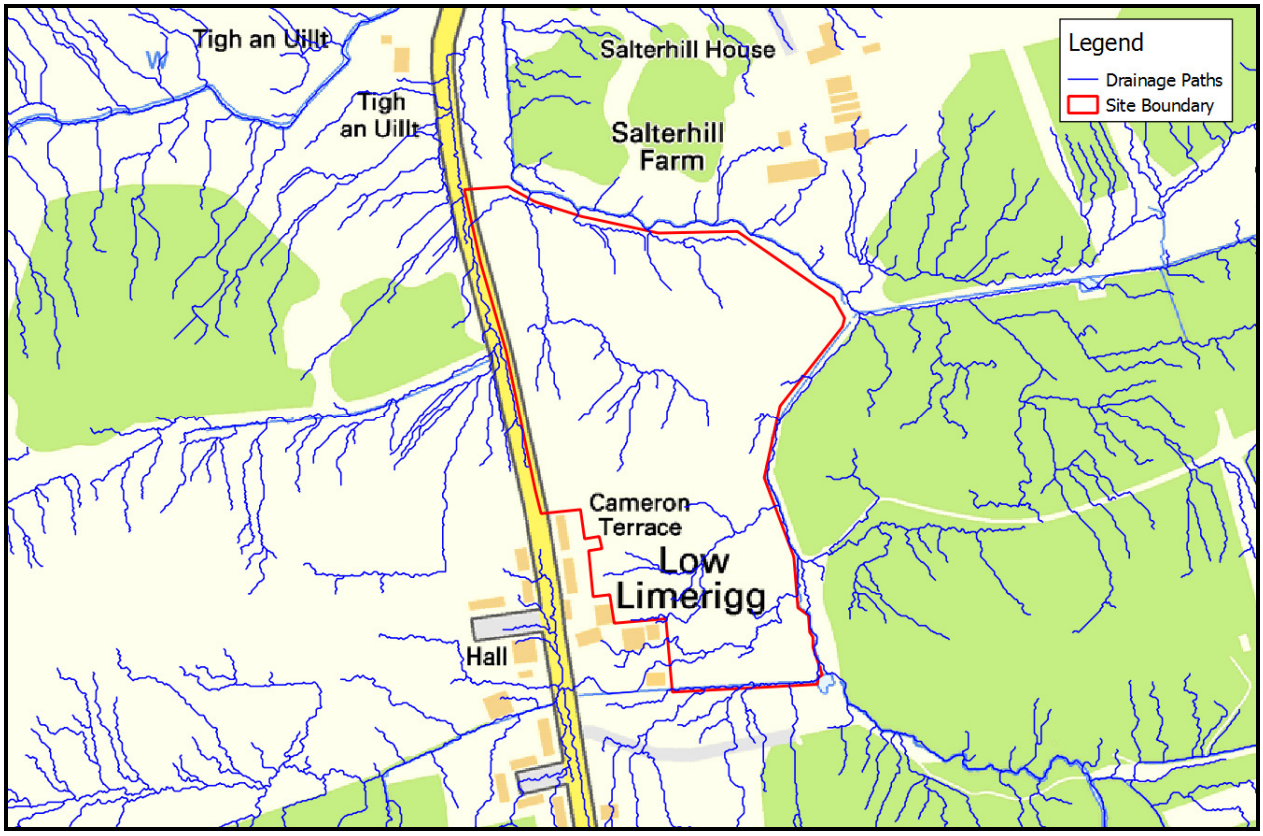


Figure 6: Drainage pathways in and around the site

The assessment shows that runoff originating from the higher elevated land to the south, east and north is intercepted by the watercourses which bound the development site, and conveyed to the north towards Culloch Burn.

Land to the south-west will drain towards the South Burn. As discussed in Sections 5.1 & 5.2 hydraulic influences in the watercourse are expected to cause overland flow through the site.

As discussed in Section 5.2, surface runoff draining to a ditch to the west of the site has to potential to flow via Slamannan Road and across the north-west of the site. This area has been identified as being at risk of fluvial flooding in a 1 in 200 year flood event, and therefore development in this area should be avoided.

Residual risk from this source of flooding can be mitigated by setting finished floor levels above surrounding ground levels, and profiling ground levels to route flood water around and away from buildings.

5.4 Sewer Flooding

It is likely that any existing sewer infrastructure is located within Slamannan Road if present. If the capacity of any such infrastructure were to be exceeded, excess water would likely follow the same flow patterns shown on Figure 6 in Section 5.3.

Residual risk from this source of flooding can be mitigated by setting finished floor levels above surrounding ground and profiling ground levels to route flood water around and away from buildings. With these mitigation measures implemented the risk of flooding from sewer flooding is considered to be low.

5.5 Groundwater Flooding

Groundwater flooding generally occurs due to a significant rise in the water table, normally as a result of prolonged and heavy rainfall. Groundwater flooding is normally associated with catchments where porous substrate or aquifers exist, though it is sometimes attributed to past or present mine workings.

The existing site generally slopes down towards the north. Within the site, superficial deposit are shown to overlay sedimentary rock based in publicly available soil and geological mapping.

Four borehole logs are available approximately 100m to the south of the site (OS Grid References 285684E 671173N, 285671E 671153N, 285685E 671133N, 285702E 671143N). All four boreholes show groundwater level to be 3m below the surface. If these conditions are assumed to be consistent with the development site, the risk of flooding from groundwater is considered to be low.

A Mining Stability Report undertaken by Fairhurst, and presented under separate cover, identified past mine workings below the site. Subsidence associated with mining works can be accompanied by groundwater flooding. This occurs where subsidence takes the ground surface below the water table. Mitigation works undertaken to reduce Mining Stability risks would also mitigate the risk of groundwater flooding.

No active mines have been identified by the study. Groundwater Rebound, a type of flooding associated with the cessation of dewatering activities is therefore not a risk.

In the event groundwater levels exceed the ground levels at the site the excess water would follow the same flow patterns as for overland flow. Residual risk from this source of flooding can be mitigated by setting finished floor levels above surrounding ground and profiling ground levels to route flood water around and away from buildings.

6. Conclusion

Fairhurst was appointed by Robert MacDonald Clarkston to carry out a Flood Risk Assessment (FRA) for a residential development site at Slamannan Road, Limerigg. Fluvial flood risk associated with the site has been quantitatively assessed against the requirements of SPP and the various sources identified in Section 4. Other sources of flood risk have also been examined

Hydraulic modelling has been used to assess the conveyance capacity of the watercourses, and associated hydraulic structures, at the development site. The model results show that an area in the north-west corner of the development site is at risk of inundation during a 1 in 200 year flood.

An area to the south of the site provides an overland flow route for out of bank flow during the 1 in 200 year flood. Out of bank flow results from an undersized culvert located outwith the development to the south-west.

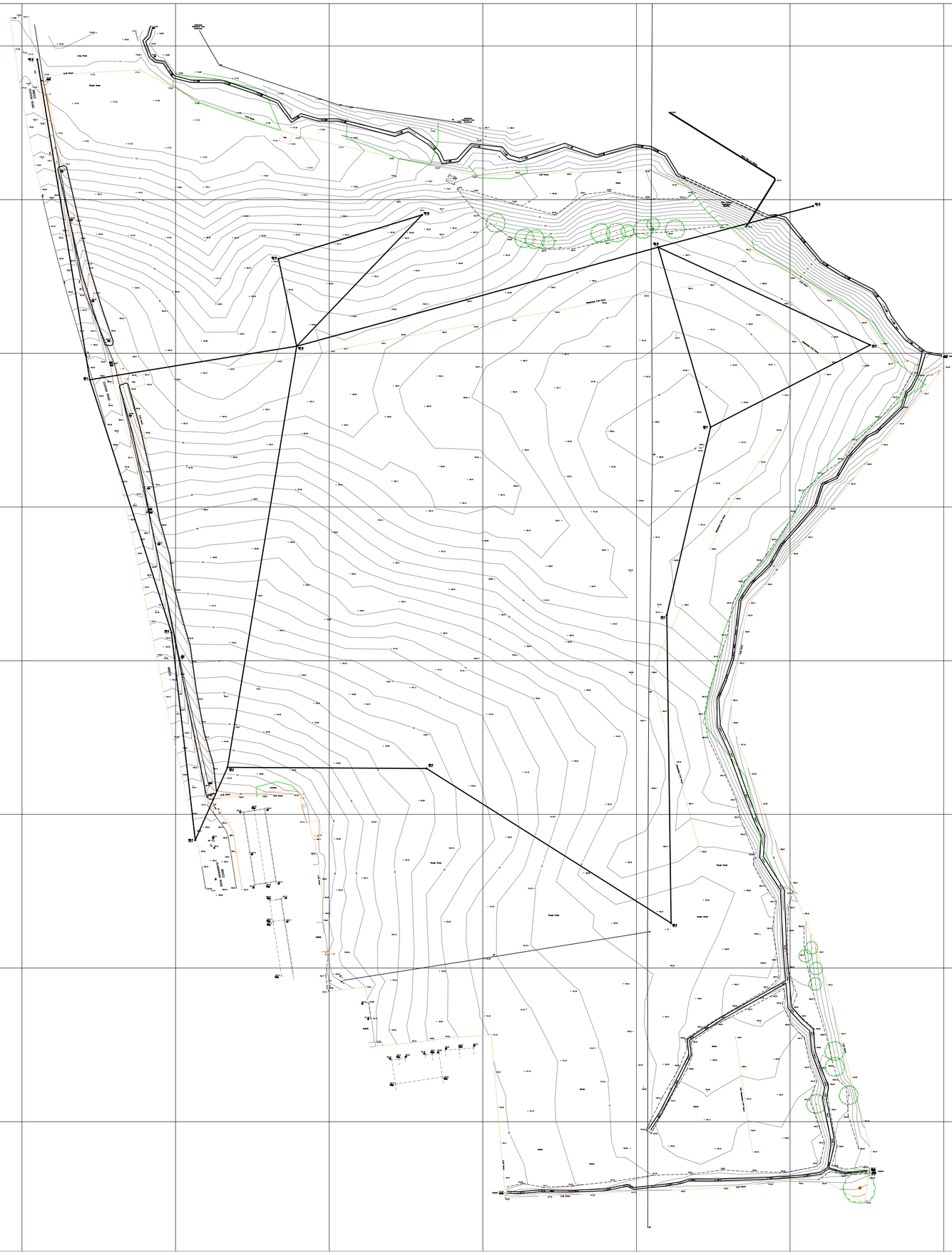
To comply with SPP's requirements regarding development within the functional flood plain development should be avoided at both locations where flooding has been identified as a potential risk.

Additional sources of flood risk have been considered, including overland flow, sewer flooding and groundwater flooding. The potential risk of flooding from these sources is considered to be low.

Residual flood risk can be mitigated at the detailed design phase by profiling site levels to route water around and away from buildings and setting finished floor levels a minimum of 600mm above the 1 in 200 year + Climate Change water level.

Appendix A

Drawings


Lane 2200M
Lane 2200M
Lane 2200M

Allt na Criche

Salterhill House

Salterhill Farm

Tigh an Uillt

Cameron Terrace

Low Limerigg

Hall

EB01_0000

EB01_0073

EB01_0134

EB01_0200

EB01_0250

EB01_0301

EB01_0354

EB01_0405

EB01_0455

EB02_0000

EB02_0057

EB02_0116

EB02_0179

EB02_0233

EB02_0285

TRIB01_0004

TRIB01_0053

WB01_0030

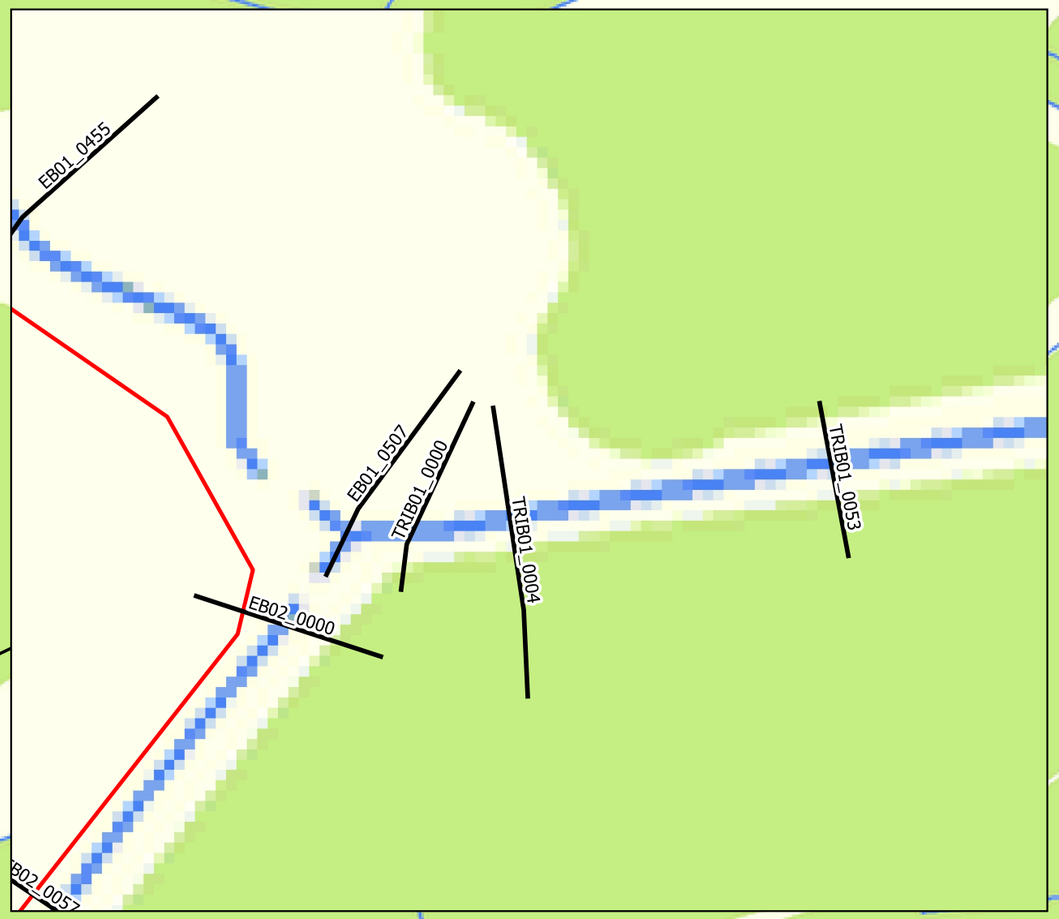
WB01_0106

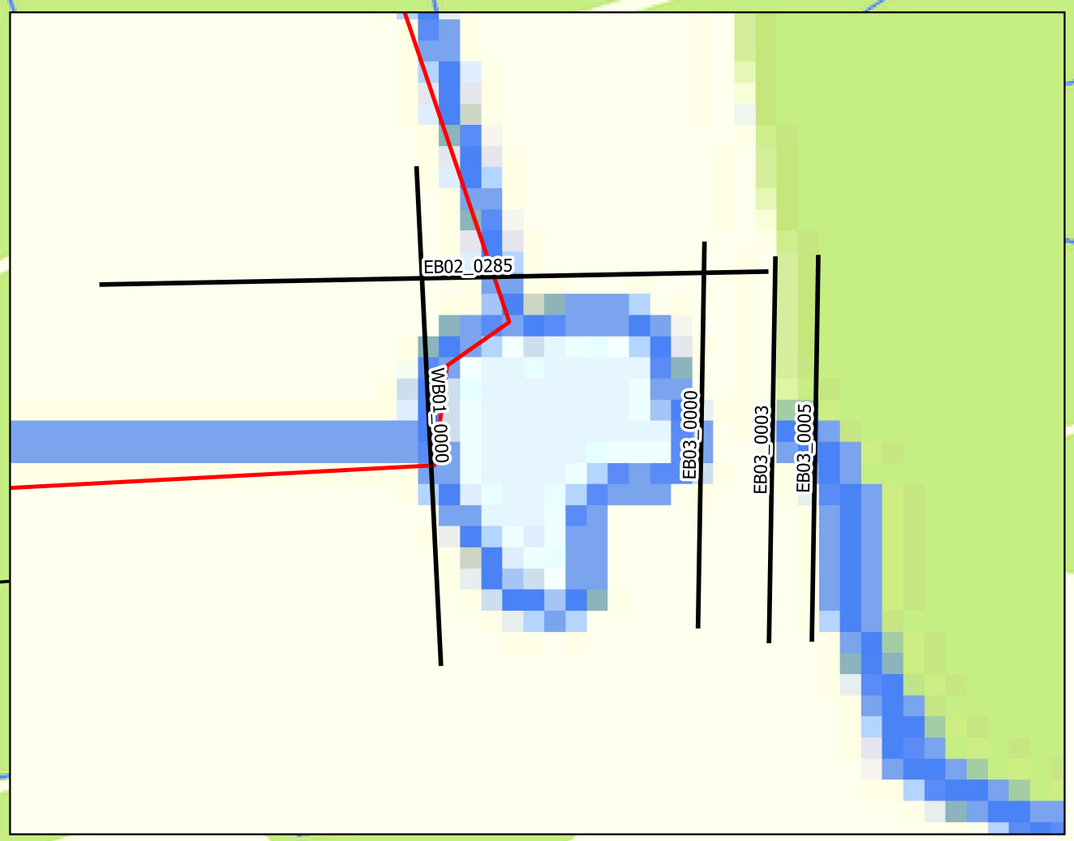
WB01_0140

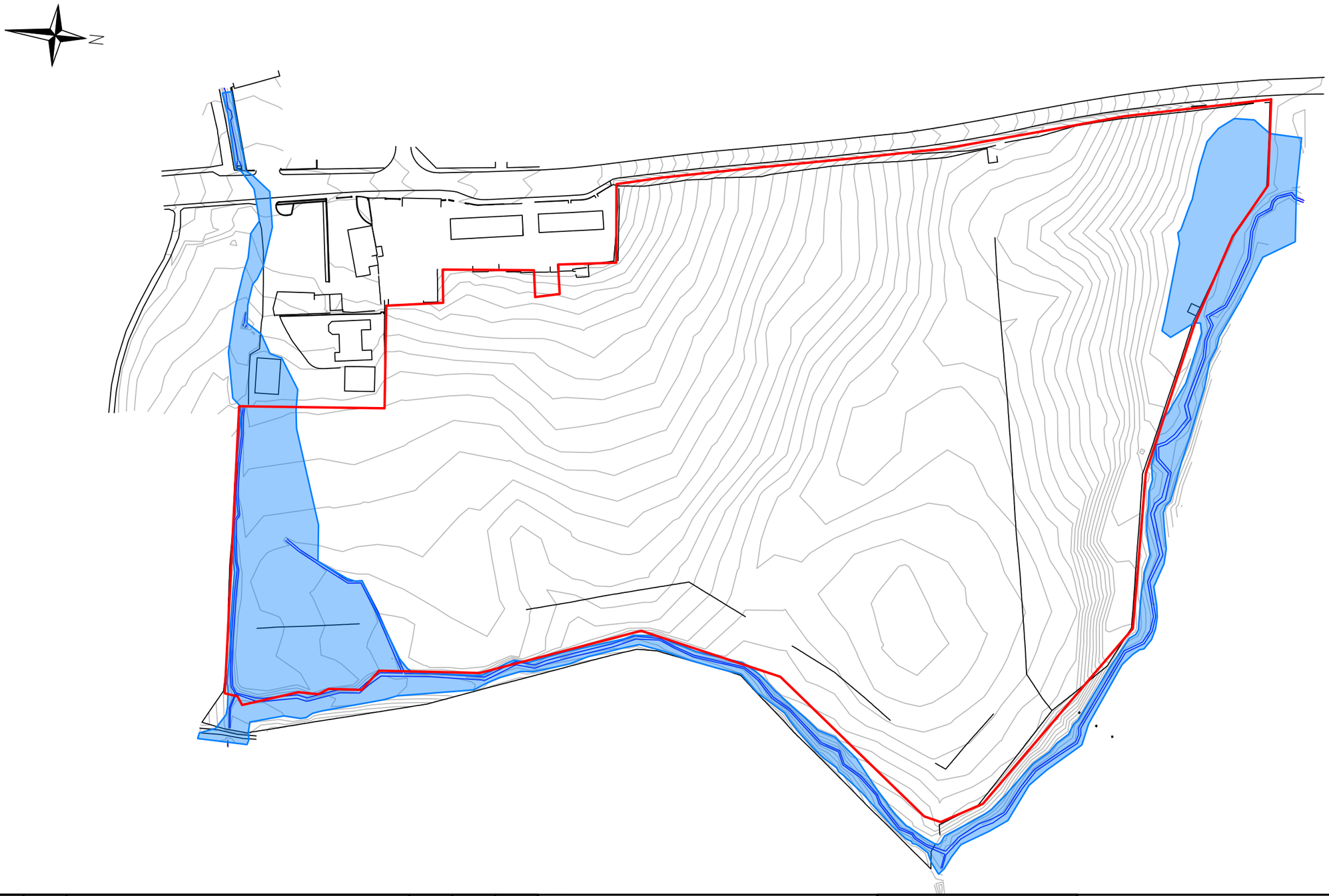
WB01_0195

WB01_0244

EB03_0050







Do not scale from this drawing.

SAFETY HEALTH AND ENVIRONMENTAL INFORMATION

IN ADDITION TO THE HAZARD/RISKS NORMALLY ASSOCIATED WITH THE TYPES OF WORK DETAILED ON THIS DRAWING, NOTE THE FOLLOWING RISKS AND INFORMATION.

RISKS LISTED HERE ARE NOT EXHAUSTIVE. REFER TO DESIGN ASSESSMENT FORM NO.

CONSTRUCTION

DEMOLITION

FOR INFORMATION RELATING TO USE, CLEANING AND MAINTENANCE SEE THE HEALTH AND SAFETY FILE

IT IS ASSUMED THAT ALL WORKS WILL BE CARRIED OUT BY A COMPETENT CONTRACTOR WORKING, WHERE APPROPRIATE, TO AN APPROVED METHOD STATEMENT.

Rev.	Date	Description	Drawn	Checked	Approved

NOTES:

1.

LEGEND:

INDICATIVE SITE BOUNDARY

1 IN 200YR + CC FLOOD EXTENTS

DITCH

Client:
ROSS WOODS ARCHITECTS

Project Title:
SLAMANNAN ROAD, LIMERIGG

Drawing Title:
1 IN 200YR FLOOD EXTENTS

FAIRHURST
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GLASGOW, G2 4GZ
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Scale at A3:	Status:	
1:1500	For Information	
Drawn: CK	Checked: JM	Approved:
Date: 07/05/19	Date: 07/05/19	Date:
Drawing No.: 126811/2001		Revision: –

Appendix B

Hydrology

B.1 Flow Estimation

The three modelled watercourses are all within the unnamed, East Burn, watercourse catchment. Catchment descriptors for the unnamed East Burn have therefore been obtained from the FEH Web Service and used as indicative catchment descriptors for all three watercourses.

The total catchment for the East Burn has been estimated using available LiDAR data, SAGA hydrological tools and contour data. The estimated catchment is 1.29km^2. The southern watercourse and eastern tributary sub-catchments have been defined in the same way. The derived catchments are shown on Figure B1, with areas presented in Table B1.

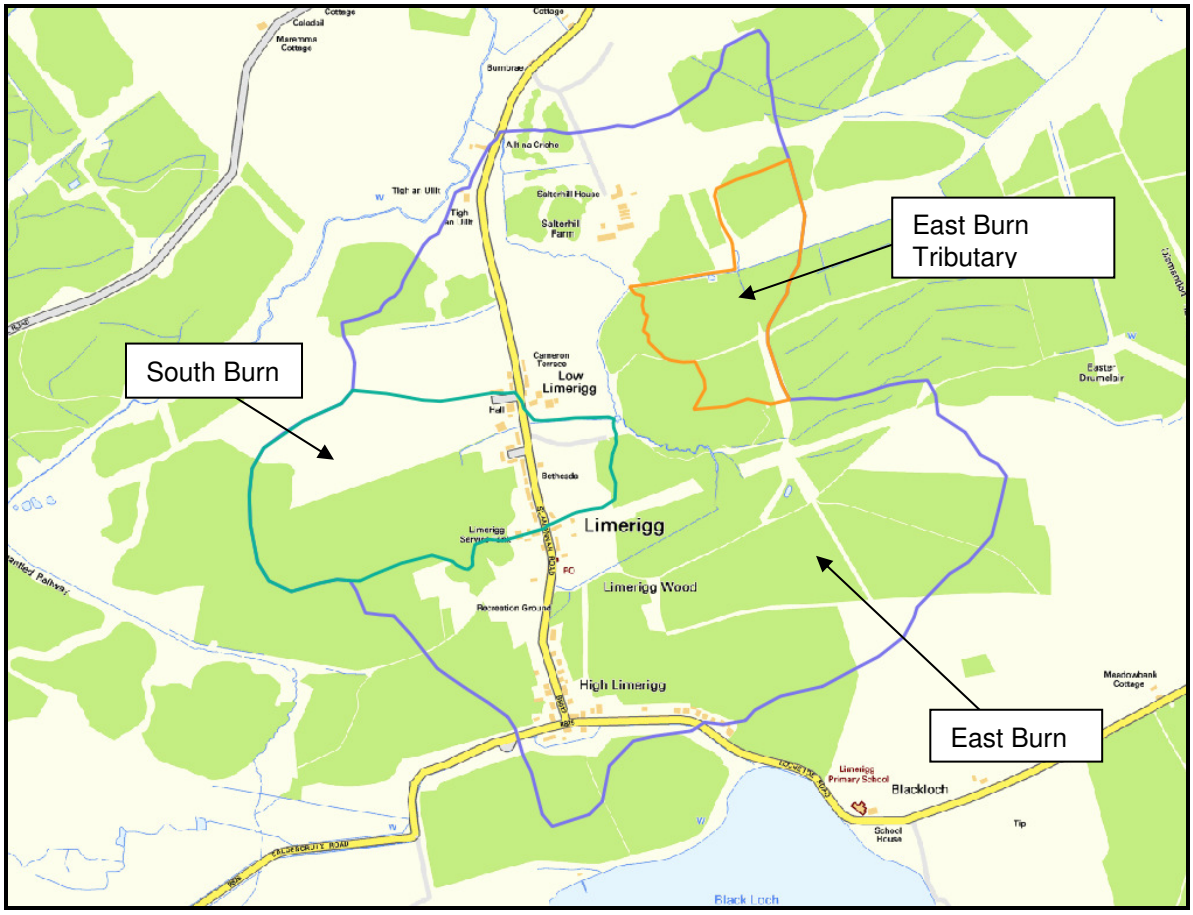


Figure B.2: Limerigg watershed catchments

Table B.1: Limerigg Watershed Catchments

Catchment Name	Catchment Area (km^2)
East Burn - Total	1.29
Southern Watercourse	0.22
Eastern Tributary	0.09
East Burn (without sub-catchments)	0.98

Catchment descriptors obtained for the total East Burn watercourse provided information on the physical and climatological properties of the catchment, allowing extreme flow estimates to be derived for each of the three modelled watercourses. The un-edited catchment descriptors are presented in Table B.2.

Table B.2: FEH Catchment Descriptors

Descriptor Name	Descriptor Value	Comment if value changed
Catchment Area	1.12km^2	Catchment estimated based on LiDAR/OS Contours
URBEXT	0.0089km^2	
SAAR	1087mm	
SPR	47.64%	Sensitivity tested using BFI Scotland maps & BFISCOT Equation
DDF (c)	-0.016	
DDF (d1)	0.42575	
DDF (d2)	0.42558	
DDF (d3)	0.36329	
DDF (e)	0.2425	
DDF (f)	2.27904	
DPLBAR	0.95	Adjusted for South Burn & East Burn Tributary catchments
DPSBAR	49.9	
PROPWET	0.58	

The catchment descriptors have been used to derive extreme flood flow estimates using the FEH Rainfall-Runoff method and the ReFH2 method, using FEH13 rainfall estimates. The Institute of Hydrology Report 124 was also utilised as a third method of flow estimation.

The Flood Estimation Handbook Volume 4 notes that “estimation of percentage runoff is probably the most important part of flood estimation using the FSR rainfall-runoff method”. Estimating standard

percentage runoff (SPR) from FEH catchment descriptors alone is not considered as reliable as using observed data and a number of different methods are available. SPR can be derived from the base flow index (BFI) and, in Scotland, published values of BFI for main watercourses are available on the Institute of Hydrology BFI Scotland map.

The BFI Scotland map provides BFI estimates for watercourses across Scotland, derived from gauged flow data. The River Avon, around 2.5km north of the site, has a gauged BFI value of 0.37. Adopting this value for use in the FEH RR flow estimation method produces a less conservative peak flow value. The FEH Web Service value of 0.308 was therefore adopted.

The methodology for adjusting BFIHOST for use in the ReFH2 method is set out in '*ReFH2 Technical Note: Adjusting BFIHOST in Scotland',* published by Wallingford Hydro Solutions in 2018. An adjusted BFI value of 0.292 was used in the ReFH2 assessment as it was found to be more conservative.

An allowance for climate change has been added to the peak 1 in 200-year flow estimate using guidance published by SEPA in '*Climate change allowances for flood risk assessment in land use planning*'. The guidance states that, for river catchments below 30km^2, a percentage increase in rainfall intensity should be applied to the routing model. For eastern watershed basins, as shown on SEPAs interactive web map (sepaweb.maps.arcgis.com/apps/webappviewer) a 35% increase in rainfall intensity is recommended. The derived climate change flow estimates are presented in Table B.3 below.

The flood flow estimates derived from each of the applied methods are shown in Table B.3 below. The critical storm duration used to provide the peak flow estimates are also shown.

Table B.3: Peak flow estimates

Method	Critical Storm Duration (Based on total catchment area) (Hours)	East Burn		South Burn		East Burn Tributary	
		1 in 200-year Peak Flow (m^3/s)	1 in 200-year + Climate Change Peak Flow (m^3/s)	1 in 200-year Peak Flow (m^3/s)	1 in 200-year + Climate Change Peak Flow (m^3/s)	1 in 200-year Peak Flow (m^3/s)	1 in 200-year + Climate Change Peak Flow (m^3/s)
ReFH2 Method with FEH13 rainfall	3.25	2.99	4.16	0.80	1.11	0.36	0.50
FEH Rainfall Runoff	3.9	2.81	3.78	0.77	1.04	0.35	0.46
IH124	N/A	2.88	3.46	0.65	0.78	0.26	0.31

The ReFH2 method provided the most conservative estimate of the 1 in 200-year flow and was therefore used in the fluvial modelling study.

Appendix C

Hydraulic Modelling

C.1 Introduction

A one dimensional hydraulic model was constructed to quantitatively assess flood risk from the identified watercourses within the vicinity of the development. Modelling has been undertaken using the industry standard software, Flood Modeller. The modelling study assesses the potential flood risk from the South Burn, East Burn and East burn tributary.

C.2 Model Construction

The hydraulic model has been constructed in 1D, representing approximately 1.15km of watercourse. Cross section data has been surveyed at characteristic locations along the channels of each watercourse. A total of 27 surveyed sections across three watercourses have been used to construct the model as follows:

- 20 Cross sections along the East Burn including two watercourse crossings
- 4 Surveyed cross sections on the South Burn including one watercourse crossing
- 3 Surveyed cross sections on the East Burn Tributary including one watercourse crossing

In addition to surveyed cross sections, additional cross section and culvert data was obtained from a topographic survey. Spill units have been constructed based on topographic data. Watercourse cross sections are shown in Appendix A.

All watercourse crossings have been represented within flood modeller using the orifice units. The cross section area of the Slamannan Road culverts has been reduced to represent siltation/sediment on the bed of the culvert. The modelled flow areas are shown in Table C.1 below.

Table C.1: Modelled Culverts at Slamannan Road

Floodplain Surface	Culvert diameter (m)	Full Bore Flow Area (m^2)	Modelled Flow Area (m^2)
Slamannan Road South	0.5	0.196	0.077
Slamannan Road North	1.15	1.039	0.959

C.2.1 Manning's Roughness

The roughness of surfaces affects the way in which water flows across them. This is represented within hydraulic models through application of a roughness parameter, which is most often the Manning's Roughness Coefficient. Manning's roughness values have been applied conservatively using values from literature (Chow, 1959).

The upper reach of the South Burn is slow and sluggish, with overgrown reaches and marshy areas. A Manning's roughness of 0.07 has been used as this is representative of a sluggish reach of watercourse with weedy, deep pools. Downstream of the marshy area the watercourse is faster flowing at a lower stage. A Manning's roughness of 0.048 has been used in these locations.

The East Burn appears to have a consistent hydro-morphology throughout the modelled reach. The shallow flow across sands and gravels has been represented using a Manning's roughness coefficient of 0.04. The tributary to the East Burn, located north-east of the site, has also be assigned a bed Manning's coefficient of 0.04.

Floodplain Manning's coefficient has been applied based the surface of the channel banks at each cross section. Assigned values have been defined as shown in Table C.2.

Table C.2: Floodplain Manning's Coefficients

Floodplain Surface	Manning's Coefficient
Hardstanding/ Road Surface	0.025
Scattered brush, heavy weeds	0.050
Light brush and trees	0.060
Medium to dense brush	0.070

C.2.2 Boundary Conditions

Inflows to the model have been applied using the Flow-Time hydrograph unit in Flood Modeller, and run using a ReFH2 hydrograph based on a storm duration of 3.25 hours and a 1 in 200-year flood event. The peak inflows are shown in Table B.3 in Appendix B.

The downstream boundary condition has been applied downstream of the northern Slamannan Road crossing. The downstream boundary condition is a normal depth boundary, based on a slope angle that is representative of the lower reach of the watercourse. The model has been extended far enough downstream of the site to ensure that there are no significant backwater impacts adjacent to the development as a result of poor definition of the downstream boundary.

C.3 Model Runs

C.3.1 Baseline Scenarios

The baseline model simulates the impact of a 1 in 200-year flow under the hydraulic conditions observed on site and described in Section C.3.

C.3.2 Sensitivity Testing

All hydraulic modelling carries a degree of uncertainty resulting from a variety of factors including:

- The hydrology used to derive the flows;
- The spatial variation of roughness within the model
- Conveyance capacity of watercourse structures such as bridges and culverts.

Sensitivity testing has therefore been carried out by varying these parameters in isolation to assess how the model reacts to variations in hydraulic conditions and in doing so better understand the risks. The following tests were carried out:

- A 35% increase in rainfall intensity to account for the potential impacts of future climate change;
- A 20% increase in Manning's roughness;
- A 50% blockage of the northern Slamannan Road crossing;
- A 100% blockage of the northern Slamannan Road crossing.

C.4 Results

The modelled water levels for each scenario are presented in Table C.3 below. The adjacent site ground level has been given where applicable as an indication of risk of inundation at that location. Recommended finished floor levels are also provided. The cross section locations and references are provided in Appendix A.

Recommended finished floor levels are given in Table C.4.

The 200-year + Climate Change flood extent drawing is provided in Appendix A.

Table C.3: Modelled Water Levels

Cross Section Label	Model Scenario				
	1 in 200 Year (mAOD)	1 in 200-Year + Climate Change (mAOD)	1 in 200-year + 20% Manning's Roughness (mAOD)	50% Blockage at Slamannan Road (North) (mAOD)	100% Blockage at Slamannan Road (South) (mAOD)
WB01_0244	196.32	196.40	196.36	196.32	196.33
WB01_0195	195.72	195.76	195.73	195.72	195.75
WB01_0140	193.66	193.71	193.71	193.66	193.66
WB01_0106	191.95	192.06	192.02	191.95	191.95
WB01_0030	190.14	190.23	190.18	190.14	190.15
WB01_0000	189.93	190.02	189.97	189.93	189.93
TRIB01_0053	184.41	184.48	184.44	184.41	184.42
TRIB01_0004	183.92	184.03	183.92	183.92	183.92
TRIB01_0000	183.49	183.59	183.54	183.49	183.49
EB03_0050	191.70	191.81	191.76	191.70	191.70
EB03_0005	190.95	191.01	190.95	190.95	190.95
EB03_0003	190.11	190.21	190.15	190.11	190.11
EB03_0000	189.93	190.02	189.97	189.93	189.93
EB02_0285	189.93	190.02	189.97	189.93	189.93
EB02_0233	188.94	189.00	188.97	188.94	188.94
EB02_0179	187.33	187.44	187.39	187.33	187.33
EB02_0116	185.94	186.05	186.00	185.94	185.95
EB02_0057	185.01	185.23	184.91	185.00	184.99

Cross Section Label	Model Scenario				
	1 in 200 Year (mAOD)	1 in 200-Year + Climate Change (mAOD)	1 in 200-year + 20% Manning's Roughness (mAOD)	50% Blockage at Slamannan Road (North) (mAOD)	100% Blockage at Slamannan Road (South) (mAOD)
EB02_0000	183.49	183.59	183.54	183.49	183.49
EB01_0507	183.27	183.36	183.32	183.27	183.27
EB01_0455	181.63	181.75	181.69	181.63	181.63
EB01_0405	180.16	180.25	180.21	180.16	180.16
EB01_0354	178.67	178.82	178.73	178.67	178.67
EB01_0301	178.02	178.13	178.09	178.02	178.02
EB01_0250	177.51	177.59	177.56	177.51	177.51
EB01_0200	177.00	177.06	177.03	177.00	177.00
EB01_0134	175.80	175.92	175.86	175.80	175.80
EB01_0073	174.60	174.70	174.63	174.62	174.60
EB01_0000	174.54	174.63	174.55	174.56	174.54

Table C.4: Recommended Finished Floor Levels

Cross Section Label	1 in 200 Year + Climate Change Water Level (mAOD)	Recommended Finished Floor Level
WB01_0106	192.06	192.66
WB01_0030	190.23	190.83
WB01_0000	190.02	190.62
EB02_0285	190.02	190.62
EB02_0233	189.00	189.60
EB02_0179	187.44	188.04
EB02_0116	186.05	186.65
EB02_0057	185.23	185.83
EB02_0000	183.59	184.19

Cross Section Label	1 in 200 Year + Climate Change Water Level (mAOD)	Recommended Finished Floor Level
EB01_0507	183.36	183.96
EB01_0455	181.75	182.35
EB01_0405	180.25	180.85
EB01_0354	178.82	179.42
EB01_0301	178.13	178.73
EB01_0250	177.59	178.19









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Limerigg Planning Meeting 01.11.18

Present:
Dean Ross – Ross Woods Architects
Tommy Semple – Client's Representative
Julie Seidel – Planning Department
Roddy MacKenzie – Roads Department
Kevin Collins – Transportation Planning Unit
Angus Duncan – Core Pathways

Main Points

1. ROADS. - Direct speed calming not allowed on main road.
   - Roundabout is the preferred indirect speed calming measure, the size and location to be agreed.

2. PATHWAYS - to be connected to the adjacent 'rural' network from the west to the east and to the south east corner of the site.

3. SHOP LOCATION - Further discussions to be held at 'Detailed Planning' stage but current location sufficient for a 'Planning in Principle'.

4. SUDS - Location agreed at the north west corner of the site (the lowest point).

5. BOUNDRY SCREENING - As per current Planning Department Local Plan.

6. AFFORDABLE HOUSING – Statement to be made in the formal 'Planning in Principle' application.

7. SCHOOLS – as point 6.

8. PLAYPARK AND OPEN SPACE – as point 6.

9. PUBLIC TRANSPORT – as point 6.

10. GENERAL – agreed that one application for the whole site is the way forward.

Please let me know of any amendments or additions required at your earliest convenience.

Dean J. Ross ARIAS RIBS MaPS
PARTNER

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m. 07957472343
e. dean@rosswoodsarchitects.com

Minute of Public Meeting.
Limerigg Community Hall @ 7pm, 23/10/18.

Present: Dean J. Ross - Ross Woods Architects
Stuart Henderson -Chairperson of Limerigg Action Group
Robert MacDonald Clarkston – Site owner
80+ Local Residents

Main Points:

1. **Roads –** Speed calming would be welcomed along the Slamannan Road frontage of the proposed new site.

2. **Pathways –** integration of both the pathways through the site and from the site to existing paths and pavements to be achieved where possible.

3. **Playpark –** It was agreed that a Developer Contribution to improve the existing playpark would be preferred with a smaller one within the new site.

4. **Shop –** Shop to be in place as early as possible through the development of phase 1 in the build programme.

5. **Schools –** Will the development mean that the local school will remain open?
   - This is out with the developer's control, but it was agreed that with the increased numbers within the village, due to the new development, it would strengthen the case.

6. **Services –** Will the development improve the availability of services, e.g. Gas, Cable etc.?
   - This is out with the developer's control, but it was agreed that with the increased numbers within the village, due to the new development, it would strengthen the case.

7 **Buses –** Will the development improve the bus service?
   - This is out with the developer's control, but it was agreed that with the increased numbers within the village, due to the new development, it would strengthen the case.

Dean J. Ross ARIAS RIBS MaPS
PARTNER

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Proposed Residential Development Limerigg

Transport Statement

May 2019









FAIRHURST

CONTROL SHEET

CLIENT: **Robert MacDonald Clarkston**

PROJECT TITLE: **Proposed Residential Development, Limerigg**

REPORT TITLE: **Transport Statement**

PROJECT REFERENCE: **126811**

DOCUMENT NUMBER: **126811/ED/T/R01**

Issue and Approval Schedule:

Issue & Approval Schedule		Name	Signature	Date
	Prepared by	Craig Jolly		28/11/2018
	Checked by	Donald Stirling		29/11/2018
	Approved by	Donald Stirling		29/11/2018

Revision Record:

Revision Record	Rev.	Date	Status	Description	Signature	
	1	29/11/18	Issue	First Issue	By	CJ
					Check	DS
					Approve	DS
	2	31/05/19	Issue	Second Issue	By	CJ
					Check	DS
					Approve	DS

This report has been prepared in accordance with procedure OP/P02 of the Fairhurst Quality and Environmental Management System.

This document has been prepared in accordance with the instructions of the client, Robert MacDonald Clarkston, for the client's sole and specific use. Any other persons who use any information contained herein do so at their own risk.

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Appendix C – TRICS Outputs

Appendix D – Census Outputs

Appendix E – Traffic Network Diagrams

Appendix F – Modelling Outputs

1 Introduction

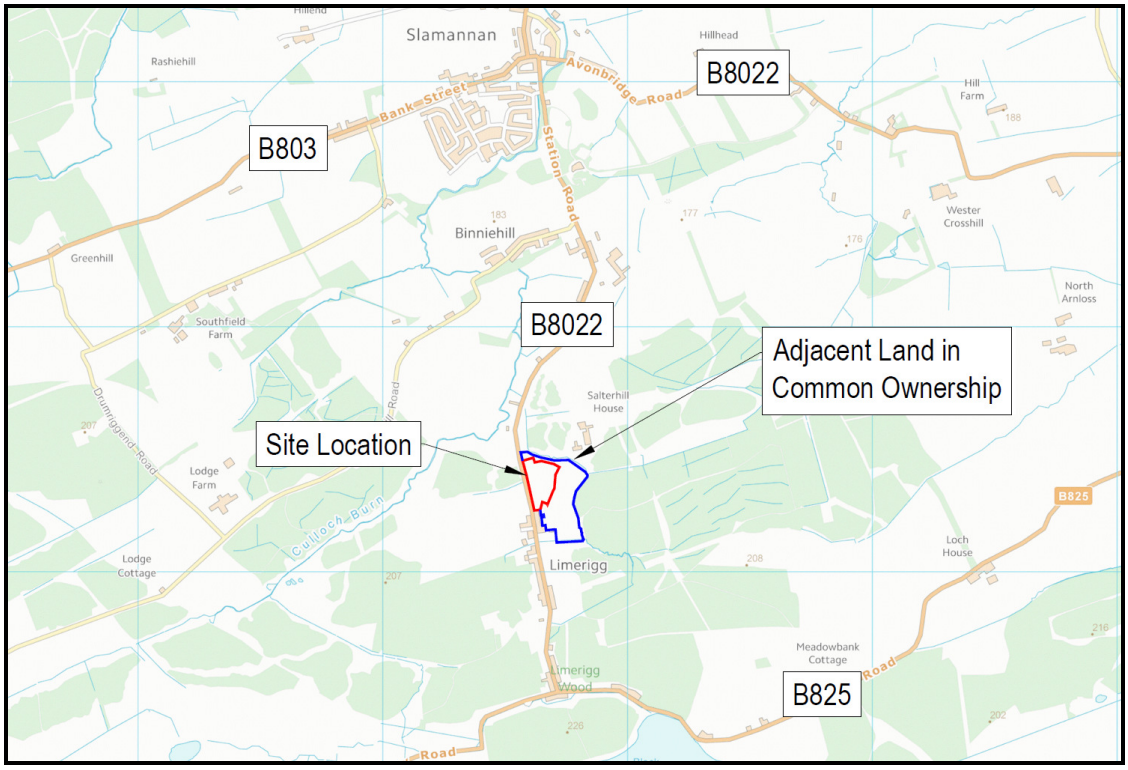
1.1 General

1.1.1 This Transport Statement (TS) has been prepared by Fairhurst on behalf of Robert MacDonald Clarkston in support of a planning application for a proposed residential development with convenience store in Limerigg.

1.2 Site Location

1.2.1 The site is located at the north end of Limerigg, on the east side of the B8082. The location of the proposed development is illustrated in Figure 1.1.

Figure1.1 - Site Location Plan



1.3 Development Proposals

1.3.1 The proposed development will comprise 90 residential units and a 155m^2 village shop. The residential units will be provided as a mixture of semi-detached and terraced houses.

1.3.2 Access to the development is to be provided by a new priority junction access with a right-turn ghost-island onto the B802 Slamannan Road.

1.3.3 The development layout is yet to be finalised, although a land ownership boundary plan highlighting the location of the proposed junction has been prepared by Ross Woods Architects. The plan is presented in Appendix A.

1.4 Scope of Assessment

1.4.1 The development proposals are below the threshold for the provision of a Transport Assessment for residential development of 100 units identified in Transport Assessment guidance. The location of the proposed development is in an area where general traffic levels are very modest, with free-flow conditions being the norm.

1.4.2 No requirement for detailed traffic assessment is conventionally required. Falkirk Council (FC) has however requested that performance of the development access junction be tested.

1.5 Report Structure

1.5.1 The report will be structured as follows:

- Introduction
- Policy Review
- Existing Site Accessibility Review, including Safe Routes to School
- Development Access Proposals
- Travel Demands
- Travel Plan Framework
- Summary and Conclusions

2 Policy Review

2.1 Introduction

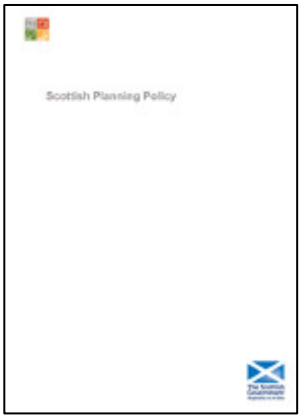
2.1.1 This section will provide a brief overview of National, Regional and Local Policy documents applicable to the proposal.

2.2 National Policy

2.2.1 The National Policy Context is defined by the following documents:

- Scottish Planning Policy (2014)
- Scottish Planning Advice Note 75 - Planning for Transport (2005)
- Transport Assessment Guidance (2012)
- Designing Streets (2010)
- National Roads Development Guide (2014)

2.2.2 **Scottish Planning Policy 2014** (SPP) was issued in June 2014 as a replacement for the first SPP document issued in 2010. SPP consolidated all of the earlier individual planning policies into one document.



2.2.3 SPP identifies that "*The planning system should:*

- *"promote business and industrial development that increases economic activity while safeguarding and enhancing the natural and built environments as national assets"*
- *"allocate sites that meet the diverse needs of the different sectors and sizes of business which are important to the plan area in a way which is flexible enough to accommodate changing circumstances and allow the realisation of new opportunities"*
- *"give due weight to net economic benefit of proposed development"*

2.2.4 The objective to prioritise the opportunities for personal travel by mode in the order – walking, cycling, public transport, car and other motorised vehicles is summarised within the Transport Section of SPP which states:

"Buildings and facilities should be accessible on foot and by cycle. Improvements to active transport networks, such as paths and cycle routes, in urban and rural areas will support more sustainable travel choices".

"New development areas should be served by public transport accessing a range of potential destinations, or proposals should be put in place to provide public transport".

"Reducing emissions from transport sources as a contribution to achieving Scottish Government greenhouse gas emission targets requires a shift to more sustainable modes of transport. For people this means a shift from car-based travel to walking, cycling and public transport".

"All significant travel generating developments should be encouraged to develop travel plans - as a package of measures aimed at promoting more sustainable travel choices and reducing reliance on car"

2.2.5 **Scottish Planning Advice Note 75 – Planning for Transport** (PAN 75) identifies the need for the integration of land use planning with transport, taking into account policies on economic growth, education, health and the objective of a more inclusive society.



2.2.6 PAN 75 identifies in Annex B the undernoted thresholds:

- *"For accessibility of public transport the recommended guidelines are less than 400m to bus services and 800m to rail services"*
- *"A maximum threshold of 1600m for walking is broadly in line with observed travel behaviour".*

2.2.7 The **Transport Assessment Guidance** document was issued by the Scottish Government in 2012 replacing 'Transport Assessment and Implementation: A Guide'. The main objective of the document is to assist in the preparation of Transport Assessments for development proposals in Scotland. The guidance sets out requirements according to the scale of development being proposed; ranging from a local development which requires a Transport Statement providing an explanation of transport issues through to a major development where detailed technical analysis will be required in a Transport Assessment accompanied by a supporting Travel Plan.



2.2.8 **Designing Streets** (DS) was published by the Scottish Government in 2010 as the first street design focused policy statement in Scotland, marking a change in emphasis away from vehicle-dominated streets towards place-making. The two key policies outlined in DS 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"*

2.2.9 The first of these policies is the most significant, with DS emphasising the importance of creating a "*sense of place"*, and stating that developments should aim to achieve "*the right balance between place and movement".*

2.2.10 The **National Roads Development Guide** (NRDG) has been produced by the Society for Chief Officers of Transport in Scotland (SCOTS) and is designed to support Designing Streets (DS). NRDG expands on the principles of DS and provides clarification on the circumstances in which DS can be used.

2.2.11 NRDG identifies under 'purpose' a number of matters which include:

- *"Provide a consistent, accessible and relevant source of information that links related detailed and complex infrastructure requirements in one place."*
- *"Advocate a re-designation of road hierarchy to user hierarchy."*
- *"Accommodate Local Authority Variances, such as parking standards or road details. These local departures are intended to be easily identified and accessed and as such form a section appended to this baseline document."*
- *"Encourage high quality environments that place a focus on people and enable developments to be designed on an individual methodology rather than following standard and rigid specifications where possible."*
- *"Support a more holistic, integrated approach to the planning and approvals process with early discussions between all parties actively encouraged."*

2.3 Regional Policy

2.3.1 The regional policy context for Limerigg is largely defined by the SEStran **Regional Transport Strategy Refresh** (RTSR) for the South East of Scotland Transport Partnership (SEStran) 2015-2025.

2.3.2 This document sets out SEStran's vision for transport for the eight council areas within the south east of Scotland as follows:

> *"South East Scotland is a dynamic and growing area which aspires to become one of northern Europe's leading economic regions. Essential to this is the development of a transport system which enables businesses to function effectively, allows all groups in society to share in the region's success through high quality access to services and opportunities, respects the environment, and contributes to better health."*

2.3.3 The document goes on to outline four main objectives as follows:

- *Economy – to ensure transport facilities encourage economic growth, regional prosperity and vitality in a sustainable manner;*
- *Accessibility – to improve accessibility for those with limited transport choice or no access to a car, particularly those who live in rural areas;*
- *Environment – to ensure that development is achieved in an environmentally sustainable manner; and*
- *Safety and Health – to promote a healthier and more active SEStran area population.*

2.4 Local Policy

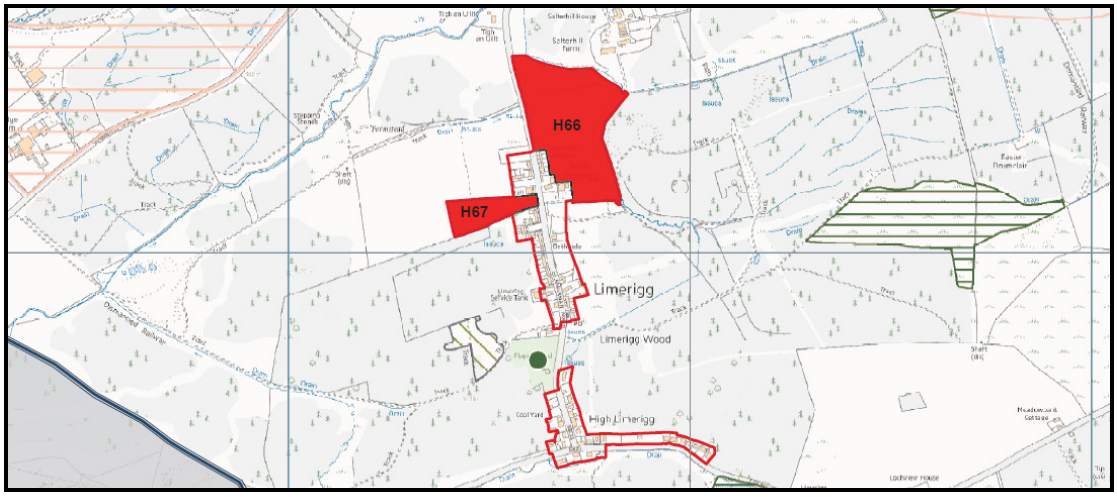
2.4.1 The local policy context for the proposed development is defined by the following documents:

- Falkirk Council Local Development Plan (2015)
- Falkirk Council Local Transport Strategy (2014)

2.4.2 The **Falkirk Council Local Development Plan** (LDP) was adopted in July 2015 "*to guide the future use and development of land within the Falkirk Council area over the next 20 years*". The LDP sets out a range of policies and proposals to identify where development should or should not occur. The LDP replaced the previous Structure Plan and Local Plan to provide a strategy for the period from 2014 to 2034, and is currently under review.

2.4.3 The development site falls within the area identified as H66 in the LDP, identified as an Existing Supply Site for up to 65 residential units, covering an area of 6.3Ha. The location of H66 is highlighted in the LDP Map Extract in Figure 2.1.

Figure 2.1 – Local Development Plan Map Extract



2.4.4 The following comments are included within the LDP:

- *Greenfield extension to village*
- *Careful siting, design, structure planting and landscaping required to mitigate landscape impact, including 6m buffer strip along boundary watercourse*
- *Flood risk assessment required*
- *Peat management plan required*
- *Developer contributions towards enhanced path network required*
- *Developer contributions towards education required*
- *25% contribution required for affordable housing*

2.4.5 The relevant transport-specific policies in the LDP include INF07 – Walking and Cycling, INF08 – Bus Travel and New Development, INF10 – Transport Assessments, and INF11 – Parking. These policies are summarised as follows:

- *INF07 – Walking and Cycling*
  - *The Council will safeguard and promote the core path network, and will seek, where appropriate, developer contributions towards the network*
  - *New development infrastructure should support active travel by walking and cycling in line with agreed Travel Plan objectives*
  - *New development should provide suitable pedestrian and cycle links to existing networks and amenities*
  - *The design of new routes should promote their safe use*
  - *Pedestrian routes, where practical, should be accessible to the mobility impaired*
- *INF08 – Bus Travel and New Development*
  - *New development should provide suitable access to bus services, taking into account the 400m walking distance specified in SPP.*
  - *Bus infrastructure provision and phasing to be agreed with the council, designed to council guidelines*
  - *Bus service routes should be incorporated into new developments where appropriate*
- *INF10 – Transport Assessments*
  - *Transport Assessments (TAs) are required for developments that are likely to result in a significant increase in the number of trips on the transport network*
  - *TAs will include travel plans (TPs) and, where necessary, safety audits of proposed mitigation and air quality assessments.*
  - *FC will only support development proposals where the TA and TP has been appropriately scoped, the network impacts defined and mitigation identified.*

- *INF11 – Parking*
  - *The maximum parking standards set out in SPP will be applied to new development, where relevant, in tandem with the Council's minimum standards. Developer contributions may be required where minimum standards cannot be met.*

2.4.6 The **Falkirk Council Local Transport Strategy** (LTS) was adopted in 2014 and sets out the council's vision *"to provide a transport network… which allows people a reasonable choice of travel options as part of a safe, reliable, convenient, accessible and sustainable transport system."*

2.4.7 To achieve this vision FC have set out a number of objectives, summarised below:

- *1 - To support the growth of the local economy in a sustainable way*
- *2 - To contribute to community regeneration through promoting social inclusion*
- *3 - To protect the environment by minimising the impact that transport can have on it and to improve health by promoting more active travel*
- *4 - To improve safety for all those using the transport network*
- *5 - To improve integration between different forms of transport*

2.5 Summary

2.5.1 The development proposals are broadly in accordance with established policy documentation at local, regional and national level.

2.5.2 The development site is allocated within the Falkirk Council Local Development Plan as a potential development site for housing, noted as a greenfield extension to the existing village. 25% of the housing provided at the site will be allocated for affordable housing, in line with the LDP.

2.5.3 The site will benefit from its close proximity to established walking, cycling and public transport links, as detailed in Chapter 3 of this report.

3 Existing Site Accessibility Review

3.1 Introduction

3.1.1 This Chapter of the report considers the existing accessibility of the site by each travel mode in turn, which will inform the development of the Residential Travel Pack Framework outlined in Chapter 5 of this report.

3.2 Pedestrian Network

3.2.1 As the site will occupy an area of undeveloped land immediately north of Limerigg the pedestrian facilities are currently limited. The development proposals, described in Chapter 4, will include the provision of a new footway on the site frontage and a number of links between the site and the external network.

3.2.2 A core path is accessed directly opposite the site on the west side of the B8022 Station Road that runs west and links with other recreational routes.

Photograph 3.1 – Core Path opposite Site



3.2.3 The core path, number 023/977, is unsurfaced and opens directly onto the B8022 carriageway. The core path is signed for Limerigg Forest Paths, and the route surface is described as ‘farm track’ in the FC Core Path Plan, with a gentle gradient and covering a length of 445m.

Photograph 3.2 – Core Path Signage



3.2.4 The nearest footway to the site currently terminates at the north end of Cameron Terrace immediately south of the southern boundary of the development. Cameron Terrace is a row of 8 properties that lie on the east side of the B8022 Slamannan Road that is provided with a layby for residents parking.

3.2.5 The footway is wide and lit, with a good quality surface. It runs continuously south to the junction formed by the B8022 and the B825. There are a number of dropped kerbs to serve numerous driveway accesses and a single break in the footway for a minor field access that is provided with dropped kerbs to facilitate the crossing.

Photograph 3.3 – Footway on West Side of B8022



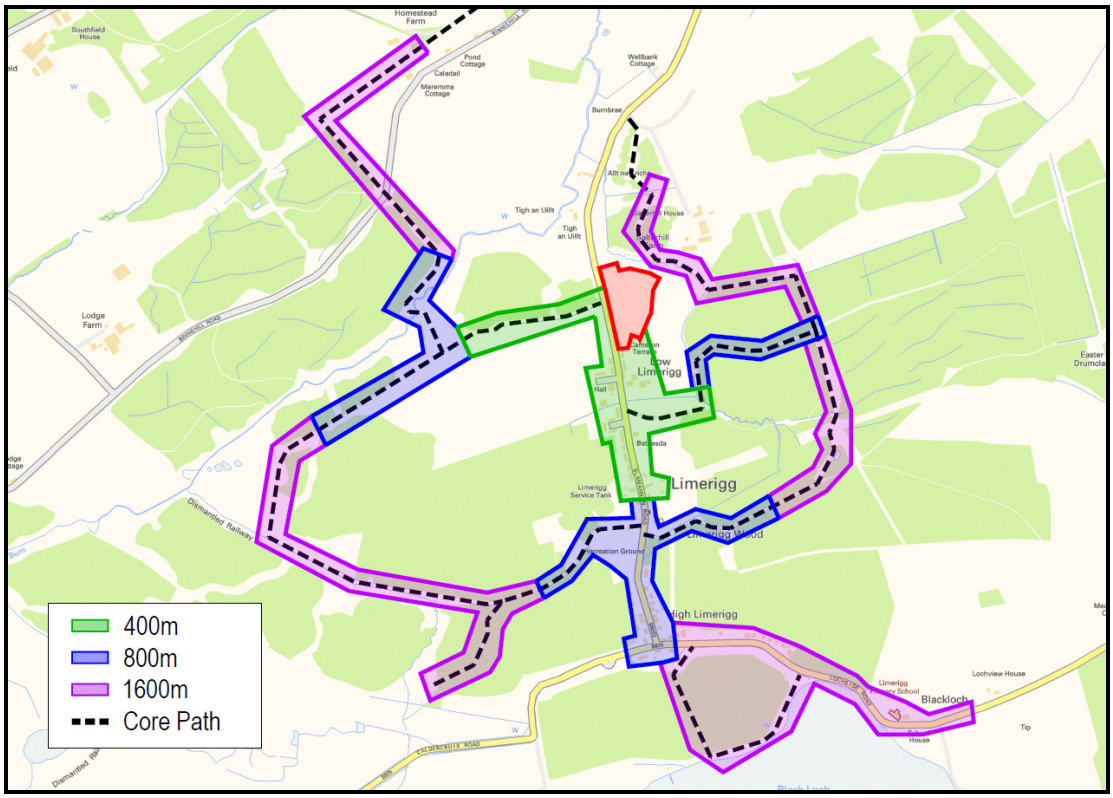
3.2.6 A footway of a similar quality, albeit narrower, begins on the west side of the B8022 approximately 15m south of the eastern footway. It runs south in a similar manner to the eastern footway, crossed by a number of driveway and minor accesses with dropped kerbs.

3.2.7 The western footway terminates at the B825 junction bellmouth, while the eastern footway forms a continuous link eastwards from the junction along to Limerigg Primary School.

3.2.8 A footway is provided for a brief section on the development frontage on the south side of the B825 directly opposite the B8022 junction, and a core path that runs south and alongside Black Loch is also accessible here.

3.2.9 Figure illustrates the 400m, 800m and 1,600m pedestrian walking isochrones for the development as set out in *PAN 75*. It also highlights the location of core paths and other pedestrian facilities in the area. The Figure demonstrates that the majority of Limerigg lies within 800m of the proposed development.

Figure 3.1 - Pedestrian Walking Isochrones



3.3 Public Transport Routes & Facilities

3.3.1 The nearest bus stop to the development is the southbound stop located on Cameron Terrace, approximately 40m south of the southern edge of the site. A

northbound stop is located a further 100m to the south. These stops are served by the First Midland Bluebird service 2, which operates between Limerigg and Bo'ness via Slamannan, Falkirk and Grangemouth. One journey is extended to Graeme High School in the morning, and starts from Graeme High School in the afternoon on schooldays only. Service 2 replaced service 17 in May 2019 as part of a series of network changes in the Falkirk area.

Photograph 3.4 – First Midland Bluebird service 17 at Limerigg turning circle



3.3.2 Service 2 runs at a typical weekday and Saturday frequency of one every hour, reducing to one every two hours on Sundays.

Photograph 3.5 – Bus Stop on B8022 at Cameron Terrace



3.3.3 Details of the bus service operating in Limerigg can be found in Table 3.1, while the location of the stops is illustrated in Figure 3.3 within walk distance isochrones. Existing bus services pass Falkirk High Station with a journey time of 20 minutes.

Figure 3.3 – Bus Stop Locations

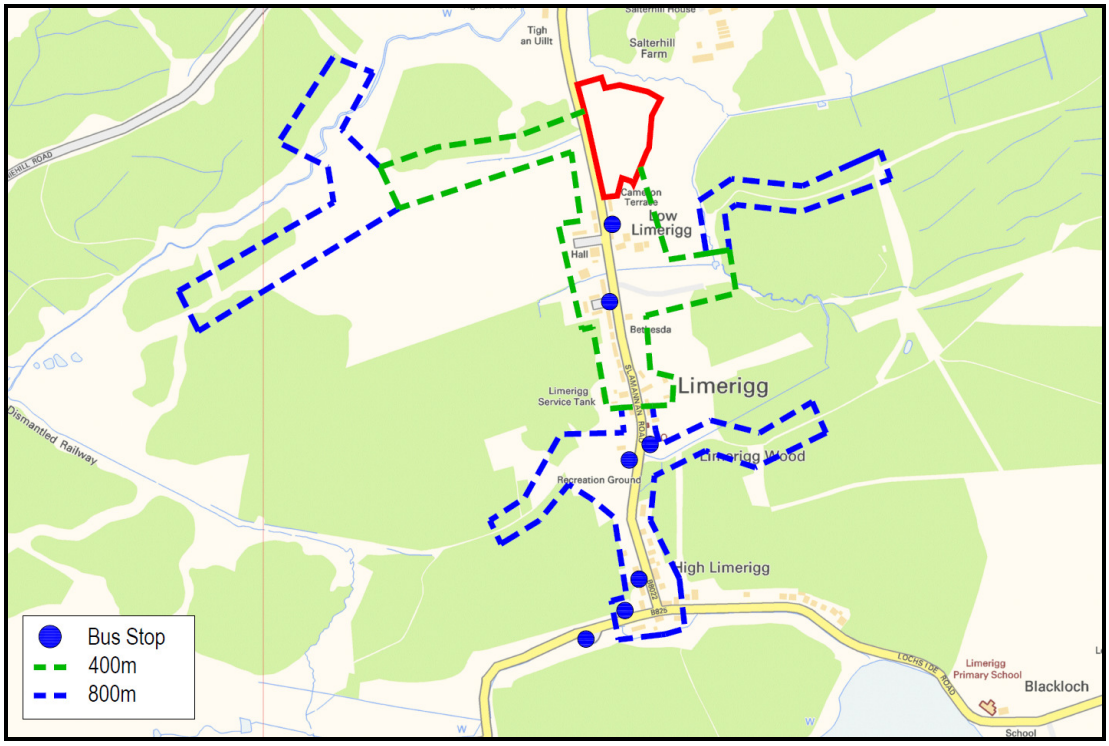


Table 3.1 – Summary of Services in Limerigg

Service No.	Route	General Frequencies		
		Mon – Fri	Sat	Sun
Operator – First Midland Bluebird				
2	Limerigg → Slamannan → Lionthorn → Falkirk → *Graeme High School →Grangemouth → Bo'Mains →Bo'ness town centre →Bo'ness Drum Farm*	60 mins	60 mins	120 mins

3.4 Existing Road Network

3.4.1 The development site is located on the east side of the B8022 and does not currently feature an access junction. The development proposals include the provision of a new ghost island priority junction, further details of which are set out in Chapter 4 of this report.

3.4.2 The B8022 is a local distributor class road that runs north-south through Limerigg, linking the settlement with Slammanan to the north. It is subject to a 40mph speed limit between the two villages, and a 30mph limit within them, marked by gateway speed limit signage.

3.4.3 It was noted during the site visit that the speed limit signage at the entry to Limerigg was partially obscured by overgrown vegetation, as shown in Photograph 3.6. It is recommended that the roadside vegetation is suitably maintained.

Photograph 3.6 – Speed Limit Gateway Signage on B8022



3.4.4 The B8022 has an undulating surface running northwards from the edge of Limerigg, generally on a downward gradient. The carriageway has a good quality surface and is approximately 6m wide. The verges on both sides are overgrown with vegetation, and the east side (i.e. the site frontage) is lined with telegraph poles.

Photograph 3.7 – B8022 Site Frontage (Looking North from Limerigg)



3.4.5 The B8022 runs south and connects to the B825 as the minor approach to a priority junction. The B825 runs broadly northeast to southwest, linking Limerigg with Avonbridge to the northeast and Caldercruix to the southwest. The southwest connection also provides the main route to destinations to the west such as Airdrie and Glasgow.

3.4.6 To the east the B825 is subject to a 30mph speed limit up to Limerigg Primary School, beyond which it is subject to the national speed limit. The section of the B825 in the vicinity of the school is also subject to a part time 20mph speed limit, as shown in Photograph 3.8.

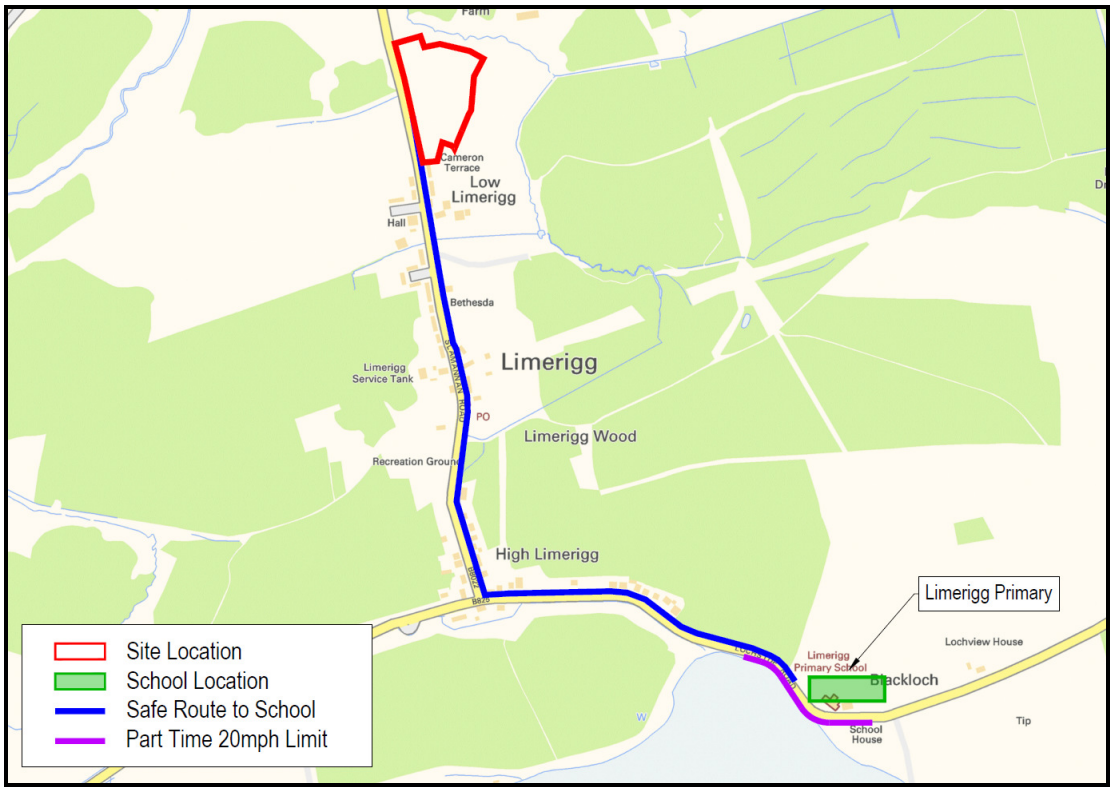
Photograph 3.8 – Part Time 20mph Signage



3.5 Safe Routes to School

3.5.1 Figure 3.4 illustrates the most direct route to the nearest school to the development, Limerigg Primary School. The route is relatively straightforward and simply follows the footways on the B8022 and B825. Road crossings are limited to driveways and a minor field access, which features a dropped kerb crossing.

Figure 3.4 – Safe Routes to School



3.5.2 Figure 3.4 also highlights the length of the part time 20mph limit, which runs along the school frontage and extends west, covering a distance of approximately 250m.

3.5.3 Systra prepared School Travel Assessments for FC in 2017 which identified potential benefit to widening the existing footway to the north side of Lochside Road which is described as 'narrow', suggesting a widening of 0.5m between 42 Lochside Road and Limerigg Primary School as appropriate. The Systra report also notes that the existing footway is in poor condition in some places. The assessment, which included qualitative assessment of vehicle speeds, provides a high level review of existing conditions to identify locations which may require improvement.

3.5.4 A review of the Limerigg Primary School handbook for 2019/2020 notes that the school roll is at present 5 pupils. It is therefore concluded that there is no justification for any improvements to the route to be delivered at the present time.

3.5.5 As noted at section 3.3, a service bus is extended to and from Graeme High School for secondary school age pupils.

3.6 Summary

3.6.1 The development is located in close proximity to established links to the existing pedestrian, cycling and bus networks in the wider local area.

3.6.2 Direct links between the site and these local networks are limited and will be improved as part of the development proposals. This includes footway provision along the site frontage to link the site with the existing network within Limerigg. Further details of these improvements are set out in Chapter 4.

3.6.3 Safe Routes to School in the area have been investigated on the existing pedestrian network, which benefits from part time 20mph speed limits in the vicinity of Limerigg Primary School.

3.6.4 The site does not currently have a point of access, and the development proposals include the provision of a new priority junction access on the east side of the B8022. The access is to be improved as part of the development proposals, details of which are set out in Chapter 4.

3.6.5 The local road network provides links to the principal network via the A89 at Caldercruix and to the north at Falkirk.

4 Site Accessibility Proposals

4.1 Introduction

4.1.1 This chapter provides details of the accessibility proposals for the development, considering the pedestrian, vehicular and service arrangements, parking, accessibility improvements and internal linkages.

4.2 Vehicular Access

4.2.1 The site will be accessed via a new priority junction with a right-turn ghost-island on the B8002 approximately 140m north of Cameron Terrace. The 30mph speed limit, which currently begins at Cameron Terrace, will be extended north to the northern edge of the development. This will be indicated by relocating the existing gateway signage to the northern boundary of the site, immediately north of Core Path 023/977

4.2.2 The development layout is yet to be confirmed, however it is anticipated that the internal road network will feature a looped section to allow refuse vehicles to navigate the site entirely in forward gear.

4.2.3 The indicative layout of the proposed site access junction is presented in Appendix B. A Road Safety Audit will be provided once confirmation is received from FC that the principles of a ghost island junction are acceptable. Consideration was given to the provision of a roundabout access junction but the gradients on approach precluded this option.

4.3 Pedestrian and Cycle Access

4.3.1 A new footway will be provided on the site frontage on the east side of the B8022, extending north to the northern edge of the site and south to link with the existing footway at Cameron Terrace. These footways will run into the development along the site access road to form continuous links between the internal footways and the external network.

4.3.2 The proposed junction will be provided with dropped kerb, tactile paved crossing points across the site access approach.

4.3.3 A dropped kerb crossing will also be provided to the north of the proposed junction to link with existing Core Path 023/977. The entrance to the Core Path will be formalised with a short footway leading into the path.

4.4 Car Parking

4.4.1 The standards for parking are based on those set out in the SCOTS National Roads Development Guide (NRDG). An extract from the NRDG is reproduced in Table 4.1.

Falkirk Council has not notified any variations to Parking Standards for Residential developments.

4.4.2 Residential parking standards are based on the number of bedrooms per dwelling. The number of bedrooms per dwelling is currently unknown as the development layout is yet to be finalised. The level of car and cycle parking provision will however be provided in line with the standards outlined in Table 4.1.

Table 4.1 – NRDG Parking Requirements

Type of Development	Appropriate Provision *(spaces per 100 m² gross floor area, GFA)*	Cycle Minimum	PTW Minimum	Disabled Minimum
1 Bedroom	1 space per dwelling	1 secure covered space per dwelling. None if garage or secure area is provided within cartilage of dwelling.	N/A	N/A if parking is in cartilage of dwelling, otherwise as Visitor/ Unallocated
2-3 Bedroom	2 spaces per dwelling*			
4 Bedroom	3 spaces per dwelling			
Retirement Developments ***(eg warden assisted independent living accommodation)***	1 space per dwelling	1 space per 8 units (visitors)	1 space + 1 per 20 car spaces (for 1st 100 car spaces), then 1 space per 30 car spaces (over 100 car spaces)	N/A if parking is in cartilage of dwelling, otherwise as Visitor/ Unallocated

4.5 Service Access

4.5.1 Refuse collection within the site will be conducted on-street within the development. Refuse vehicles will be able to utilise the provided loop road and turning heads to ensure that they arrive at and depart from the site in forward gear.

5 Travel Demands

5.1 Introduction

5.1.1 This chapter provides an estimate of People Trips by all modes of transport generated by the development, along with the anticipated distribution of the generated traffic and its likely impact on the road network.

5.2 People Trip Prediction - Residential

5.2.1 The TRICS database has been interrogated to identify the estimated people trip rates for the proposed development. A TRICS report for 'Residential – Houses Privately Owned' is presented in Appendix C and has been used to estimate the people trips by each mode during the weekday AM and PM peak hours. The TRICS report includes sites in 'Edge of Town Centre', 'Suburban Area' and 'Edge of Town' locations and excludes sites in Greater London.

5.2.2 Table 5.1 sets out the identified vehicle trip rates and trip generation for 90 residential units.

Table 6.1 – Estimated TRICS Vehicle Trip Generation - Residential

Time Period	Trip Rate		Trip Generation		
	Arrivals	Departures	Arrivals	Departures	Two-way
AM Peak	0.160	0.434	14	39	53
PM Peak	0.365	0.208	33	19	52

5.2.3 It is anticipated that the development will produce a maximum of 53 two-way vehicle trips, occurring in the AM peak hour, equivalent to less than one vehicle per minute.

5.2.4 The TRICS data has also provided the estimated mode share at the development based on the predicted people trips. The data for the mode share and associated trips by each mode is presented in Table 5.2.

5.2.5 The data indicates that car trips will account for 61% of trips generated by the development, with car passengers accounting for a further 22% of trips. Very few cyclist and public transport trips are predicted, with the remainder largely comprising pedestrian trips.

Table 5.2 – Estimated TRICS People Trip Generation by Mode - Residential

Mode of Travel	Average Mode Share	AM Peak		PM Peak	
		In	Out	In	Out
Pedestrian	19%	5	16	10	5
Cyclist	2%	0	2	1	1
Public Transport	2%	0	2	1	0
Car Driver	55%	14	39	33	19
Car Passenger	22%	3	19	13	8
Other	0%	0	0	0	0
Total	100%	23	78	59	33

5.2.6 To ensure a robust prediction of vehicle trips a comparison has been made with travel to work data for Slamannan from the Scotland Census 2011. This data is presented in Table 5.3 below, and the Census outputs for Slamannan are presented in Appendix D.

Table 5.3 – Estimated Census People Trip Generation by Mode - Residential

Mode of Travel	Census Mode Share	AM Peak		PM Peak	
		In	Out	In	Out
Pedestrian	14%	3	10	7	4
Cyclist	1%	0	0	0	0
Public Transport	23%	5	16	12	7
Car Driver	50%	10	35	26	15
Car Passenger	10%	2	7	5	3
Other	2%	0	1	1	1
Total	100%	20	69	53	29

5.2.7 The Census Mode Share data indicates that a lower proportion of trips (14% compared to 19%) will be made by pedestrians, and a much higher proportion will be made by public transport (23% compared to 2%).

5.3 People Trip Prediction - Retail

5.3.1 A trip generation assessment has also been undertaken for the 155m^2 retail unit, assumed to be a convenience store, using TRICS. The identified vehicle trip rates and trip generation are summarised in Table 5.4, and the TRICS outputs are provided in Appendix C.

Table 5.4 – Estimated TRICS Vehicle Trip Generation - Retail

Time Period	Trip Rate		Trip Generation	
	Arrivals	Departures	Arrivals	Departures
AM Peak	6.729	6.275	10	10
PM Peak	8.768	8.79	14	14

5.3.2 It is anticipated that the development will produce a maximum of 28 two-way vehicle trips, occurring in the PM peak hour, approximately one vehicle every two minutes. No allowance has been made for 'pass by' trips, or higher levels of walk trips due to the 'local' nature of the facility.

5.3.3 The TRICS data has also provided the estimated mode share at the development based on the predicted people trips. The data for the mode share and associated trips by each mode is presented in Table 5.5.

Table 5.5 – Estimated TRICS People Trip Generation by Mode - Retail

Mode of Travel	Average Mode Share	AM Peak		PM Peak	
		In	Out	In	Out
Pedestrian	43%	11	11	13	13
Cyclist	2%	0	0	1	1
Public Transport	3%	1	1	1	1
Car Driver	43%	10	10	14	14
Car Passenger	9%	2	2	3	3
Other	0%	0	0	0	0
Total	100%	25	23	31	32

5.3.4 The data indicates that car and pedestrian trips will account for a similar level of trips generated by the retail unit, both accounting for approximately 43% of trips. Given the nature of the site as a small convenience store for a small village this is considered a relatively conservative estimate, and that the number of trips on foot is likely to be significantly higher due to the short distances involved.

5.3.5 As the trips generated by the retail unit are not anticipated to be 'travel to work' trips a comparison with the Census mode share has not been made.

5.4 Traffic Impact Assessment

5.4.1 A modelling assessment has been undertaken for the indicative layout. Traffic flows were based on the peak hour flows from the classified ATC surveys supplied by Falkirk Council. The observed flows on the B8022 were relatively low, with an approximate peak hour two-way average of around 150 vehicles on a normal

weekday. A tidal bias towards northbound movements was noted for the AM peak, with the reverse being the case in the PM peak.

5.4.2 It has been assumed that 100% of the traffic generated by the residential development will run to and from the north, while 100% of the retail flows will run to and from the south.

5.4.3 Traffic network diagrams summarising the turning movements at the junction are presented in Appendix E.

5.4.4 NRTF Low Growth has been used to factor the flows from the 2019 observed flows to the estimated year of completion, 2021, with a growth factor of 1.016 applied.

5.4.5 The modelling assessment has been undertaken using the industry standard software package Junctions8. The modelling results for the 2021 with Development Flows scenario are presented in Table 5.6.

Table 5.6 – Site Access Modelling Results Summary

Approach	AM			PM		
	Queue (PCUs)	Delay (s)	RFC	Queue (PCUs)	Delay (s)	RFC
2021 with Development Flows						
Site Access	0	5	0.01	0	5	0.02
B9022 South	0	6	0.06	0	5	0.03

5.4.6 The results of the modelling of the site access indicate that it will operate well within capacity. The modelling outputs are presented in Appendix F.

5.5 Summary

5.5.1 The predicted level of peoples trips by all modes from the proposed development are at modest levels, which can be comfortably accommodated on the existing road network.

6 Residential Travel Pack Framework

6.1 Introduction

6.1.1 This framework outlines the key objectives, monitoring and implementation methods that a Travel Plan may implement.

6.1.2 The travel plan is a key tool in ensuring that travel generated by the development is more sustainable (less polluting and damaging to the environment), healthier (using active transport methods such as walking or cycling, which provide children and adults with valuable exercise) and safer for all residents and visitors.

6.1.3 Travel Plans have conventionally focused on employment-only developments but similar principles are increasingly being applied to residential developments. Travel Plans for residential developments are tailored to the needs, location and scale of the development.

6.1.4 It is envisaged that the practical implementation of a Travel Plan for this development would require the preparation of a Residential Travel Pack that will provide all of the key Travel Plan features in a concise, attractive and easy to read format.

6.2 Policy Context

6.2.1 Scottish Planning Policy (SPP), at paragraph 167, encourages the preparation of Travel Plans for all significant travel generating developments. It defines a Travel Plan as:

> *"A travel plan is a package of measures aimed at promoting more sustainable travel choices and reducing reliance on the car, and should be encouraged for all significant travel generating developments."*

6.3 Travel Plan Objectives

6.3.1 A Travel Plan provides the opportunity to deliver more sustainable travel patterns to and from the development in an attempt to reduce the level of private car traffic generated by the site. The primary aim of this Travel Plan is therefore to minimise the level of single occupancy private car trips generated by the development, particularly for local and commuter journeys.

6.3.2 The main objective of this Travel Plan, presented in Pack format, will be to promote alternative travel choices to car use by offering incentives to choose more sustainable travel alternatives as well as disincentives to the use of the car. Reductions in commuting costs along with the improved health are anticipated to form additional objectives.

6.4 Residential Travel Pack Contents

6.4.1 The provision of a Travel Pack that can be distributed to residents will form a crucial role in communicating the aims and measures of the TP.

6.4.2 As a new development the Travel Pack will be coordinated by the developer, who will focus on increasing awareness of the benefits of the Travel Plan initiative.

6.4.3 The Travel Pack will typically contain a range of information relating to active and sustainable travel modes, with a view to increasing the general awareness of the availability of these travel modes. This can include, but is not limited to:

- Walking route maps
- Cycling route maps
- A walking and cycling isochrone map, similar to that in Chapter 3 of this report, highlighting the travel times to key local destinations
- Bus route maps with associated timetable information
- Details of local shops and services, along with any special offers, that would encourage people to access those facilities locally rather than travelling out of the area
- Information regarding School Travel Plans where available
- Encouraging more sustainable patterns by setting and maintaining targets
- Car sharing scheme information
- Information detailing the health benefits of active travel modes

6.5 Residential Travel Plan Implementation

6.5.1 This Framework shall form the basis of the Residential Travel Plan, which will be developed in line with local and national policies and guidance. The existing conditions at the site, outlined earlier in this report, shall inform the development of the Residential Travel Pack. Together with the accessibility improvements outlined in Chapter 4 of this report they will provide the facilities, measures and schemes to ensure that users of the development have access to safe and viable transport alternative for onward travel.

6.5.2 The successful implementation of the Travel Plan requires a full package of measures and a partnership between the developer, Falkirk Council and other relevant local stakeholders.

7 Summary and Conclusions

7.1 Summary

7.1.1 This Transport Statement (TS) has been prepared by Fairhurst on behalf of Robert MacDonald Clarkston in support of a planning application for a proposed residential development in Limerigg.

7.1.2 The proposed development is anticipated to comprise 90 residential units and a 155m^2 village shop. The residential units will be provided as a mixture of semi-detached and terraced houses.

7.1.3 Access to the development is to be provided by a new priority junction access with a right-turn ghost-island onto the B802 Slamannan Road.

7.1.4 A modelling assessment for the junction was undertaken using Junctions8, confirming that the junction would operate well within capacity.

7.1.5 The TS provides a review of National, Regional and Local Policy context, and concludes that while the development proposals are broadly in accordance with policy.

7.1.6 The TS provides a summary of existing and proposed accessibility to the site by all modes of transport, and concludes that the site accessibility is provided to a suitable standard.

7.1.7 The TS states that the proposed level of car and cycle parking provision will be in accordance with established guidelines standards.

7.1.8 The estimated travel patterns generated by the development were identified using the TRICS database in conjunction with Scotland Census travel to work data. It is estimated that the residential development will generate approximately 53 and 52 two-way car trips in the AM and PM weekday peak hours respectively. The Census data indicates that over a third of residents (37%) will travel to work either on foot or via public transport.

7.1.9 The retail unit is anticipated to generate approximately 20 and 28 two-way car trips in the AM and PM weekday peak hours respectively. This is however anticipated to be much lower in practice, as due to the short distances between the retail unit and the rest of Limerigg the majority of trips are expected to be made on foot.

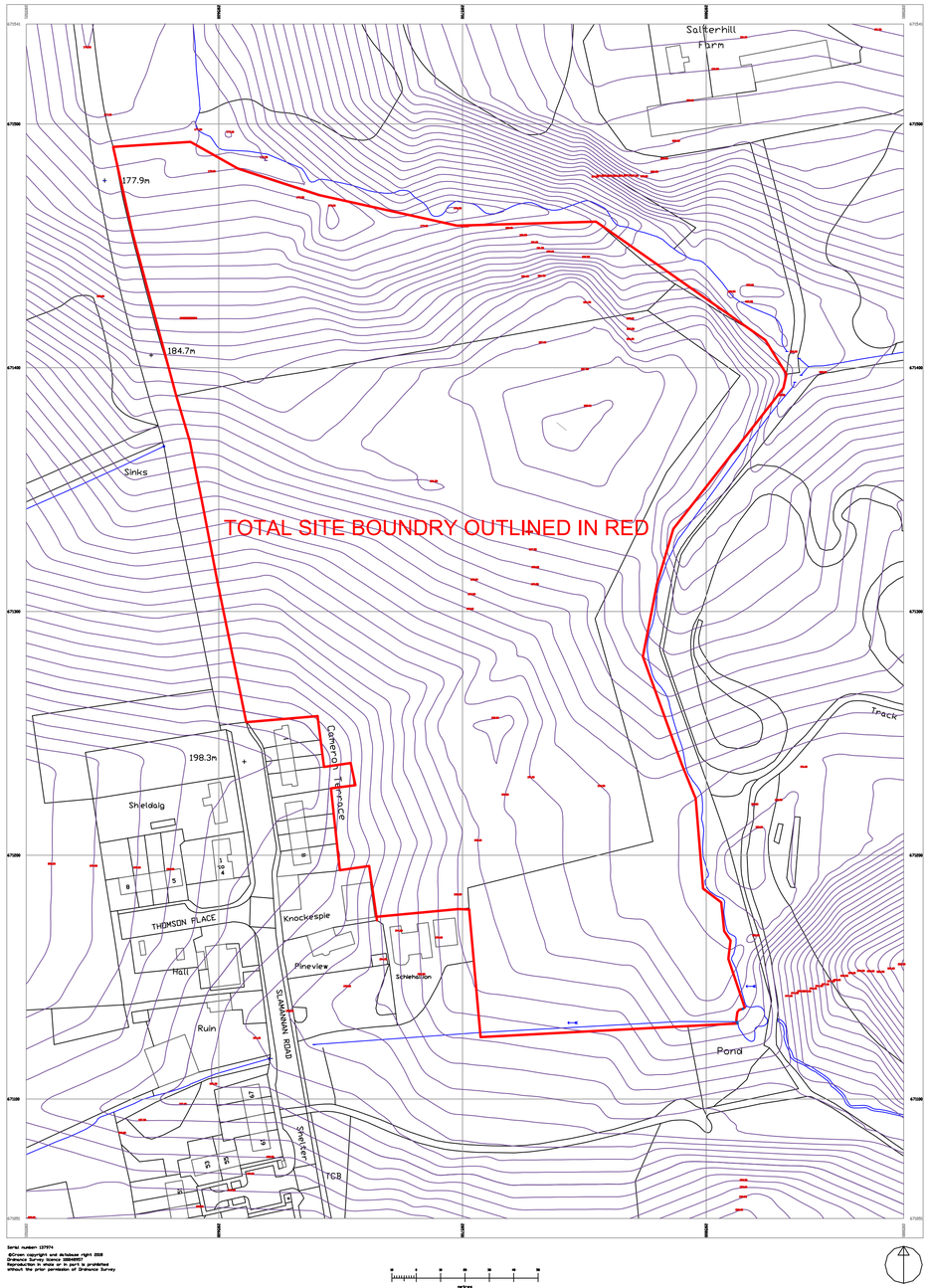
7.1.10 The TA provides a framework for the development of a residential travel pack.

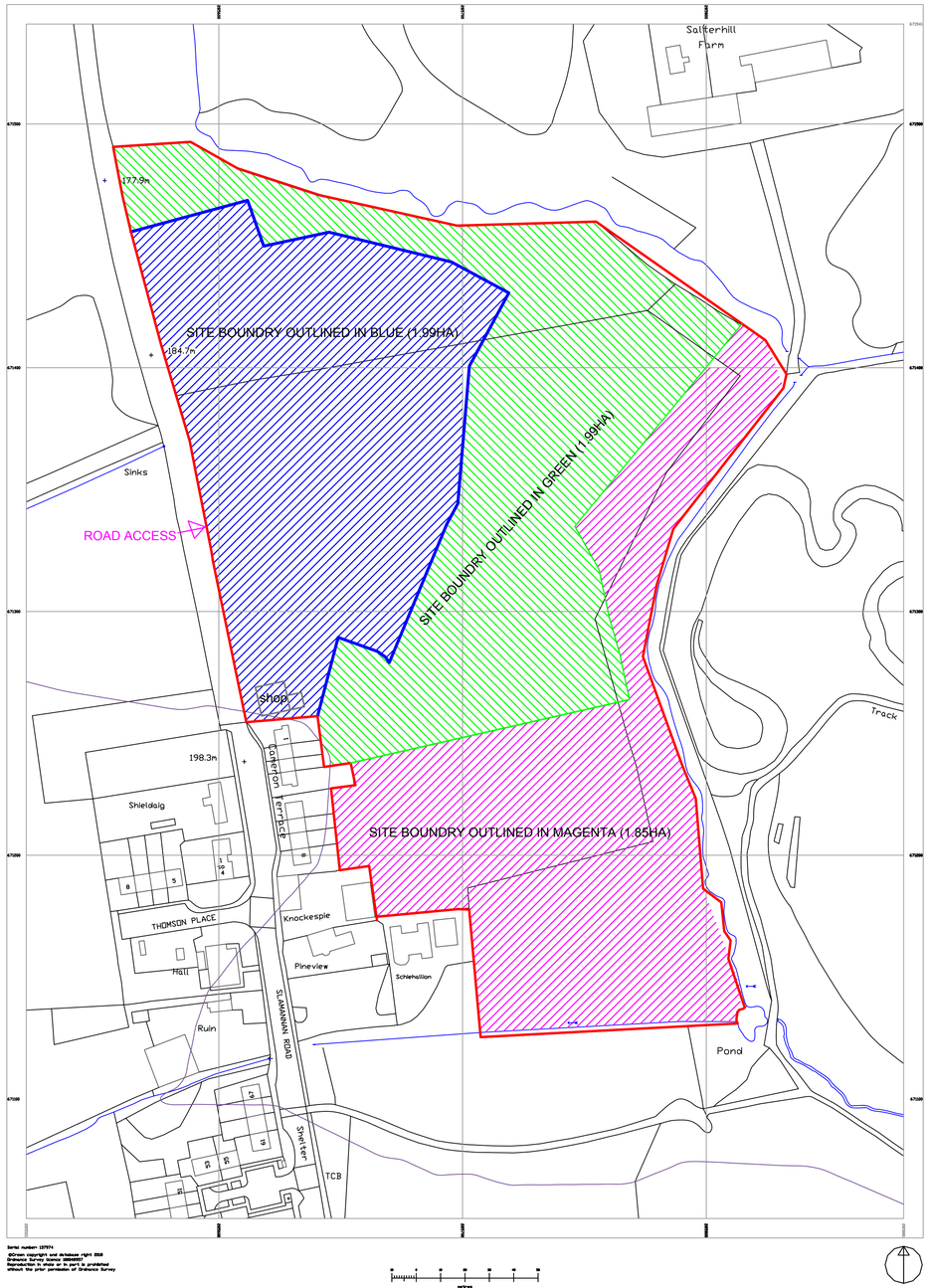
7.2 Conclusions

7.2.1 It is therefore concluded that there are no transport related issues preventing the award of planning consent.

Appendix A

Site Boundary Plan





LOCATION PLANS 1:1250 @ A1

APPENDIX 1

THIS DOCUMENT IS THE PROPOERTY OF ROSS WOODS ARCHITECTS. THE DESIGN INFORMATION CONTAINED HEREIN IS STRICTLY CONFIDENTIAL. THIS DOCUMENT IS NOT TO BE USED, REPRODUCED, DISCLOSED OR CIRCULATED IN WHOLE OR IN PART, WITHOUT THE PRIOR WRITTEN PERMISSION OF ROSS WOODS ARCHITECTS, IN EACH INSTANCE.

Do NOT scale from this drawing.

If in doubt ask.

TOTAL SITE BOUNDRY OUTLINED IN RED

PP1 HATCHED BLUE (1.99ha)

PP2 HATCHED GREEN (1.99ha)

PP3 HATCHED MAGENTA (1.85ha)

NORTH

REV	DATE		
-	-	-	-
-	-	-	-
D	030818	SHOP AND ACCESS SHOW	DR
C	160718	PAN DRAWING	DR
B	240518	PLANNING REQUEST	DR
A	230518	SITE REDUCED	DR

Proposed Residential Development
Limerigg
for Robert MacDonald Clarkston

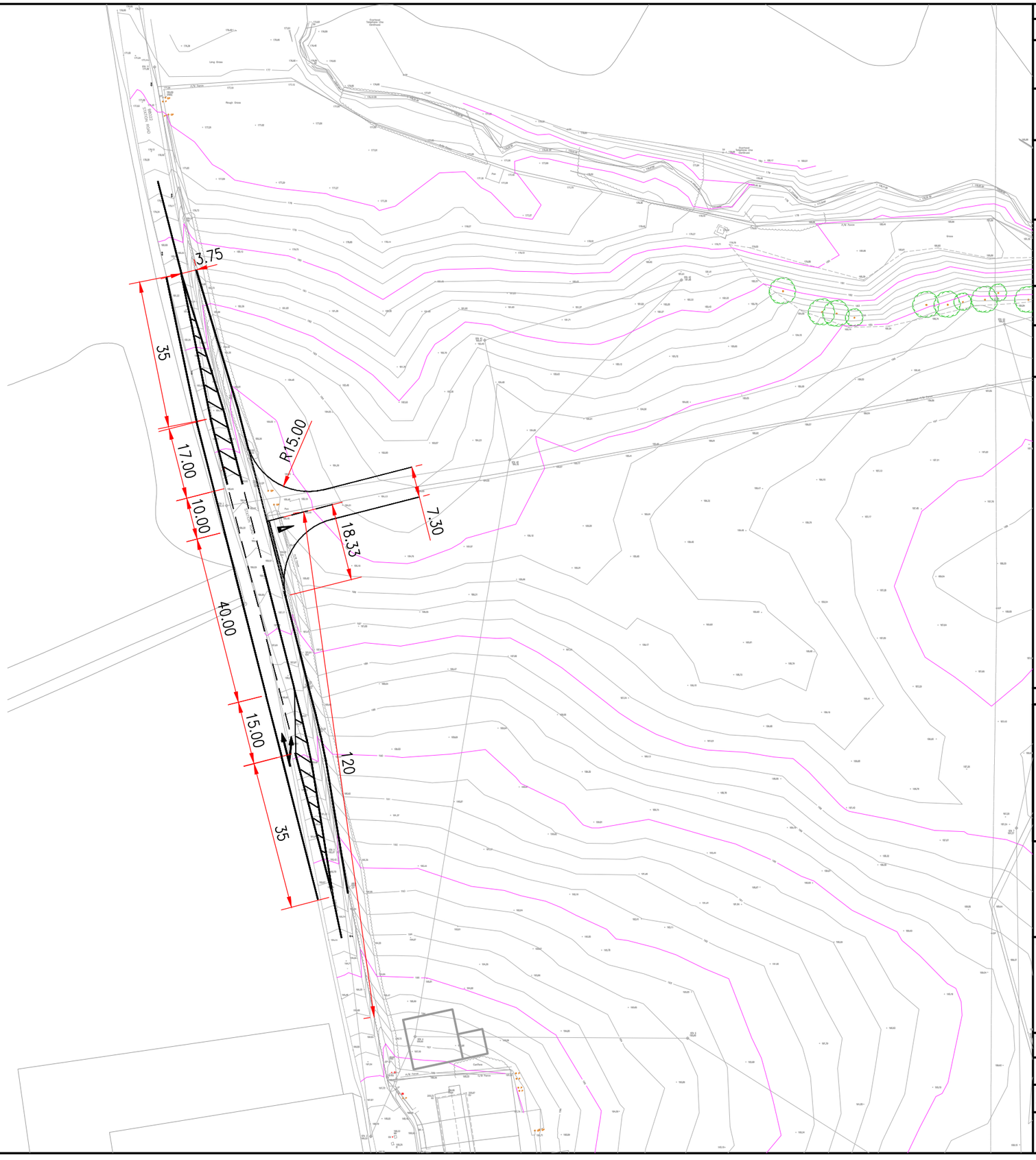
Title:	SITE SURVEY / OS MAP		
Client:	RM Clarkston		
Job No. :	RWA/18/09	Drawn:	DR
Scale	1:1250 @ A1	Date:	150518
Drg No. :	P001	Rev:	D

ROSS WOODS ARCHITECTS
54 BERKELEY STREET
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e-mail: dean@rosswoodsarchitects.com
www.rosswoodsarchitects.com

PLANNING

Appendix B

Site Access Layout Drawing



Do not scale from this drawing.

SAFETY HEALTH AND ENVIRONMENTAL INFORMATION

IN ADDITION TO THE HAZARD/RISKS NORMALLY ASSOCIATED WITH THE TYPES OF WORK DETAILED ON THIS DRAWING, NOTE THE FOLLOWING RISKS AND INFORMATION.

RISKS LISTED HERE ARE NOT EXHAUSTIVE. REFER TO DESIGN ASSESSMENT FORM NO.

CONSTRUCTION

DEMOLITION

FOR INFORMATION RELATING TO USE, CLEANING AND MAINTENANCE SEE THE HEALTH AND SAFETY FILE

IT IS ASSUMED THAT ALL WORKS WILL BE CARRIED OUT BY A COMPETENT CONTRACTOR WORKING, WHERE APPROPRIATE, TO AN APPROVED METHOD STATEMENT.

Rev.	Date	Description	Drwn.	Chkd.	Appd.

FAIRHURST

43 George Street
EDINBURGH
EH2 2HT

Tel: 0131 225 6741
Fax: 0844 381 4412

Client:

Project Title:
PROPOSED RESIDENTIAL DEVELOPMENT
LIMERIGG

Drawing Title:
INDICATIVE SITE ACCESS
GHOST ISLAND

Scale at A3:	Status:	
NTS	For Information	
Drawn:	Checked:	Approved:
ML		
Date:	Date:	Date:
07/05/19		

Drawing No.:	Revision:
126811/sk7002	–

Appendix C

TRICS Outputs

Calculation Reference: AUDIT-109303-180716-0705

TRIP RATE CALCULATION SELECTION PARAMETERS:

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

Selected regions and areas:

03	SOUTH WEST		
	DV	DEVON	2 days
	SM	SOMERSET	1 days
	WL	WILTSHIRE	1 days
04	EAST ANGLIA		
	CA	CAMBRIDGESHIRE	2 days
	NF	NORFOLK	3 days
	SF	SUFFOLK	2 days
05	EAST MIDLANDS		
	LN	LINCOLNSHIRE	2 days
06	WEST MIDLANDS		
	SH	SHROPSHIRE	2 days
	WK	WARWICKSHIRE	2 days
07	YORKSHIRE & NORTH LINCOLNSHIRE		
	NY	NORTH YORKSHIRE	6 days
08	NORTH WEST		
	CH	CHESHIRE	2 days
09	NORTH		
	CB	CUMBRIA	1 days
	DH	DURHAM	1 days
10	WALES		
	PS	POWYS	2 days
	VG	VALE OF GLAMORGAN	1 days
11	SCOTLAND		
	AG	ANGUS	1 days
	FA	FALKIRK	1 days
	HI	HIGHLAND	1 days
	PK	PERTH & KINROSS	1 days
12	CONNAUGHT		
	GA	GALWAY	1 days
	LT	LEITRIM	1 days
	MA	MAYO	1 days
	RO	ROSCOMMON	3 days
14	LEINSTER		
	WX	WEXFORD	1 days
15	GREATER DUBLIN		
	DL	DUBLIN	1 days
16	ULSTER (REPUBLIC OF IRELAND)		
	CV	CAVAN	1 days
	DN	DONEGAL	3 days
17	ULSTER (NORTHERN IRELAND)		
	AN	ANTRIM	1 days
	DO	DOWN	1 days

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

Secondary Filtering 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:	6 to 98 (units:)
Range Selected by User:	4 to 100 (units:)

Public Transport Provision:
Selection by: Include all surveys

Date Range: 01/01/10 to 22/09/17

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	12 days
Tuesday	13 days
Wednesday	8 days
Thursday	10 days
Friday	5 days

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

Selected survey types:

Manual count	48 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:

Edge of Town Centre	6
Suburban Area (PPS6 Out of Centre)	26
Edge of Town	16

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:

Residential Zone	44
No Sub Category	4

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.

Secondary Filtering selection:

Use Class:

C3	47 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	13 days
5,001 to 10,000	7 days
10,001 to 15,000	12 days
15,001 to 20,000	9 days
20,001 to 25,000	3 days
25,001 to 50,000	4 days

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

Secondary Filtering selection (Cont.):

Population within 5 miles:

5,000 or Less	3 days
5,001 to 25,000	13 days
25,001 to 50,000	7 days
50,001 to 75,000	5 days
75,001 to 100,000	9 days
100,001 to 125,000	1 days
125,001 to 250,000	10 days

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

Car ownership within 5 miles:

0.5 or Less	1 days
0.6 to 1.0	13 days
1.1 to 1.5	33 days
1.6 to 2.0	1 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	48 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.

PTAL Rating:

No PTAL Present	48 days

This data displays the number of selected surveys with PTAL Ratings.

LIST OF SITES relevant to selection parameters

1 AG-03-A-01 BUNGALOWS/DET. ANGUS
KEPTIE ROAD

ARBROATH
Suburban Area (PPS6 Out of Centre)
Residential Zone
Total Number of dwellings: 7
Survey date: TUESDAY *22/05/12* *Survey Type: MANUAL*

2 AN-03-A-07 SEMI DETACHED/TERRACED HOUSING ANTRIM
CASTLE WAY

ANTRIM
Suburban Area (PPS6 Out of Centre)
Residential Zone
Total Number of dwellings: 55
Survey date: TUESDAY *20/12/11* *Survey Type: MANUAL*

3 CA-03-A-04 DETACHED CAMBRIDGESHIRE

THORPE PARK ROAD
PETERBOROUGH
Suburban Area (PPS6 Out of Centre)
Residential Zone
Total Number of dwellings: 9
Survey date: TUESDAY *18/10/11* *Survey Type: MANUAL*

4 CA-03-A-05 DETACHED HOUSES CAMBRIDGESHIRE
EASTFIELD ROAD

PETERBOROUGH
Suburban Area (PPS6 Out of Centre)
Residential Zone
Total Number of dwellings: 28
Survey date: MONDAY *17/10/16* *Survey Type: MANUAL*

5 CB-03-A-05 DETACHED/TERRACED HOUSING CUMBRIA
MACADAM WAY

PENRITH
Edge of Town Centre
Residential Zone
Total Number of dwellings: 50
Survey date: TUESDAY *21/06/16* *Survey Type: MANUAL*

6 CH-03-A-08 DETACHED CHESHIRE
WHITCHURCH ROAD
BOUGHTON HEATH
CHESTER
Suburban Area (PPS6 Out of Centre)
Residential Zone
Total Number of dwellings: 11
Survey date: TUESDAY *22/05/12* *Survey Type: MANUAL*

7 CH-03-A-09 TERRACED HOUSES CHESHIRE
GREYSTOKE ROAD
HURDSFIELD
MACCLESFIELD
Edge of Town
Residential Zone
Total Number of dwellings: 24
Survey date: MONDAY *24/11/14* *Survey Type: MANUAL*

8 CV-03-A-01 DETACHED CAVAN
DUBLIN ROAD

CAVAN
Edge of Town
No Sub Category
Total Number of dwellings: 37
Survey date: TUESDAY *18/12/12* *Survey Type: MANUAL*

LIST OF SITES relevant to selection parameters (Cont.)

9 DH-03-A-01 SEMI DETACHED DURHAM
GREENFIELDS ROAD

BISHOP AUCKLAND
Suburban Area (PPS6 Out of Centre)
Residential Zone
Total Number of dwellings: 50
Survey date: TUESDAY 28/03/17 Survey Type: MANUAL

10 DL-03-A-07 SEMI DET./TERRACED DUBLIN
CASTLE DAWSON
BLACKROCK
DUBLIN
Edge of Town Centre
Residential Zone
Total Number of dwellings: 56
Survey date: MONDAY 26/09/11 Survey Type: MANUAL

11 DN-03-A-02 DETACHED DONEGAL
GLENFIN ROAD

BALLYBOFEY
Edge of Town
Residential Zone
Total Number of dwellings: 7
Survey date: THURSDAY 05/09/13 Survey Type: MANUAL

12 DN-03-A-03 DETACHED/SEMI-DETACHED DONEGAL
THE GRANGE
GLENCAR IRISH
LETTERKENNY
Edge of Town
Residential Zone
Total Number of dwellings: 50
Survey date: MONDAY 01/09/14 Survey Type: MANUAL

13 DN-03-A-04 SEMI-DETACHED DONEGAL
GORTLEE ROAD
GORTLEE
LETTERKENNY
Edge of Town
Residential Zone
Total Number of dwellings: 83
Survey date: FRIDAY 26/09/14 Survey Type: MANUAL

14 DO-03-A-03 DETACHED/SEMI DETACHED DOWN
OLD MILL HEIGHTS
DUNDONALD
BELFAST
Edge of Town
Residential Zone
Total Number of dwellings: 79
Survey date: WEDNESDAY 23/10/13 Survey Type: MANUAL

15 DV-03-A-01 TERRACED HOUSES DEVON
BRONSHILL ROAD

TORQUAY
Suburban Area (PPS6 Out of Centre)
Residential Zone
Total Number of dwellings: 37
Survey date: WEDNESDAY 30/09/15 Survey Type: MANUAL

16 DV-03-A-03 TERRACED & SEMI DETACHED DEVON
LOWER BRAND LANE

HONITON
Suburban Area (PPS6 Out of Centre)
Residential Zone
Total Number of dwellings: 70
Survey date: MONDAY 28/09/15 Survey Type: MANUAL

17 FA-03-A-01 SEMI-DETACHED/TERRACED FALKIRK
MANDELA AVENUE

FALKIRK
Suburban Area (PPS6 Out of Centre)
Residential Zone
Total Number of dwellings: 37
Survey date: THURSDAY 30/05/13 Survey Type: MANUAL

LIST OF SITES relevant to selection parameters (Cont.)

18 GA-03-A-04 SEMi DET. & BUNGALOWS GALWAY
R347 CAHEROYN ROAD

ATHENRY
Edge of Town Centre
Residential Zone
Total Number of dwellings: 21
Survey date: TUESDAY *09/10/12* *Survey Type: MANUAL*

19 HI-03-A-14 SEMI-DETACHED & TERRACED HIGHLAND
KING BRUDE ROAD
SCORGUIE
INVERNESS
Suburban Area (PPS6 Out of Centre)
Residential Zone
Total Number of dwellings: 40
Survey date: WEDNESDAY *23/03/16* *Survey Type: MANUAL*

20 LN-03-A-03 SEMI DETACHED LINCOLNSHIRE
ROOKERY LANE
BOULTHAM
LINCOLN
Suburban Area (PPS6 Out of Centre)
Residential Zone
Total Number of dwellings: 22
Survey date: TUESDAY *18/09/12* *Survey Type: MANUAL*

21 LN-03-A-04 DETACHED & SEMI-DETACHED LINCOLNSHIRE
EGERTON ROAD

LINCOLN
Edge of Town Centre
Residential Zone
Total Number of dwellings: 30
Survey date: MONDAY *29/06/15* *Survey Type: MANUAL*

22 LT-03-A-01 SEMI-DETACHED & DETACHED LEITRIM
ARD NA SI
ATTIRORY
CARRICK-ON-SHANNON
Suburban Area (PPS6 Out of Centre)
Residential Zone
Total Number of dwellings: 90
Survey date: FRIDAY *24/04/15* *Survey Type: MANUAL*

23 MA-03-A-01 SEMI-DET. & TERRACED MAYO
N26 STATION ROAD

BALLINA
Suburban Area (PPS6 Out of Centre)
Residential Zone
Total Number of dwellings: 74
Survey date: FRIDAY *15/07/11* *Survey Type: MANUAL*

24 NF-03-A-01 SEMI DET. & BUNGALOWS NORFOLK
YARMOUTH ROAD

CAISTER-ON-SEA
Suburban Area (PPS6 Out of Centre)
Residential Zone
Total Number of dwellings: 27
Survey date: TUESDAY *16/10/12* *Survey Type: MANUAL*

25 NF-03-A-02 HOUSES & FLATS NORFOLK
DEREHAM ROAD

NORWICH
Suburban Area (PPS6 Out of Centre)
Residential Zone
Total Number of dwellings: 98
Survey date: MONDAY *22/10/12* *Survey Type: MANUAL*

LIST OF SITES relevant to selection parameters (Cont.)

26 NF-03-A-03 DETACHED HOUSES NORFOLK
HALING WAY

THETFORD
Edge of Town
Residential Zone
Total Number of dwellings: 10
Survey date: WEDNESDAY *16/09/15* *Survey Type: MANUAL*

27 NY-03-A-08 TERRACED HOUSES NORTH YORKSHIRE
NICHOLAS STREET

YORK
Suburban Area (PPS6 Out of Centre)
Residential Zone
Total Number of dwellings: 21
Survey date: MONDAY *16/09/13* *Survey Type: MANUAL*

28 NY-03-A-09 MIXED HOUSING NORTH YORKSHIRE
GRAMMAR SCHOOL LANE

NORTHALLERTON
Suburban Area (PPS6 Out of Centre)
Residential Zone
Total Number of dwellings: 52
Survey date: MONDAY *16/09/13* *Survey Type: MANUAL*

29 NY-03-A-10 HOUSES AND FLATS NORTH YORKSHIRE
BOROUGHBRIDGE ROAD

RIPON
Edge of Town
No Sub Category
Total Number of dwellings: 71
Survey date: TUESDAY *17/09/13* *Survey Type: MANUAL*

30 NY-03-A-11 PRIVATE HOUSING NORTH YORKSHIRE
HORSEFAIR

BOROUGHBRIDGE
Edge of Town
Residential Zone
Total Number of dwellings: 23
Survey date: WEDNESDAY *18/09/13* *Survey Type: MANUAL*

31 NY-03-A-12 TOWN HOUSES NORTH YORKSHIRE
RACECOURSE LANE

NORTHALLERTON
Edge of Town Centre
Residential Zone
Total Number of dwellings: 47
Survey date: TUESDAY *27/09/16* *Survey Type: MANUAL*

32 NY-03-A-13 TERRACED HOUSES NORTH YORKSHIRE
CATTERICK ROAD
OLD HOSPITAL COMPOUND
CATTERICK GARRISON
Suburban Area (PPS6 Out of Centre)
Residential Zone
Total Number of dwellings: 10
Survey date: WEDNESDAY *10/05/17* *Survey Type: MANUAL*

33 PK-03-A-01 DETAC. & BUNGALOWS PERTH & KINROSS
TULLYLUMB TERRACE
GORNHILL
PERTH
Suburban Area (PPS6 Out of Centre)
Residential Zone
Total Number of dwellings: 36
Survey date: WEDNESDAY *11/05/11* *Survey Type: MANUAL*

34 PS-03-A-01 MIXED HOUSES POWYS
BRYN GLAS

WELSHPOOL
Edge of Town Centre
Residential Zone
Total Number of dwellings: 16
Survey date: MONDAY *11/05/15* *Survey Type: MANUAL*

LIST OF SITES relevant to selection parameters (Cont.)

35 PS-03-A-02 DETACHED/SEMI-DETACHED POWYS
GUNROG ROAD

WELSHPOOL
Suburban Area (PPS6 Out of Centre)
Residential Zone
Total Number of dwellings: 28
Survey date: MONDAY *11/05/15* *Survey Type: MANUAL*

36 RO-03-A-02 SEMI DET. & BUNGALOWS ROSCOMMON
SLIGO ROAD

BALLAGHADERREEN
Suburban Area (PPS6 Out of Centre)
Residential Zone
Total Number of dwellings: 31
Survey date: THURSDAY *14/07/11* *Survey Type: MANUAL*

37 RO-03-A-03 DETACHED HOUSES ROSCOMMON
N61
GREATMEADOW
BOYLE
Edge of Town
No Sub Category
Total Number of dwellings: 23
Survey date: THURSDAY *25/09/14* *Survey Type: MANUAL*

38 RO-03-A-04 SEMI DET. & BUNGALOWS ROSCOMMON
EAGLE COURT
ARDNANAGH
ROSCOMMON
Suburban Area (PPS6 Out of Centre)
Residential Zone
Total Number of dwellings: 39
Survey date: FRIDAY *26/09/14* *Survey Type: MANUAL*

39 SF-03-A-04 DETACHED & BUNGALOWS SUFFOLK
NORMANSTON DRIVE

LOWESTOFT
Suburban Area (PPS6 Out of Centre)
Residential Zone
Total Number of dwellings: 7
Survey date: TUESDAY *23/10/12* *Survey Type: MANUAL*

40 SF-03-A-05 DETACHED HOUSES SUFFOLK
VALE LANE

BURY ST EDMUNDS
Edge of Town
Residential Zone
Total Number of dwellings: 18
Survey date: WEDNESDAY *09/09/15* *Survey Type: MANUAL*

41 SH-03-A-05 SEMI-DETACHED/TERRACED SHROPSHIRE
SANDCROFT
SUTTON HILL
TELFORD
Edge of Town
Residential Zone
Total Number of dwellings: 54
Survey date: THURSDAY *24/10/13* *Survey Type: MANUAL*

42 SH-03-A-06 BUNGALOWS SHROPSHIRE
ELLESMERE ROAD

SHREWSBURY
Edge of Town
Residential Zone
Total Number of dwellings: 16
Survey date: THURSDAY *22/05/14* *Survey Type: MANUAL*

43 SM-03-A-01 DETACHED & SEMI SOMERSET
WEMBDON ROAD
NORTHFIELD
BRIDGWATER
Edge of Town
Residential Zone
Total Number of dwellings: 33
Survey date: THURSDAY *24/09/15* *Survey Type: MANUAL*

LIST OF SITES relevant to selection parameters (Cont.)

44 VG-03-A-01 SEMI-DETACHED & TERRACED VALE OF GLAMORGAN
ARTHUR STREET

BARRY
Edge of Town
Residential Zone
Total Number of dwellings: 12
Survey date: MONDAY *08/05/17* *Survey Type: MANUAL*

45 WK-03-A-01 TERRACED/SEMI/DET. WARWICKSHIRE
ARLINGTON AVENUE

LEAMINGTON SPA
Suburban Area (PPS6 Out of Centre)
Residential Zone
Total Number of dwellings: 6
Survey date: FRIDAY *21/10/11* *Survey Type: MANUAL*

46 WK-03-A-02 BUNGALOWS WARWICKSHIRE
NARBERTH WAY
POTTERS GREEN
COVENTRY
Edge of Town
Residential Zone
Total Number of dwellings: 17
Survey date: THURSDAY *17/10/13* *Survey Type: MANUAL*

47 WL-03-A-02 SEMI DETACHED WILTSHIRE
HEADLANDS GROVE

SWINDON
Suburban Area (PPS6 Out of Centre)
Residential Zone
Total Number of dwellings: 27
Survey date: THURSDAY *22/09/16* *Survey Type: MANUAL*

48 WX-03-A-01 SEMI-DETACHED WEXFORD
CLONARD ROAD

WEXFORD
Suburban Area (PPS6 Out of Centre)
No Sub Category
Total Number of dwellings: 34
Survey date: THURSDAY *25/09/14* *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	48	36	0.060	48	36	0.249	48	36	0.309
08:00 - 09:00	48	36	0.160	48	36	0.434	48	36	0.594
09:00 - 10:00	48	36	0.178	48	36	0.221	48	36	0.399
10:00 - 11:00	48	36	0.132	48	36	0.144	48	36	0.276
11:00 - 12:00	48	36	0.154	48	36	0.163	48	36	0.317
12:00 - 13:00	48	36	0.183	48	36	0.179	48	36	0.362
13:00 - 14:00	48	36	0.207	48	36	0.211	48	36	0.418
14:00 - 15:00	48	36	0.204	48	36	0.222	48	36	0.426
15:00 - 16:00	48	36	0.265	48	36	0.185	48	36	0.450
16:00 - 17:00	48	36	0.345	48	36	0.217	48	36	0.562
17:00 - 18:00	48	36	0.365	48	36	0.208	48	36	0.573
18:00 - 19:00	48	36	0.283	48	36	0.184	48	36	0.467
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			2.536			2.617			5.153

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.*

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Parameter summary

Trip rate parameter range selected:	6 - 98 (units:)
Survey date date range:	01/01/10 - 22/09/17
Number of weekdays (Monday-Friday):	48
Number of Saturdays:	0
Number of Sundays:	0
Surveys automatically removed from selection:	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.

TRIP RATE for Land Use 03 - RESIDENTIAL/A - HOUSES PRIVATELY OWNED
MULTI-MODAL TAXIS
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	48	36	0.003	48	36	0.003	48	36	0.006
08:00 - 09:00	48	36	0.005	48	36	0.005	48	36	0.010
09:00 - 10:00	48	36	0.005	48	36	0.003	48	36	0.008
10:00 - 11:00	48	36	0.002	48	36	0.003	48	36	0.005
11:00 - 12:00	48	36	0.004	48	36	0.003	48	36	0.007
12:00 - 13:00	48	36	0.003	48	36	0.003	48	36	0.006
13:00 - 14:00	48	36	0.004	48	36	0.005	48	36	0.009
14:00 - 15:00	48	36	0.002	48	36	0.002	48	36	0.004
15:00 - 16:00	48	36	0.005	48	36	0.005	48	36	0.010
16:00 - 17:00	48	36	0.006	48	36	0.007	48	36	0.013
17:00 - 18:00	48	36	0.006	48	36	0.006	48	36	0.012
18:00 - 19:00	48	36	0.004	48	36	0.004	48	36	0.008
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.049			0.049			0.098

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.*

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Parameter summary

Trip rate parameter range selected:	6 - 98 (units:)
Survey date date range:	01/01/10 - 22/09/17
Number of weekdays (Monday-Friday):	48
Number of Saturdays:	0
Number of Sundays:	0
Surveys automatically removed from selection:	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.

TRIP RATE for Land Use 03 - RESIDENTIAL/A - HOUSES PRIVATELY OWNED
MULTI-MODAL OGVS
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	48	36	0.001	48	36	0.002	48	36	0.003
08:00 - 09:00	48	36	0.002	48	36	0.003	48	36	0.005
09:00 - 10:00	48	36	0.003	48	36	0.002	48	36	0.005
10:00 - 11:00	48	36	0.003	48	36	0.002	48	36	0.005
11:00 - 12:00	48	36	0.003	48	36	0.002	48	36	0.005
12:00 - 13:00	48	36	0.001	48	36	0.002	48	36	0.003
13:00 - 14:00	48	36	0.002	48	36	0.002	48	36	0.004
14:00 - 15:00	48	36	0.002	48	36	0.002	48	36	0.004
15:00 - 16:00	48	36	0.003	48	36	0.001	48	36	0.004
16:00 - 17:00	48	36	0.001	48	36	0.003	48	36	0.004
17:00 - 18:00	48	36	0.002	48	36	0.001	48	36	0.003
18:00 - 19:00	48	36	0.001	48	36	0.000	48	36	0.001
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.024			0.022			0.046

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.*

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Parameter summary

Trip rate parameter range selected:	6 - 98 (units:)
Survey date date range:	01/01/10 - 22/09/17
Number of weekdays (Monday-Friday):	48
Number of Saturdays:	0
Number of Sundays:	0
Surveys automatically removed from selection:	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.

TRIP RATE for Land Use 03 - RESIDENTIAL/A - HOUSES PRIVATELY OWNED
MULTI-MODAL PSVS
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	48	36	0.000	48	36	0.000	48	36	0.000
08:00 - 09:00	48	36	0.006	48	36	0.006	48	36	0.012
09:00 - 10:00	48	36	0.001	48	36	0.001	48	36	0.002
10:00 - 11:00	48	36	0.000	48	36	0.000	48	36	0.000
11:00 - 12:00	48	36	0.002	48	36	0.002	48	36	0.004
12:00 - 13:00	48	36	0.000	48	36	0.000	48	36	0.000
13:00 - 14:00	48	36	0.000	48	36	0.000	48	36	0.000
14:00 - 15:00	48	36	0.002	48	36	0.002	48	36	0.004
15:00 - 16:00	48	36	0.004	48	36	0.003	48	36	0.007
16:00 - 17:00	48	36	0.001	48	36	0.002	48	36	0.003
17:00 - 18:00	48	36	0.000	48	36	0.000	48	36	0.000
18:00 - 19:00	48	36	0.000	48	36	0.000	48	36	0.000
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.016			0.016			0.032

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.*

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Parameter summary

Trip rate parameter range selected:	6 - 98 (units:)
Survey date date range:	01/01/10 - 22/09/17
Number of weekdays (Monday-Friday):	48
Number of Saturdays:	0
Number of Sundays:	0
Surveys automatically removed from selection:	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.

TRIP RATE for Land Use 03 - RESIDENTIAL/A - HOUSES PRIVATELY OWNED
MULTI-MODAL CYCLISTS
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	48	36	0.004	48	36	0.020	48	36	0.024
08:00 - 09:00	48	36	0.001	48	36	0.021	48	36	0.022
09:00 - 10:00	48	36	0.002	48	36	0.010	48	36	0.012
10:00 - 11:00	48	36	0.005	48	36	0.009	48	36	0.014
11:00 - 12:00	48	36	0.002	48	36	0.005	48	36	0.007
12:00 - 13:00	48	36	0.006	48	36	0.006	48	36	0.012
13:00 - 14:00	48	36	0.008	48	36	0.003	48	36	0.011
14:00 - 15:00	48	36	0.007	48	36	0.008	48	36	0.015
15:00 - 16:00	48	36	0.020	48	36	0.005	48	36	0.025
16:00 - 17:00	48	36	0.020	48	36	0.006	48	36	0.026
17:00 - 18:00	48	36	0.022	48	36	0.008	48	36	0.030
18:00 - 19:00	48	36	0.007	48	36	0.006	48	36	0.013
19:00 - 20:00	1	7	0.000	1	7	0.000	1	7	0.000
20:00 - 21:00	1	7	0.000	1	7	0.000	1	7	0.000
21:00 - 22:00	1	7	0.000	1	7	0.000	1	7	0.000
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.104			0.107			0.211

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.*

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Parameter summary

Trip rate parameter range selected:	6 - 98 (units:)
Survey date date range:	01/01/10 - 22/09/17
Number of weekdays (Monday-Friday):	48
Number of Saturdays:	0
Number of Sundays:	0
Surveys automatically removed from selection:	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.

TRIP RATE for Land Use 03 - RESIDENTIAL/A - HOUSES PRIVATELY OWNED
MULTI-MODAL VEHICLE OCCUPANTS
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	48	36	0.074	48	36	0.312	48	36	0.386
08:00 - 09:00	48	36	0.194	48	36	0.641	48	36	0.835
09:00 - 10:00	48	36	0.207	48	36	0.300	48	36	0.507
10:00 - 11:00	48	36	0.163	48	36	0.196	48	36	0.359
11:00 - 12:00	48	36	0.198	48	36	0.204	48	36	0.402
12:00 - 13:00	48	36	0.232	48	36	0.230	48	36	0.462
13:00 - 14:00	48	36	0.263	48	36	0.286	48	36	0.549
14:00 - 15:00	48	36	0.279	48	36	0.284	48	36	0.563
15:00 - 16:00	48	36	0.416	48	36	0.259	48	36	0.675
16:00 - 17:00	48	36	0.483	48	36	0.294	48	36	0.777
17:00 - 18:00	48	36	0.512	48	36	0.296	48	36	0.808
18:00 - 19:00	48	36	0.388	48	36	0.252	48	36	0.640
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			3.409			3.554			6.963

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.*

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Parameter summary

Trip rate parameter range selected:	6 - 98 (units:)
Survey date date range:	01/01/10 - 22/09/17
Number of weekdays (Monday-Friday):	48
Number of Saturdays:	0
Number of Sundays:	0
Surveys automatically removed from selection:	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.

TRIP RATE for Land Use 03 - RESIDENTIAL/A - HOUSES PRIVATELY OWNED
MULTI-MODAL PEDESTRIANS
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	48	36	0.019	48	36	0.069	48	36	0.088
08:00 - 09:00	48	36	0.053	48	36	0.179	48	36	0.232
09:00 - 10:00	48	36	0.041	48	36	0.079	48	36	0.120
10:00 - 11:00	48	36	0.048	48	36	0.070	48	36	0.118
11:00 - 12:00	48	36	0.054	48	36	0.048	48	36	0.102
12:00 - 13:00	48	36	0.059	48	36	0.049	48	36	0.108
13:00 - 14:00	48	36	0.076	48	36	0.076	48	36	0.152
14:00 - 15:00	48	36	0.076	48	36	0.056	48	36	0.132
15:00 - 16:00	48	36	0.152	48	36	0.094	48	36	0.246
16:00 - 17:00	48	36	0.131	48	36	0.071	48	36	0.202
17:00 - 18:00	48	36	0.110	48	36	0.059	48	36	0.169
18:00 - 19:00	48	36	0.077	48	36	0.050	48	36	0.127
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.896			0.900			1.796

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.

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Parameter summary

Trip rate parameter range selected:	6 - 98 (units:)
Survey date date range:	01/01/10 - 22/09/17
Number of weekdays (Monday-Friday):	48
Number of Saturdays:	0
Number of Sundays:	0
Surveys automatically removed from selection:	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.

TRIP RATE for Land Use 03 - RESIDENTIAL/A - HOUSES PRIVATELY OWNED
MULTI-MODAL BUS/TRAM PASSENGERS
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	48	36	0.003	48	36	0.009	48	36	0.012
08:00 - 09:00	48	36	0.002	48	36	0.016	48	36	0.018
09:00 - 10:00	48	36	0.002	48	36	0.010	48	36	0.012
10:00 - 11:00	48	36	0.005	48	36	0.004	48	36	0.009
11:00 - 12:00	48	36	0.005	48	36	0.005	48	36	0.010
12:00 - 13:00	48	36	0.007	48	36	0.005	48	36	0.012
13:00 - 14:00	48	36	0.003	48	36	0.003	48	36	0.006
14:00 - 15:00	48	36	0.008	48	36	0.005	48	36	0.013
15:00 - 16:00	48	36	0.009	48	36	0.007	48	36	0.016
16:00 - 17:00	48	36	0.016	48	36	0.006	48	36	0.022
17:00 - 18:00	48	36	0.010	48	36	0.005	48	36	0.015
18:00 - 19:00	48	36	0.010	48	36	0.001	48	36	0.011
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.080			0.076			0.156

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.

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Parameter summary

Trip rate parameter range selected:	6 - 98 (units:)
Survey date date range:	01/01/10 - 22/09/17
Number of weekdays (Monday-Friday):	48
Number of Saturdays:	0
Number of Sundays:	0
Surveys automatically removed from selection:	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.

TRIP RATE for Land Use 03 - RESIDENTIAL/A - HOUSES PRIVATELY OWNED
MULTI-MODAL TOTAL RAIL PASSENGERS
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	48	36	0.000	48	36	0.003	48	36	0.003
08:00 - 09:00	48	36	0.000	48	36	0.006	48	36	0.006
09:00 - 10:00	48	36	0.000	48	36	0.001	48	36	0.001
10:00 - 11:00	48	36	0.000	48	36	0.001	48	36	0.001
11:00 - 12:00	48	36	0.000	48	36	0.001	48	36	0.001
12:00 - 13:00	48	36	0.000	48	36	0.001	48	36	0.001
13:00 - 14:00	48	36	0.000	48	36	0.000	48	36	0.000
14:00 - 15:00	48	36	0.001	48	36	0.001	48	36	0.002
15:00 - 16:00	48	36	0.000	48	36	0.000	48	36	0.000
16:00 - 17:00	48	36	0.001	48	36	0.000	48	36	0.001
17:00 - 18:00	48	36	0.003	48	36	0.000	48	36	0.003
18:00 - 19:00	48	36	0.003	48	36	0.000	48	36	0.003
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.008			0.014			0.022

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.

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Parameter summary

Trip rate parameter range selected:	6 - 98 (units:)
Survey date date range:	01/01/10 - 22/09/17
Number of weekdays (Monday-Friday):	48
Number of Saturdays:	0
Number of Sundays:	0
Surveys automatically removed from selection:	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.

TRIP RATE for Land Use 03 - RESIDENTIAL/A - HOUSES PRIVATELY OWNED
MULTI-MODAL COACH PASSENGERS
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	48	36	0.000	48	36	0.000	48	36	0.000
08:00 - 09:00	48	36	0.000	48	36	0.002	48	36	0.002
09:00 - 10:00	48	36	0.000	48	36	0.000	48	36	0.000
10:00 - 11:00	48	36	0.000	48	36	0.000	48	36	0.000
11:00 - 12:00	48	36	0.000	48	36	0.000	48	36	0.000
12:00 - 13:00	48	36	0.000	48	36	0.000	48	36	0.000
13:00 - 14:00	48	36	0.000	48	36	0.000	48	36	0.000
14:00 - 15:00	48	36	0.001	48	36	0.000	48	36	0.001
15:00 - 16:00	48	36	0.001	48	36	0.000	48	36	0.001
16:00 - 17:00	48	36	0.000	48	36	0.000	48	36	0.000
17:00 - 18:00	48	36	0.000	48	36	0.000	48	36	0.000
18:00 - 19:00	48	36	0.000	48	36	0.000	48	36	0.000
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.002			0.002			0.004

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.

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Parameter summary

Trip rate parameter range selected:	6 - 98 (units:)
Survey date date range:	01/01/10 - 22/09/17
Number of weekdays (Monday-Friday):	48
Number of Saturdays:	0
Number of Sundays:	0
Surveys automatically removed from selection:	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.

TRIP RATE for Land Use 03 - RESIDENTIAL/A - HOUSES PRIVATELY OWNED
MULTI-MODAL PUBLIC TRANSPORT USERS
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	48	36	0.003	48	36	0.013	48	36	0.016
08:00 - 09:00	48	36	0.002	48	36	0.023	48	36	0.025
09:00 - 10:00	48	36	0.002	48	36	0.012	48	36	0.014
10:00 - 11:00	48	36	0.005	48	36	0.005	48	36	0.010
11:00 - 12:00	48	36	0.005	48	36	0.005	48	36	0.010
12:00 - 13:00	48	36	0.007	48	36	0.006	48	36	0.013
13:00 - 14:00	48	36	0.003	48	36	0.003	48	36	0.006
14:00 - 15:00	48	36	0.009	48	36	0.006	48	36	0.015
15:00 - 16:00	48	36	0.010	48	36	0.007	48	36	0.017
16:00 - 17:00	48	36	0.017	48	36	0.006	48	36	0.023
17:00 - 18:00	48	36	0.013	48	36	0.005	48	36	0.018
18:00 - 19:00	48	36	0.013	48	36	0.001	48	36	0.014
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.089			0.092			0.181

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.

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Parameter summary

Trip rate parameter range selected:	6 - 98 (units:)
Survey date date range:	01/01/10 - 22/09/17
Number of weekdays (Monday-Friday):	48
Number of Saturdays:	0
Number of Sundays:	0
Surveys automatically removed from selection:	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.

TRIP RATE for Land Use 03 - RESIDENTIAL/A - HOUSES PRIVATELY OWNED
MULTI-MODAL TOTAL PEOPLE
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	48	36	0.100	48	36	0.413	48	36	0.513
08:00 - 09:00	48	36	0.250	48	36	0.865	48	36	1.115
09:00 - 10:00	48	36	0.252	48	36	0.400	48	36	0.652
10:00 - 11:00	48	36	0.221	48	36	0.280	48	36	0.501
11:00 - 12:00	48	36	0.259	48	36	0.261	48	36	0.520
12:00 - 13:00	48	36	0.303	48	36	0.292	48	36	0.595
13:00 - 14:00	48	36	0.351	48	36	0.369	48	36	0.720
14:00 - 15:00	48	36	0.371	48	36	0.353	48	36	0.724
15:00 - 16:00	48	36	0.597	48	36	0.365	48	36	0.962
16:00 - 17:00	48	36	0.651	48	36	0.377	48	36	1.028
17:00 - 18:00	48	36	0.658	48	36	0.367	48	36	1.025
18:00 - 19:00	48	36	0.484	48	36	0.309	48	36	0.793
19:00 - 20:00	1	7	0.000	1	7	0.000	1	7	0.000
20:00 - 21:00	1	7	0.000	1	7	0.000	1	7	0.000
21:00 - 22:00	1	7	0.000	1	7	0.000	1	7	0.000
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			4.497			4.651			9.148

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.

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Parameter summary

Trip rate parameter range selected:	6 - 98 (units:)
Survey date date range:	01/01/10 - 22/09/17
Number of weekdays (Monday-Friday):	48
Number of Saturdays:	0
Number of Sundays:	0
Surveys automatically removed from selection:	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.

Calculation Reference: AUDIT-109303-181011-1011

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 01 - RETAIL
Category : O - CONVENIENCE STORE
MULTI-MODAL VEHICLES

Selected regions and areas:

03	SOUTH WEST		
	WL	WILTSHIRE	1 days
04	EAST ANGLIA		
	CA	CAMBRIDGESHIRE	1 days
	NF	NORFOLK	1 days
07	YORKSHIRE & NORTH LINCOLNSHIRE		
	NE	NORTH EAST LINCOLNSHIRE	1 days
	NY	NORTH YORKSHIRE	1 days
	SY	SOUTH YORKSHIRE	1 days
	WY	WEST YORKSHIRE	1 days
09	NORTH		
	CB	CUMBRIA	1 days
	DH	DURHAM	1 days
	TW	TYNE & WEAR	1 days

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

Secondary Filtering 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: Gross floor area
Actual Range: 292 to 1200 (units: sqm)
Range Selected by User: 70 to 1500 (units: sqm)

Public Transport Provision:
Selection by: Include all surveys

Date Range: 01/01/10 to 07/04/17

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
Friday	4 days
Saturday	2 days

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

Selected survey types:

Manual count	10 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
Neighbourhood Centre (PPS6 Local Centre)	3

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:

Residential Zone	8
Built-Up Zone	1
High Street	1

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.

Secondary Filtering selection:

Use Class:

A1	10 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	3 days
10,001 to 15,000	2 days
15,001 to 20,000	2 days
25,001 to 50,000	2 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	2 days
25,001 to 50,000	1 days
75,001 to 100,000	1 days
100,001 to 125,000	1 days
125,001 to 250,000	5 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	5 days
1.1 to 1.5	5 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.

Petrol filling station:

Included in the survey count	0 days
Excluded from count or no filling station	10 days

This data displays the number of surveys within the selected set that include petrol filling station activity, and the number of surveys that do not.

Travel Plan:

No	10 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.

PTAL Rating:

No PTAL Present	10 days

This data displays the number of selected surveys with PTAL Ratings.

LIST OF SITES relevant to selection parameters

1 CA-01-O-01 CO-OP CAMBRIDGESHIRE
MAYORS WALK
PETERBOROUGH
NETHERTON
Neighbourhood Centre (PPS6 Local Centre)
Residential Zone
Total Gross floor area: 375 sqm
Survey date: MONDAY *17/10/11* *Survey Type: MANUAL*

2 CB-01-O-01 CO-OPERATIVE CUMBRIA
DENTON STREET
CARLISLE

Suburban Area (PPS6 Out of Centre)
Built-Up Zone
Total Gross floor area: 300 sqm
Survey date: SATURDAY *25/06/16* *Survey Type: MANUAL*

3 DH-01-O-01 SAINSBURY'S LOCAL DURHAM
132 STATION LANE
HARTLEPOOL
SEATON CAREW
Suburban Area (PPS6 Out of Centre)
Residential Zone
Total Gross floor area: 469 sqm
Survey date: MONDAY *26/11/12* *Survey Type: MANUAL*

4 NE-01-O-01 TESCO EXPRESS NORTH EAST LINCOLNSHIRE
311 ASHBY HIGH STREET
SCUNTHORPE

Suburban Area (PPS6 Out of Centre)
Residential Zone
Total Gross floor area: 1200 sqm
Survey date: SATURDAY *17/05/14* *Survey Type: MANUAL*

5 NF-01-O-01 TESCO EXPRESS NORFOLK
DEREHAM ROAD
NORWICH

Suburban Area (PPS6 Out of Centre)
Residential Zone
Total Gross floor area: 298 sqm
Survey date: FRIDAY *26/10/12* *Survey Type: MANUAL*

6 NY-01-O-03 CO-OPERATIVE NORTH YORKSHIRE
FOREST ROAD
NORTHALLERTON

Suburban Area (PPS6 Out of Centre)
Residential Zone
Total Gross floor area: 305 sqm
Survey date: MONDAY *19/09/16* *Survey Type: MANUAL*

7 SY-01-O-02 SAINSBURY'S LOCAL SOUTH YORKSHIRE
ECCLESALL ROAD
SHEFFIELD

Neighbourhood Centre (PPS6 Local Centre)
High Street
Total Gross floor area: 306 sqm
Survey date: FRIDAY *14/12/12* *Survey Type: MANUAL*

8 TW-01-O-02 CO-OPERATIVE TYNE & WEAR
ETHEL TERRACE
SUNDERLAND
CASTLETOWN
Suburban Area (PPS6 Out of Centre)
Residential Zone
Total Gross floor area: 330 sqm
Survey date: FRIDAY *07/04/17* *Survey Type: MANUAL*

LIST OF SITES relevant to selection parameters (Cont.)

9	WL-01-O-01 THE CIRCLE SWINDON	ONE STOP		WILTSHIRE
	Suburban Area (PPS6 Out of Centre) Residential Zone Total Gross floor area:		292 sqm	
	Survey date: FRIDAY		*23/09/16*	*Survey Type: MANUAL*
10	WY-01-O-02 AINSTY ROAD WETHERBY	CO-OPERATIVE		WEST YORKSHIRE
	Neighbourhood Centre (PPS6 Local Centre) Residential Zone Total Gross floor area:		539 sqm	
	Survey date: MONDAY		*26/09/16*	*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 01 - RETAIL/O - CONVENIENCE STORE
MULTI-MODAL VEHICLES
Calculation factor: 100 sqm
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	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	4	379	3.560	4	379	3.098	4	379	6.658
07:00 - 08:00	10	441	5.596	10	441	5.392	10	441	10.988
08:00 - 09:00	10	441	6.729	10	441	6.275	10	441	13.004
09:00 - 10:00	10	441	5.754	10	441	5.460	10	441	11.214
10:00 - 11:00	10	441	5.868	10	441	5.596	10	441	11.464
11:00 - 12:00	10	441	5.777	10	441	5.890	10	441	11.667
12:00 - 13:00	10	441	8.088	10	441	7.522	10	441	15.610
13:00 - 14:00	10	441	5.890	10	441	5.800	10	441	11.690
14:00 - 15:00	10	441	6.819	10	441	6.570	10	441	13.389
15:00 - 16:00	10	441	7.182	10	441	7.272	10	441	14.454
16:00 - 17:00	10	441	8.632	10	441	7.703	10	441	16.335
17:00 - 18:00	10	441	8.768	10	441	8.790	10	441	17.558
18:00 - 19:00	10	441	9.447	10	441	9.968	10	441	19.415
19:00 - 20:00	10	441	7.046	10	441	7.703	10	441	14.749
20:00 - 21:00	9	458	3.130	9	458	4.221	9	458	7.351
21:00 - 22:00	9	458	2.572	9	458	3.033	9	458	5.605
22:00 - 23:00	3	681	0.587	3	681	0.978	3	681	1.565
23:00 - 24:00									
Total Rates:			101.445			101.271			202.716

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.*

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Parameter summary

Trip rate parameter range selected:	292 - 1200 (units: sqm)
Survey date date range:	01/01/10 - 07/04/17
Number of weekdays (Monday-Friday):	8
Number of Saturdays:	2
Number of Sundays:	0
Surveys automatically removed from selection:	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.

TRIP RATE for Land Use 01 - RETAIL/O - CONVENIENCE STORE
MULTI-MODAL TAXIS
Calculation factor: 100 sqm
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	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	4	379	0.000	4	379	0.000	4	379	0.000
07:00 - 08:00	10	441	0.068	10	441	0.068	10	441	0.136
08:00 - 09:00	10	441	0.136	10	441	0.091	10	441	0.227
09:00 - 10:00	10	441	0.045	10	441	0.068	10	441	0.113
10:00 - 11:00	10	441	0.045	10	441	0.045	10	441	0.090
11:00 - 12:00	10	441	0.068	10	441	0.091	10	441	0.159
12:00 - 13:00	10	441	0.159	10	441	0.136	10	441	0.295
13:00 - 14:00	10	441	0.091	10	441	0.113	10	441	0.204
14:00 - 15:00	10	441	0.091	10	441	0.068	10	441	0.159
15:00 - 16:00	10	441	0.045	10	441	0.068	10	441	0.113
16:00 - 17:00	10	441	0.068	10	441	0.045	10	441	0.113
17:00 - 18:00	10	441	0.068	10	441	0.045	10	441	0.113
18:00 - 19:00	10	441	0.068	10	441	0.091	10	441	0.159
19:00 - 20:00	10	441	0.000	10	441	0.023	10	441	0.023
20:00 - 21:00	9	458	0.049	9	458	0.049	9	458	0.098
21:00 - 22:00	9	458	0.049	9	458	0.049	9	458	0.098
22:00 - 23:00	3	681	0.000	3	681	0.000	3	681	0.000
23:00 - 24:00									
Total Rates:			1.050			1.050			2.100

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.*

TRIP RATE for Land Use 01 - RETAIL/O - CONVENIENCE STORE
MULTI-MODAL OGVS
Calculation factor: 100 sqm
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	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	4	379	0.000	4	379	0.000	4	379	0.000
07:00 - 08:00	10	441	0.204	10	441	0.204	10	441	0.408
08:00 - 09:00	10	441	0.159	10	441	0.113	10	441	0.272
09:00 - 10:00	10	441	0.068	10	441	0.113	10	441	0.181
10:00 - 11:00	10	441	0.023	10	441	0.023	10	441	0.046
11:00 - 12:00	10	441	0.068	10	441	0.068	10	441	0.136
12:00 - 13:00	10	441	0.068	10	441	0.045	10	441	0.113
13:00 - 14:00	10	441	0.023	10	441	0.045	10	441	0.068
14:00 - 15:00	10	441	0.000	10	441	0.000	10	441	0.000
15:00 - 16:00	10	441	0.023	10	441	0.023	10	441	0.046
16:00 - 17:00	10	441	0.023	10	441	0.000	10	441	0.023
17:00 - 18:00	10	441	0.000	10	441	0.023	10	441	0.023
18:00 - 19:00	10	441	0.000	10	441	0.000	10	441	0.000
19:00 - 20:00	10	441	0.000	10	441	0.000	10	441	0.000
20:00 - 21:00	9	458	0.000	9	458	0.000	9	458	0.000
21:00 - 22:00	9	458	0.000	9	458	0.000	9	458	0.000
22:00 - 23:00	3	681	0.000	3	681	0.000	3	681	0.000
23:00 - 24:00									
Total Rates:			0.659			0.657			1.316

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.*

TRIP RATE for Land Use 01 - RETAIL/O - CONVENIENCE STORE
MULTI-MODAL CYCLISTS
Calculation factor: 100 sqm
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	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	4	379	0.330	4	379	0.264	4	379	0.594
07:00 - 08:00	10	441	0.272	10	441	0.227	10	441	0.499
08:00 - 09:00	10	441	0.181	10	441	0.227	10	441	0.408
09:00 - 10:00	10	441	0.159	10	441	0.136	10	441	0.295
10:00 - 11:00	10	441	0.068	10	441	0.045	10	441	0.113
11:00 - 12:00	10	441	0.204	10	441	0.227	10	441	0.431
12:00 - 13:00	10	441	0.272	10	441	0.227	10	441	0.499
13:00 - 14:00	10	441	0.091	10	441	0.136	10	441	0.227
14:00 - 15:00	10	441	0.204	10	441	0.204	10	441	0.408
15:00 - 16:00	10	441	0.295	10	441	0.317	10	441	0.612
16:00 - 17:00	10	441	0.408	10	441	0.295	10	441	0.703
17:00 - 18:00	10	441	0.408	10	441	0.408	10	441	0.816
18:00 - 19:00	10	441	0.430	10	441	0.340	10	441	0.770
19:00 - 20:00	10	441	0.317	10	441	0.272	10	441	0.589
20:00 - 21:00	9	458	0.049	9	458	0.146	9	458	0.195
21:00 - 22:00	9	458	0.073	9	458	0.073	9	458	0.146
22:00 - 23:00	3	681	0.000	3	681	0.000	3	681	0.000
23:00 - 24:00									
Total Rates:			3.761			3.544			7.305

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.*

TRIP RATE for Land Use 01 - RETAIL/O - CONVENIENCE STORE
MULTI-MODAL VEHICLE OCCUPANTS
Calculation factor: 100 sqm
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	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	4	379	4.021	4	379	3.296	4	379	7.317
07:00 - 08:00	10	441	6.638	10	441	6.411	10	441	13.049
08:00 - 09:00	10	441	8.088	10	441	7.612	10	441	15.700
09:00 - 10:00	10	441	7.318	10	441	6.525	10	441	13.843
10:00 - 11:00	10	441	7.363	10	441	6.910	10	441	14.273
11:00 - 12:00	10	441	7.386	10	441	7.499	10	441	14.885
12:00 - 13:00	10	441	9.515	10	441	8.881	10	441	18.396
13:00 - 14:00	10	441	7.023	10	441	7.114	10	441	14.137
14:00 - 15:00	10	441	8.156	10	441	8.020	10	441	16.176
15:00 - 16:00	10	441	9.175	10	441	9.175	10	441	18.350
16:00 - 17:00	10	441	11.441	10	441	10.240	10	441	21.681
17:00 - 18:00	10	441	10.716	10	441	10.761	10	441	21.477
18:00 - 19:00	10	441	12.279	10	441	12.687	10	441	24.966
19:00 - 20:00	10	441	8.609	10	441	9.198	10	441	17.807
20:00 - 21:00	9	458	4.221	9	458	5.580	9	458	9.801
21:00 - 22:00	9	458	3.154	9	458	3.639	9	458	6.793
22:00 - 23:00	3	681	0.783	3	681	1.076	3	681	1.859
23:00 - 24:00									
Total Rates:			125.886			124.624			250.510

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.*

TRIP RATE for Land Use 01 - RETAIL/O - CONVENIENCE STORE
MULTI-MODAL PEDESTRIANS
Calculation factor: 100 sqm
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	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	4	379	2.571	4	379	2.505	4	379	5.076
07:00 - 08:00	10	441	4.667	10	441	4.055	10	441	8.722
08:00 - 09:00	10	441	7.272	10	441	6.842	10	441	14.114
09:00 - 10:00	10	441	6.162	10	441	5.483	10	441	11.645
10:00 - 11:00	10	441	6.547	10	441	6.570	10	441	13.117
11:00 - 12:00	10	441	6.683	10	441	6.366	10	441	13.049
12:00 - 13:00	10	441	6.910	10	441	6.910	10	441	13.820
13:00 - 14:00	10	441	7.318	10	441	7.657	10	441	14.975
14:00 - 15:00	10	441	6.683	10	441	7.159	10	441	13.842
15:00 - 16:00	10	441	9.334	10	441	8.518	10	441	17.852
16:00 - 17:00	10	441	7.635	10	441	7.907	10	441	15.542
17:00 - 18:00	10	441	8.428	10	441	8.473	10	441	16.901
18:00 - 19:00	10	441	8.450	10	441	8.586	10	441	17.036
19:00 - 20:00	10	441	7.589	10	441	8.586	10	441	16.175
20:00 - 21:00	9	458	5.531	9	458	5.774	9	458	11.305
21:00 - 22:00	9	458	4.779	9	458	5.216	9	458	9.995
22:00 - 23:00	3	681	0.147	3	681	0.098	3	681	0.245
23:00 - 24:00									
Total Rates:			106.706			106.705			213.411

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.*

TRIP RATE for Land Use 01 - RETAIL/O - CONVENIENCE STORE
MULTI-MODAL BUS/TRAM PASSENGERS
Calculation factor: 100 sqm
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	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	4	379	0.000	4	379	0.000	4	379	0.000
07:00 - 08:00	10	441	0.136	10	441	0.045	10	441	0.181
08:00 - 09:00	10	441	0.295	10	441	0.385	10	441	0.680
09:00 - 10:00	10	441	0.181	10	441	0.136	10	441	0.317
10:00 - 11:00	10	441	0.385	10	441	0.385	10	441	0.770
11:00 - 12:00	10	441	0.317	10	441	0.227	10	441	0.544
12:00 - 13:00	10	441	0.181	10	441	0.362	10	441	0.543
13:00 - 14:00	10	441	0.181	10	441	0.136	10	441	0.317
14:00 - 15:00	10	441	0.453	10	441	0.272	10	441	0.725
15:00 - 16:00	10	441	0.181	10	441	0.204	10	441	0.385
16:00 - 17:00	10	441	0.136	10	441	0.091	10	441	0.227
17:00 - 18:00	10	441	0.657	10	441	0.657	10	441	1.314
18:00 - 19:00	10	441	0.362	10	441	0.295	10	441	0.657
19:00 - 20:00	10	441	0.136	10	441	0.091	10	441	0.227
20:00 - 21:00	9	458	0.073	9	458	0.049	9	458	0.122
21:00 - 22:00	9	458	0.024	9	458	0.024	9	458	0.048
22:00 - 23:00	3	681	0.000	3	681	0.000	3	681	0.000
23:00 - 24:00									
Total Rates:			3.698			3.359			7.057

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.*

TRIP RATE for Land Use 01 - RETAIL/O - CONVENIENCE STORE
MULTI-MODAL TOTAL RAIL PASSENGERS
Calculation factor: 100 sqm
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	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	4	379	0.000	4	379	0.000	4	379	0.000
07:00 - 08:00	10	441	0.000	10	441	0.000	10	441	0.000
08:00 - 09:00	10	441	0.045	10	441	0.000	10	441	0.045
09:00 - 10:00	10	441	0.000	10	441	0.023	10	441	0.023
10:00 - 11:00	10	441	0.023	10	441	0.000	10	441	0.023
11:00 - 12:00	10	441	0.000	10	441	0.000	10	441	0.000
12:00 - 13:00	10	441	0.000	10	441	0.000	10	441	0.000
13:00 - 14:00	10	441	0.000	10	441	0.000	10	441	0.000
14:00 - 15:00	10	441	0.000	10	441	0.000	10	441	0.000
15:00 - 16:00	10	441	0.023	10	441	0.000	10	441	0.023
16:00 - 17:00	10	441	0.000	10	441	0.000	10	441	0.000
17:00 - 18:00	10	441	0.068	10	441	0.113	10	441	0.181
18:00 - 19:00	10	441	0.045	10	441	0.045	10	441	0.090
19:00 - 20:00	10	441	0.023	10	441	0.023	10	441	0.046
20:00 - 21:00	9	458	0.000	9	458	0.000	9	458	0.000
21:00 - 22:00	9	458	0.000	9	458	0.000	9	458	0.000
22:00 - 23:00	3	681	0.000	3	681	0.000	3	681	0.000
23:00 - 24:00									
Total Rates:			0.227			0.204			0.431

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.*

TRIP RATE for Land Use 01 - RETAIL/O - CONVENIENCE STORE
MULTI-MODAL PUBLIC TRANSPORT USERS
Calculation factor: 100 sqm
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	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	4	379	0.000	4	379	0.000	4	379	0.000
07:00 - 08:00	10	441	0.136	10	441	0.045	10	441	0.181
08:00 - 09:00	10	441	0.340	10	441	0.385	10	441	0.725
09:00 - 10:00	10	441	0.181	10	441	0.159	10	441	0.340
10:00 - 11:00	10	441	0.408	10	441	0.385	10	441	0.793
11:00 - 12:00	10	441	0.317	10	441	0.227	10	441	0.544
12:00 - 13:00	10	441	0.181	10	441	0.362	10	441	0.543
13:00 - 14:00	10	441	0.181	10	441	0.136	10	441	0.317
14:00 - 15:00	10	441	0.453	10	441	0.272	10	441	0.725
15:00 - 16:00	10	441	0.204	10	441	0.204	10	441	0.408
16:00 - 17:00	10	441	0.136	10	441	0.091	10	441	0.227
17:00 - 18:00	10	441	0.725	10	441	0.770	10	441	1.495
18:00 - 19:00	10	441	0.408	10	441	0.340	10	441	0.748
19:00 - 20:00	10	441	0.159	10	441	0.113	10	441	0.272
20:00 - 21:00	9	458	0.073	9	458	0.049	9	458	0.122
21:00 - 22:00	9	458	0.024	9	458	0.024	9	458	0.048
22:00 - 23:00	3	681	0.000	3	681	0.000	3	681	0.000
23:00 - 24:00									
Total Rates:			3.926			3.562			7.488

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.*

TRIP RATE for Land Use 01 - RETAIL/O - CONVENIENCE STORE
MULTI-MODAL TOTAL PEOPLE
Calculation factor: 100 sqm
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	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	4	379	6.922	4	379	6.065	4	379	12.987
07:00 - 08:00	10	441	11.713	10	441	10.739	10	441	22.452
08:00 - 09:00	10	441	15.881	10	441	15.066	10	441	30.947
09:00 - 10:00	10	441	13.820	10	441	12.302	10	441	26.122
10:00 - 11:00	10	441	14.386	10	441	13.910	10	441	28.296
11:00 - 12:00	10	441	14.590	10	441	14.318	10	441	28.908
12:00 - 13:00	10	441	16.878	10	441	16.380	10	441	33.258
13:00 - 14:00	10	441	14.613	10	441	15.043	10	441	29.656
14:00 - 15:00	10	441	15.496	10	441	15.655	10	441	31.151
15:00 - 16:00	10	441	19.008	10	441	18.215	10	441	37.223
16:00 - 17:00	10	441	19.619	10	441	18.532	10	441	38.151
17:00 - 18:00	10	441	20.276	10	441	20.412	10	441	40.688
18:00 - 19:00	10	441	21.568	10	441	21.953	10	441	43.521
19:00 - 20:00	10	441	16.674	10	441	18.169	10	441	34.843
20:00 - 21:00	9	458	9.874	9	458	11.548	9	458	21.422
21:00 - 22:00	9	458	8.030	9	458	8.952	9	458	16.982
22:00 - 23:00	3	681	0.930	3	681	1.174	3	681	2.104
23:00 - 24:00									
Total Rates:			240.278			238.433			478.711

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.*

TRIP RATE for Land Use 01 - RETAIL/O - CONVENIENCE STORE
MULTI-MODAL Servicing Vehicles
Calculation factor: 100 sqm
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	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	4	379	0.000	4	379	0.000	4	379	0.000
07:00 - 08:00	10	441	0.068	10	441	0.045	10	441	0.113
08:00 - 09:00	10	441	0.023	10	441	0.045	10	441	0.068
09:00 - 10:00	10	441	0.000	10	441	0.000	10	441	0.000
10:00 - 11:00	10	441	0.000	10	441	0.000	10	441	0.000
11:00 - 12:00	10	441	0.000	10	441	0.000	10	441	0.000
12:00 - 13:00	10	441	0.000	10	441	0.000	10	441	0.000
13:00 - 14:00	10	441	0.000	10	441	0.000	10	441	0.000
14:00 - 15:00	10	441	0.000	10	441	0.000	10	441	0.000
15:00 - 16:00	10	441	0.000	10	441	0.000	10	441	0.000
16:00 - 17:00	10	441	0.000	10	441	0.000	10	441	0.000
17:00 - 18:00	10	441	0.000	10	441	0.000	10	441	0.000
18:00 - 19:00	10	441	0.000	10	441	0.000	10	441	0.000
19:00 - 20:00	10	441	0.000	10	441	0.000	10	441	0.000
20:00 - 21:00	9	458	0.000	9	458	0.000	9	458	0.000
21:00 - 22:00	9	458	0.000	9	458	0.000	9	458	0.000
22:00 - 23:00	3	681	0.000	3	681	0.000	3	681	0.000
23:00 - 24:00									
Total Rates:			0.091			0.090			0.181

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.*

Appendix D

Census Outputs

National Records of Scotland

C11
Scotland's Census 2011 - National Records of Scotland
Table 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 the week before the census

Settlement/Locality 2010 by Transport to place of work or study by Term-time Address (Indicator) and In education or employment
Counting: Person

Filters:

Default Summation	Person
Term-time Address (Indicator)	Resident
In education or employment	In education or employment - Part time students

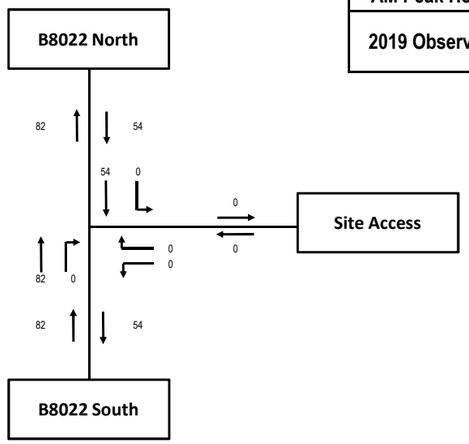
Transport to place of work or study	All people	Work or study mainly at or from home	Underground, metro, light rail or tram	Train	Bus, minibus or coach	Taxi or minicab	Driving a car or van	Passenger in a car or van	Motorcycle, scooter or moped	Bicycle	On foot	Other
Settlement/Locality 2010												
Slamannan	794	112	0	24	132	9	342	70	1	4	96	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.
Crown copyright 2013
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.

Appendix E

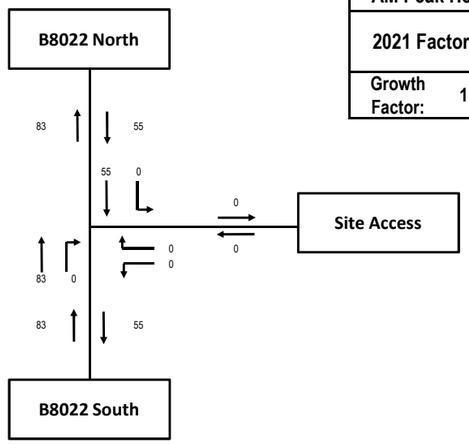
Traffic Network Diagrams

AM Peak Hour — 2019 Observed

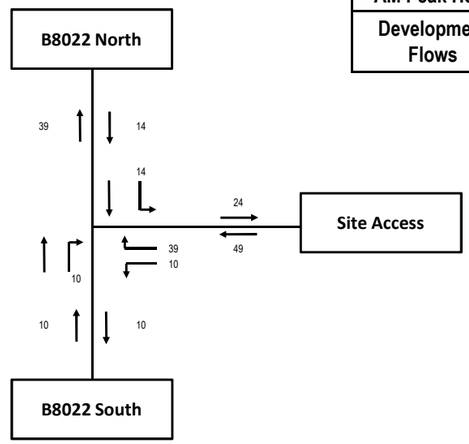


AM Peak Hour — 2021 Factored

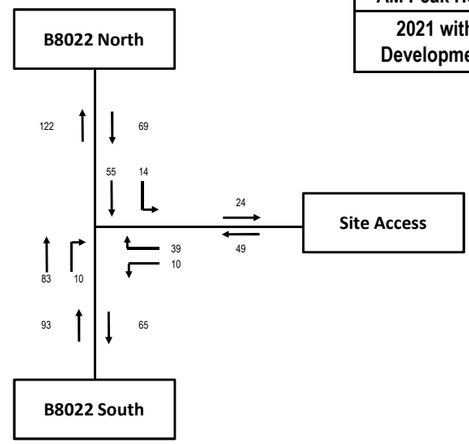
Growth Factor: 1.016



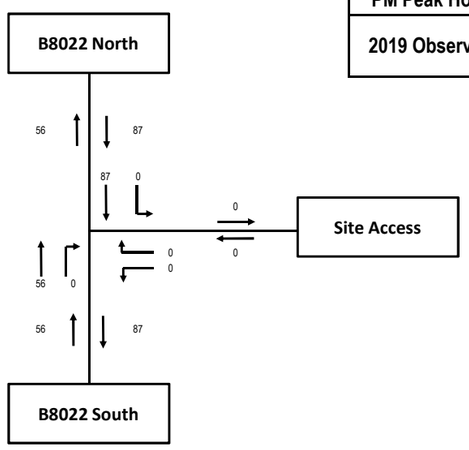
AM Peak Hour — Development Flows



AM Peak Hour — 2021 with Development

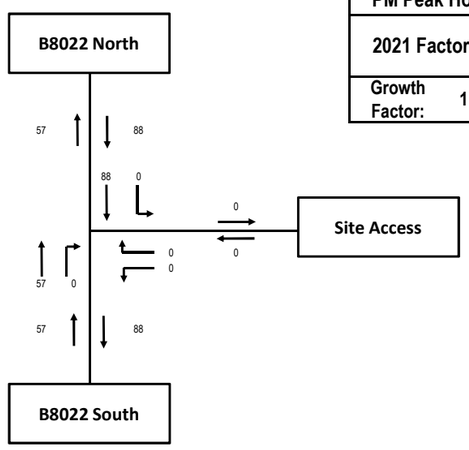


PM Peak Hour — 2019 Observed

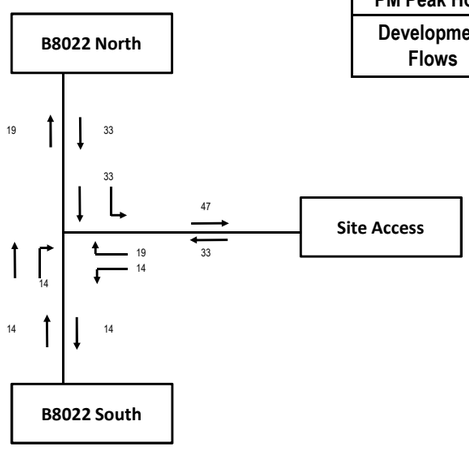


PM Peak Hour — 2021 Factored

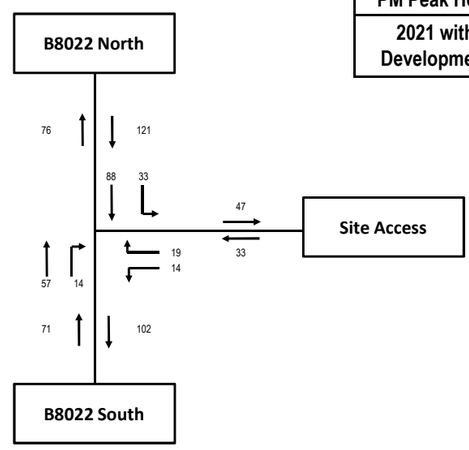
Growth Factor: 1.016



PM Peak Hour — Development Flows



PM Peak Hour — 2021 with Development



126811	Proposed Residential Development, Limerigg

Appendix F

Modelling Outputs

Junctions 8

PICADY 8 - Priority Intersection Module

Version: 8.0.2.316 [14 Feb 2013]
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Filename: 2019-05-24 Site Access Ghost Island.arc8
Path: X:\126000-126999\126811 Limerigg\Data
Report generation date: 24/05/2019 14:52:53

Summary of junction performance

	AM			PM		
	Queue (PCU)	**Delay (s)**	**RFC**	**Queue (PCU)**	**Delay (s)**	**RFC**
	A1 - 01 - Total					
Stream B-C	0.01	4.81	0.01	0.02	4.68	0.02
Stream B-A	0.07	5.57	0.06	0.03	5.35	0.03
Stream C-AB	0.01	4.77	0.01	0.02	4.91	0.02
Stream C-A	-	-	-	-	-	-
Stream A-B	-	-	-	-	-	-
Stream A-C	-	-	-	-	-	-

Values shown are the maximum values over all time segments. Delay is the maximum value of average delay per arriving vehicle.

"D1 - 01 - Total, AM " model duration: 08:00 - 09:30
"D2 - 01 - Total, PM" model duration: 17:00 - 18:30

Run using Junctions 8.0.2.316 at 24/05/2019 14:52:53

File summary

File Description

Title	(untitled)
Location	
Site Number	
Date	24/05/2019
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	
Description	

Analysis Options

Vehicle Length (m)	Do Queue Variations	Calculate Residual Capacity	Residual Capacity Criteria Type	RFC Threshold	Average Delay Threshold (s)	Queue Threshold (PCU)
5.75			N/A	0.85	36.00	20.00

Units

Distance Units	Speed Units	Traffic Units Input	Traffic Units Results	Flow Units	Average Delay Units	Total Delay Units	Rate Of Delay Units
m	kph	PCU	PCU	perHour	s	-Min	perMin

(Default Analysis Set) - 01 - Total, AM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Roundabout Capacity Model	Description	Include In Report	Use Specific Demand Set(s)	Specific Demand Set(s)	Locked	Network Flow Scaling Factor (%)	Network Capacity Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)	N/A		✓				100.000	100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Results For Central Hour Only	Single Time Segment Only	Locked	Run Automatically	Use Relationship	Relationship
01 - Total, AM	01 - Total	AM		ONE HOUR	08:00	09:30	90	15				✓		

Junction Network

Junctions

Name	Junction Type	Major Road Direction	Arm Order	Do Geometric Delay	Junction Delay (s)	Junction LOS
(untitled)	T-Junction	Two-way	A,B,C		5.30	A

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description	Arm Type
A	(untitled)		Major
B	(untitled)		Minor
C	(untitled)		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Width of kerbed central reserve (m)	Has right turn bay	Width For Right Turn (m)	Visibility For Right Turn (m)	Blocks?	Blocking Queue (PCU)
C	7.00		0.00	✓	3.50	200.00	✓	9.00

Geometries for Arm C are measured opposite Arm B. Geometries for Arm A (if relevant) are measured opposite Arm D.

Minor Arm Geometry

Arm	Minor Arm Type	Lane Width (m)	Lane Width (Left) (m)	Lane Width (Right) (m)	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate Flare Length	Flare Length (PCU)	Visibility To Left (m)	Visibility To Right (m)
B	One lane plus flare				10.00	7.10	4.20	3.65	3.65	✓	1.00	200	200

Pedestrian Crossings

Arm	Crossing Type
A	None
B	None
C	None

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
1	B-A	734.608	0.128	0.323	0.204	0.462
1	B-C	791.133	0.116	0.293	-	-
1	C-B	787.379	0.292	0.292	-	-

The slopes and intercepts shown above do NOT include any corrections or adjustments.

Streams may be combined, in which case capacity will be adjusted.

Values are shown for the first time segment only; they may differ for subsequent time segments.

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
A	ONE HOUR	✓	69.00	100.000
B	ONE HOUR	✓	49.00	100.000
C	ONE HOUR	✓	93.00	100.000

Turning Proportions

Turning Counts or Proportions (PCU/hr) - Junction 1 (for whole period)

		To		
		A	B	C
From	A	0.000	14.000	55.000
	B	39.000	0.000	10.000
	C	83.000	10.000	0.000

Turning Proportions (PCU) - Junction 1 (for whole period)

		To		
		A	B	C
From	A	0.00	0.20	0.80
	B	0.80	0.00	0.20
	C	0.89	0.11	0.00

Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

		To		
		A	B	C
From	A	1.000	1.000	1.000
	B	1.000	1.000	1.000
	C	1.000	1.000	1.000

Heavy Vehicle Percentages - Junction 1 (for whole period)

		To		
		A	B	C
From	A	0.000	0.000	0.000
	B	0.000	0.000	0.000
	C	0.000	0.000	0.000

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)	Total Queueing Delay (PCU-min)	Average Queueing Delay (s)	Rate Of Queueing Delay (PCU-min/min)	Inclusive Total Queueing Delay (PCU-min)	Inclusive Average Queueing Delay (s)
B-C	0.01	4.81	0.01	A	9.18	13.76	1.09	4.75	0.01	1.09	4.75
B-A	0.06	5.57	0.07	A	35.79	53.68	4.85	5.43	0.05	4.86	5.43
C-AB	0.01	4.77	0.01	A	9.18	13.76	1.09	4.74	0.01	1.09	4.74
C-A	-	-	-	-	76.16	114.24	-	-	-	-	-
A-B	-	-	-	-	12.85	19.27	-	-	-	-	-
A-C	-	-	-	-	50.47	75.70	-	-	-	-	-

(Default Analysis Set) - 01 - Total, PM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Roundabout Capacity Model	Description	Include In Report	Use Specific Demand Set(s)	Specific Demand Set(s)	Locked	Network Flow Scaling Factor (%)	Network Capacity Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)	N/A		✓				100.000	100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Results For Central Hour Only	Single Time Segment Only	Locked	Run Automatically	Use Relationship	Relationship
01 - Total, PM	01 - Total	PM		ONE HOUR	17:00	18:30	90	15				✓		

Junction Network

Junctions

Name	Junction Type	Major Road Direction	Arm Order	Do Geometric Delay	Junction Delay (s)	Junction LOS
(untitled)	T-Junction	Two-way	A,B,C		5.02	A

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description	Arm Type
A	(untitled)		Major
B	(untitled)		Minor
C	(untitled)		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Width of kerbed central reserve (m)	Has right turn bay	Width For Right Turn (m)	Visibility For Right Turn (m)	Blocks?	Blocking Queue (PCU)
C	7.00		0.00	✓	3.50	200.00	✓	9.00

Geometries for Arm C are measured opposite Arm B. Geometries for Arm A (if relevant) are measured opposite Arm D.

Minor Arm Geometry

Arm	Minor Arm Type	Lane Width (m)	Lane Width (Left) (m)	Lane Width (Right) (m)	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate Flare Length	Flare Length (PCU)	Visibility To Left (m)	Visibility To Right (m)
B	One lane plus flare				10.00	7.10	4.20	3.65	3.65	✓	1.00	200	200

Pedestrian Crossings

Arm	Crossing Type
A	None
B	None
C	None

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
1	B-A	750.483	0.131	0.330	0.208	0.472
1	B-C	825.370	0.121	0.306	-	-
1	C-B	787.379	0.292	0.292	-	-

The slopes and intercepts shown above do NOT include any corrections or adjustments.
Streams may be combined, in which case capacity will be adjusted.
Values are shown for the first time segment only; they may differ for subsequent time segments.

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
		✓	✓	HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
A	ONE HOUR	✓	121.00	100.000
B	ONE HOUR	✓	33.00	100.000
C	ONE HOUR	✓	71.00	100.000

Turning Proportions

Turning Counts or Proportions (PCU/hr) - Junction 1 (for whole period)

		To		
		A	B	C
From	A	0.000	33.000	88.000
	B	19.000	0.000	14.000
	C	57.000	14.000	0.000

Turning Proportions (PCU) - Junction 1 (for whole period)

		To		
		A	B	C
From	A	0.00	0.27	0.73
	B	0.58	0.00	0.42
	C	0.80	0.20	0.00

Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

		To		
		A	B	C
From	A	1.000	1.000	1.000
	B	1.000	1.000	1.000
	C	1.000	1.000	1.000

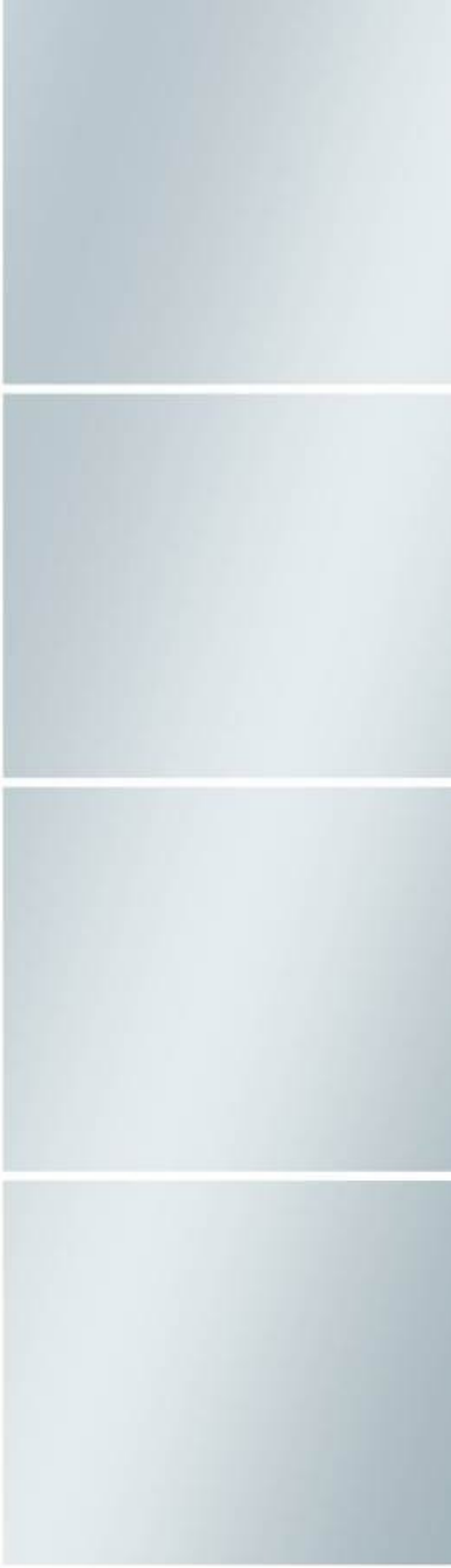
Heavy Vehicle Percentages - Junction 1 (for whole period)

		To		
		A	B	C
From	A	0.000	0.000	0.000
	B	0.000	0.000	0.000
	C	0.000	0.000	0.000

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)	Total Queueing Delay (PCU-min)	Average Queueing Delay (s)	Rate Of Queueing Delay (PCU-min/min)	Inclusive Total Queueing Delay (PCU-min)	Inclusive Average Queueing Delay (s)
B-C	0.02	4.68	0.02	A	12.85	19.27	1.48	4.60	0.02	1.48	4.60
B-A	0.03	5.35	0.03	A	17.43	26.15	2.28	5.23	0.03	2.28	5.23
C-AB	0.02	4.91	0.02	A	12.85	19.27	1.56	4.85	0.02	1.56	4.85
C-A	-	-	-	-	52.30	78.46	-	-	-	-	-
A-B	-	-	-	-	30.28	45.42	-	-	-	-	-
A-C	-	-	-	-	80.75	121.13	-	-	-	-	-

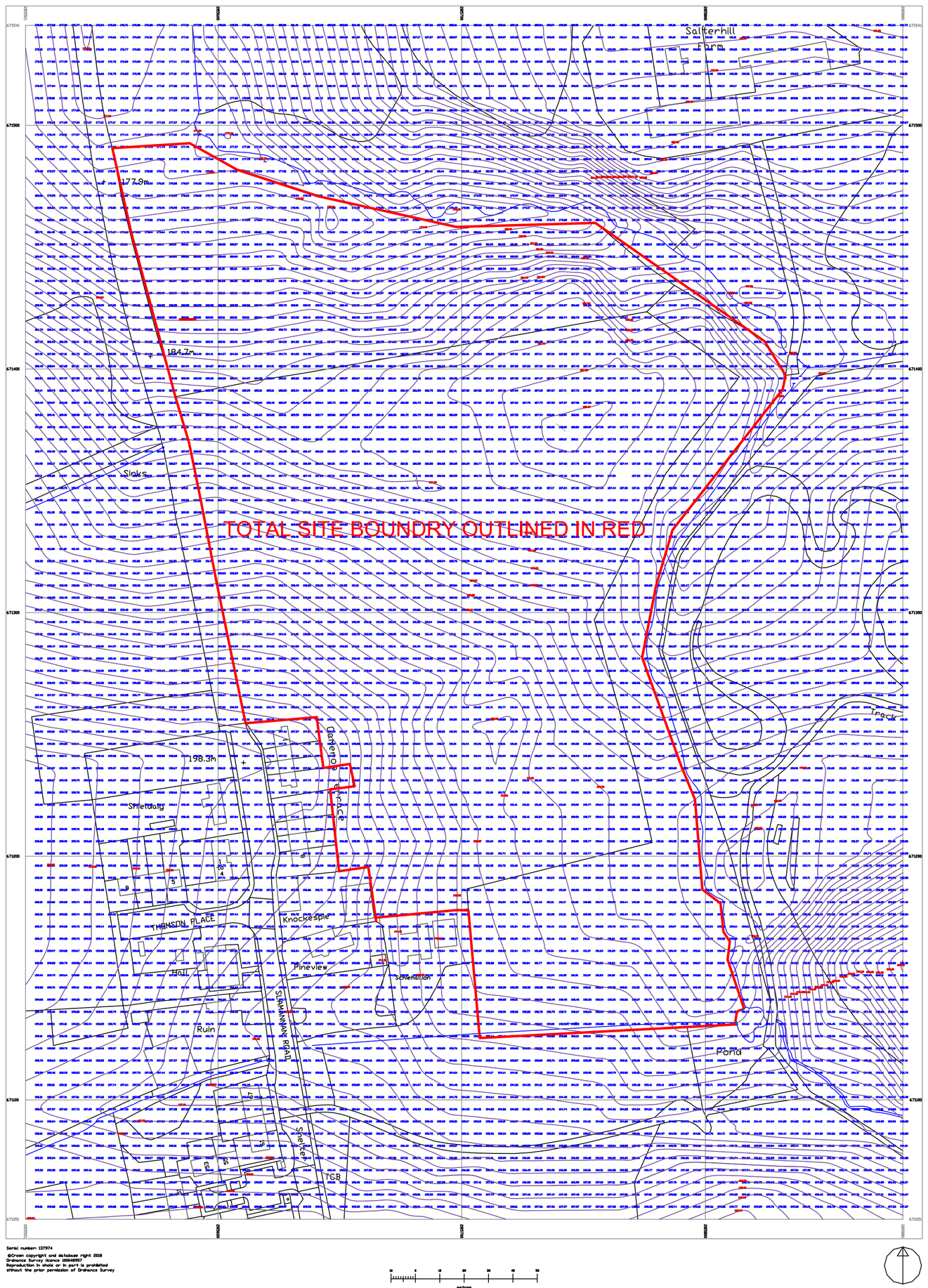


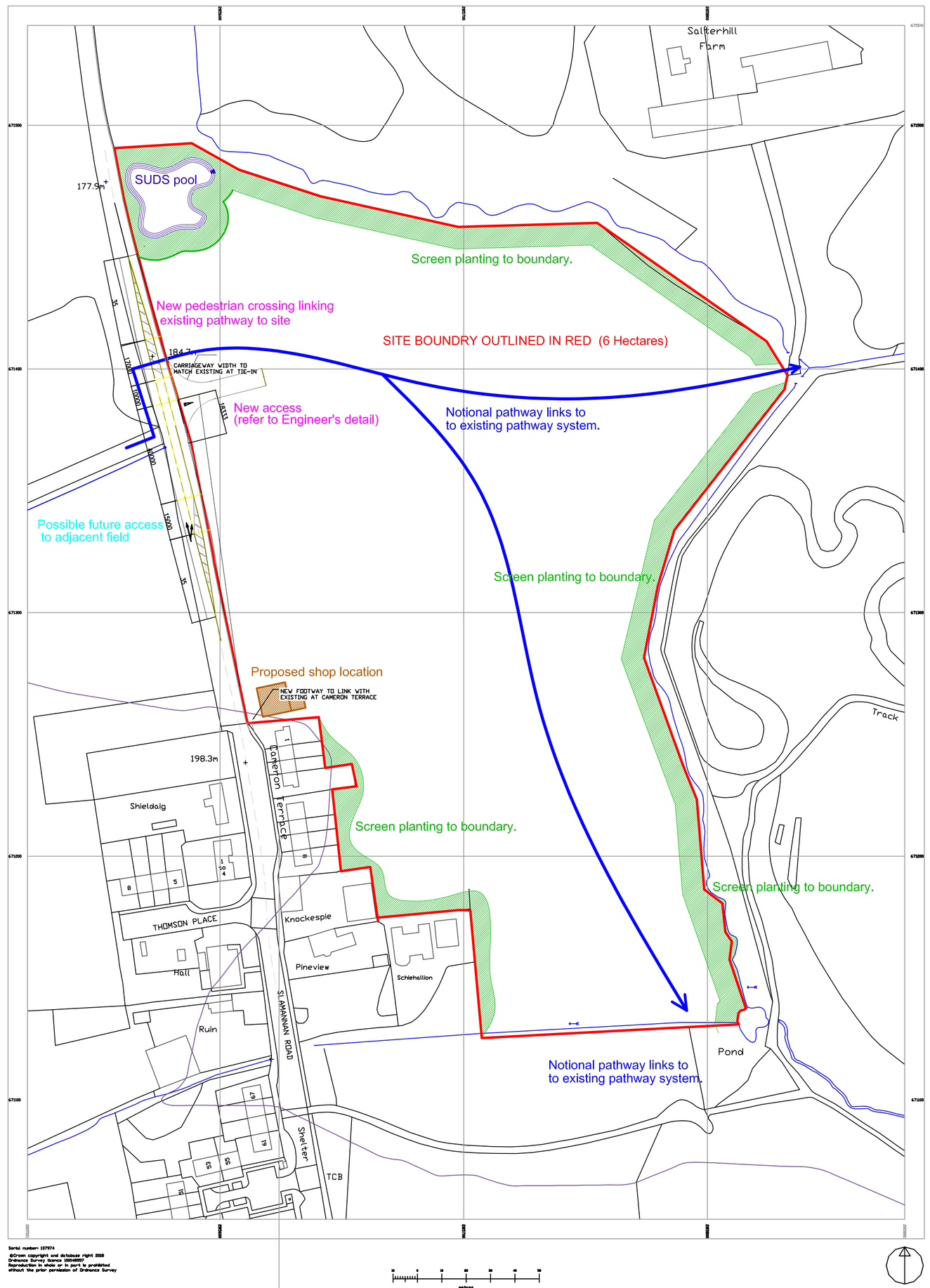
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FAIRHURST

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LOCATION PLANS 1:1250 @ A1

LOCATION / SITE PLANS

THIS DOCUMENT IS THE PROPOERTY OF ROSS WOODS ARCHITECTS. THE DESIGN INFORMATION CONTAINED HEREIN IS STRICTLY CONFIDENTIAL. THIS DOCUMENT IS NOT TO BE USED, REPRODUCED, DISCLOSED OR CIRCULATED IN WHOLE OR IN PART, WITHOUT THE PRIOR WRITTEN PERMISSION OF ROSS WOODS ARCHITECTS, IN EACH INSTANCE.

Do NOT scale from this drawing.

If in doubt ask.

NORTH

TOTAL SITE BOUNDRY OUTLINED IN RED

NEW SHOP LOCATION HATCHED BROWN

SCREEN PLANTING HATCHED GREEN

NOTIONAL PATHWAY LINKS

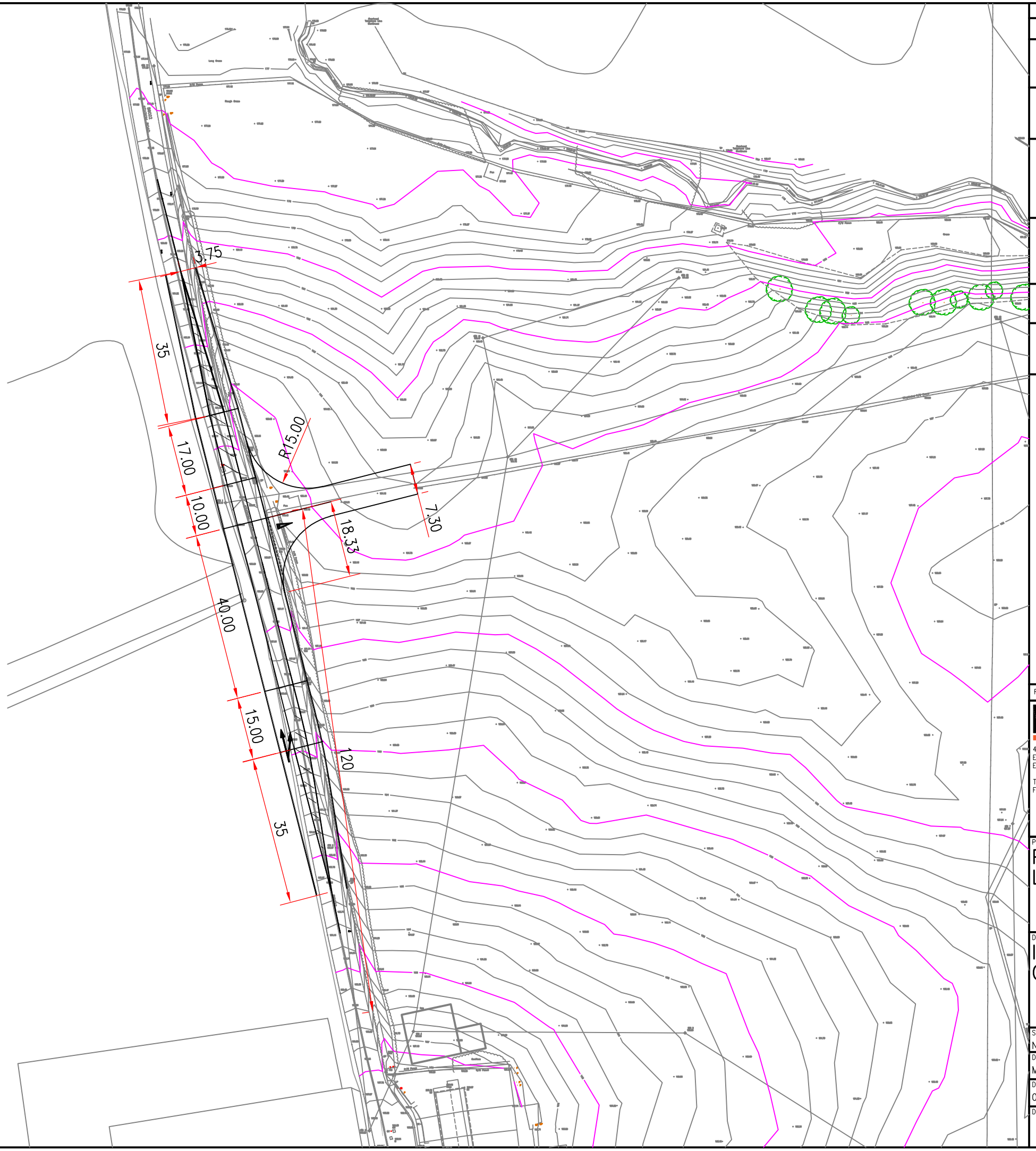
REV	DATE		
F	310519	ALTERED ROAD ACCESS	
E	231118	NEW PinP	DR
D	030818	SHOP AND ACCESS SHOW	DR
C	160718	PAN DRAWING	DR
B	240518	PLANNING REQUEST	DR
A	230518	SITE REDUCED	DR

Proposed Residential Development
Limerigg
for Robert MacDonald Clarkston

Title:	SITE SURVEY / OS MAP / SITE PLAN		
Client:	RM Clarkston		
Job No. :	RWA/18/09	Drawn:	DR
Scale	1:1250 @ A1	Date:	150518
Drg No. :	P001	Rev:	F

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www.rosswoodsarchitects.com

PLANNING



Do not scale from this drawing.

SAFETY HEALTH AND ENVIRONMENTAL INFORMATION

IN ADDITION TO THE HAZARD/RISKS NORMALLY ASSOCIATED WITH THE TYPES OF WORK DETAILED ON THIS DRAWING, NOTE THE FOLLOWING RISKS AND INFORMATION.

RISKS LISTED HERE ARE NOT EXHAUSTIVE. REFER TO DESIGN ASSESSMENT FORM NO.

CONSTRUCTION

DEMOLITION

FOR INFORMATION RELATING TO USE, CLEANING AND MAINTENANCE SEE THE HEALTH AND SAFETY FILE

IT IS ASSUMED THAT ALL WORKS WILL BE CARRIED OUT BY A COMPETENT CONTRACTOR WORKING, WHERE APPROPRIATE, TO AN APPROVED METHOD STATEMENT.

Rev.	Date	Description	Drwn.	Chkd.	Appd.

FAIRHURST

43 George Street
EDINBURGH
EH2 2HT

Tel: 0131 225 6741
Fax: 0844 381 4412

Client:

Project Title:
PROPOSED RESIDENTIAL DEVELOPMENT
LIMERIGG

Drawing Title:
INDICATIVE SITE ACCESS
GHOST ISLAND

Scale at A3:	Status:	
NTS	For Information	
Drawn:	Checked:	Approved:
ML		
Date:	Date:	Date:
07/05/19		

Drawing No.: 126811/sk7002

Revision: –

Falkirk Council

Abbotsford House Davids Loan Falkirk FK2 7YZ Tel: 01324 504748 Email: bsdm@falkirk.gov.uk

Applications cannot be validated until all the necessary documentation has been submitted and the required fee has been paid.

Thank you for completing this application form:

ONLINE REFERENCE 100145345-001

The online reference is the unique reference for your online form only. The Planning Authority will allocate an Application Number when your form is validated. Please quote this reference if you need to contact the planning Authority about this application.

Type of Application

What is this application for? Please select one of the following: *

☐ Application for planning permission (including changes of use and surface mineral working).

☒ Application for planning permission in principle.

☐ Further application, (including renewal of planning permission, modification, variation or removal of a planning condition etc)

☐ Application for Approval of Matters specified in conditions.

Description of Proposal

Please describe the proposal including any change of use: * (Max 500 characters)

APPLICATION FOR PLANNING IN PRINCIPLE FOR 90 HOUSES AND A VILLAGE SHOP.

Is this a temporary permission? * ☐ Yes ☒ No

If a change of use is to be included in the proposal has it already taken place? ☐ Yes ☒ No
(Answer 'No' if there is no change of use.) *

Has the work already been started and/or completed? *

☒ No ☐ Yes – Started ☐ Yes - Completed

Applicant or Agent Details

Are you an applicant or an agent? * (An agent is an architect, consultant or someone else acting on behalf of the applicant in connection with this application) ☐ Applicant ☒ Agent

Agent Details

Please enter Agent details

Company/Organisation:	ROSS WOODS ARCHITECTS		
Ref. Number:		You must enter a Building Name or Number, or both: *	
First Name: *	DEAN	Building Name:	
Last Name: *	ROSS	Building Number:	54
Telephone Number: *	01412045316	Address 1 (Street): *	BERKELEY STREET
Extension Number:		Address 2:	
Mobile Number:	07957472343	Town/City: *	GLASGOW
Fax Number:		Country: *	LANARKSHIRE
		Postcode: *	G3 7DS
Email Address: *	dean@rosswoodsarchitects.com		

Is the applicant an individual or an organisation/corporate entity? *

☒ Individual ☐ Organisation/Corporate entity

Applicant Details

Please enter Applicant details

Title:	Mr	You must enter a Building Name or Number, or both: *	
Other Title:		Building Name:	WHITESIDE FARM
First Name: *	ROBERT	Building Number:	
Last Name: *	MACDONALD CLARKSTON	Address 1 (Street): *	SLAMANNAN
Company/Organisation		Address 2:	
Telephone Number: *		Town/City: *	FALKIRK
Extension Number:		Country: *	UK
Mobile Number:		Postcode: *	FR1 3BX
Fax Number:			
Email Address: *			

Site Address Details

Planning Authority: Falkirk Council

Full postal address of the site (including postcode where available):

Address 1:

Address 2:

Address 3:

Address 4:

Address 5:

Town/City/Settlement:

Post Code:

Please identify/describe the location of the site or sites

LAND NORTH OF 1 CAMERON TERRACE, SLAMANNAN ROAD, LIMERIGG.

Northing 671353 Easting 285650

Pre-Application Discussion

Have you discussed your proposal with the planning authority? * ☒ Yes ☐ No

Pre-Application Discussion Details Cont.

In what format was the feedback given? *

☒ Meeting ☒ Telephone ☐ Letter ☒ Email

Please provide a description of the feedback you were given and the name of the officer who provided this feedback. If a processing agreement [note 1] is currently in place or if you are currently discussing a processing agreement with the planning authority, please provide details of this. (This will help the authority to deal with this application more efficiently.) * (max 500 characters)

WE HAD A MEETING WITH JULIE SEIDEL OF THE PLANNING DEPARTMENT, RODDY MACKENZIE OF THE ROADS DEPARTMENT, KEVIN COLLINS OF THE TRANSPORTATION PLANNING UNIT AND ANGUS DUNCAN OF CORE PATHWAYS. IT WAS AGREED THAT A ROUNDABOUT WAS REQUIRES AND THE LOCATION OF THE PATHWAY CONNECTIONS.

Title: Mrs Other title:

First Name: JULIE Last Name: SEIDEL

Correspondence Reference Number: Date (dd/mm/yyyy): 01/11/2018

Note 1. A Processing agreement involves setting out the key stages involved in determining a planning application, identifying what information is required and from whom and setting timescales for the delivery of various stages of the process.

Site Area

Please state the site area: 6.00

Please state the measurement type used: ☒ Hectares (ha) ☐ Square Metres (sq.m)

Existing Use

Please describe the current or most recent use: * (Max 500 characters)

VACANT GROUND BUT ALLOCATED IN THE CURRENT LOCAL PLAN FOR HOUSING - RURAL SOUTH - H66 - SLAMANNAN ROAD - LIMERIGG.

Access and Parking

Are you proposing a new altered vehicle access to or from a public road? * ☒ Yes ☐ No

If Yes please describe and show on your drawings the position of any existing. Altered or new access points, highlighting the changes you propose to make. You should also show existing footpaths and note if there will be any impact on these.

Are you proposing any change to public paths, public rights of way or affecting any public right of access? * ☐ Yes ☒ No

If Yes please show on your drawings the position of any affected areas highlighting the changes you propose to make, including arrangements for continuing or alternative public access.

Water Supply and Drainage Arrangements

Will your proposal require new or altered water supply or drainage arrangements? * ☒ Yes ☐ No

Are you proposing to connect to the public drainage network (eg. to an existing sewer)? *

☒ Yes – connecting to public drainage network

☐ No – proposing to make private drainage arrangements

☐ Not Applicable – only arrangements for water supply required

Do your proposals make provision for sustainable drainage of surface water?? * (e.g. SUDS arrangements) * ☒ Yes ☐ No

Note:-

Please include details of SUDS arrangements on your plans

Selecting 'No' to the above question means that you could be in breach of Environmental legislation.

Are you proposing to connect to the public water supply network? *

☒ Yes

☐ No, using a private water supply

☐ No connection required

If No, using a private water supply, please show on plans the supply and all works needed to provide it (on or off site).

Assessment of Flood Risk

Is the site within an area of known risk of flooding? * ☐ Yes ☒ No ☐ Don't Know

If the site is within an area of known risk of flooding you may need to submit a Flood Risk Assessment before your application can be determined. You may wish to contact your Planning Authority or SEPA for advice on what information may be required.

Do you think your proposal may increase the flood risk elsewhere? * ☐ Yes ☒ No ☐ Don't Know

Trees

Are there any trees on or adjacent to the application site? * ☐ Yes ☒ No

If Yes, please mark on your drawings any trees, known protected trees and their canopy spread close to the proposal site and indicate if any are to be cut back or felled.

All Types of Non Housing Development – Proposed New Floorspace

Does your proposal alter or create non-residential floorspace? * ☒ Yes ☐ No

All Types of Non Housing Development – Proposed New Floorspace Details

For planning permission in principle applications, if you are unaware of the exact proposed floorspace dimensions please provide an estimate where necessary and provide a fuller explanation in the 'Don't Know' text box below.

Please state the use type and proposed floorspace (or number of rooms if you are proposing a hotel or residential institution): *

Class 1 Retail (non-food)

Gross (proposed) floorspace (In square meters, sq.m) or number of new (additional) Rooms (If class 7, 8 or 8a): * 156

If Class 1, please give details of internal floorspace:

Net trading spaces: 120

Non-trading space: 36

Total:

If Class 'Not in a use class' or 'Don't know' is selected, please give more details: (Max 500 characters)

Schedule 3 Development

Does the proposal involve a form of development listed in Schedule 3 of the Town and Country Planning (Development Management Procedure (Scotland) Regulations 2013 * ☐ Yes ☒ No ☐ Don't Know

If yes, your proposal will additionally have to be advertised in a newspaper circulating in the area of the development. Your planning authority will do this on your behalf but will charge you a fee. Please check the planning authority's website for advice on the additional fee and add this to your planning fee.

If you are unsure whether your proposal involves a form of development listed in Schedule 3, please check the Help Text and Guidance notes before contacting your planning authority.

Planning Service Employee/Elected Member Interest

Is the applicant, or the applicant's spouse/partner, either a member of staff within the planning service or an elected member of the planning authority? * ☐ Yes ☒ No

Certificates and Notices

CERTIFICATE AND NOTICE UNDER REGULATION 15 – TOWN AND COUNTRY PLANNING (DEVELOPMENT MANAGEMENT PROCEDURE) (SCOTLAND) REGULATION 2013

One Certificate must be completed and submitted along with the application form. This is most usually Certificate A, Form 1, Certificate B, Certificate C or Certificate E.

Are you/the applicant the sole owner of ALL the land? * ☒ Yes ☐ No

Is any of the land part of an agricultural holding? * ☐ Yes ☒ No

Certificate Required

The following Land Ownership Certificate is required to complete this section of the proposal:

Certificate A

Land Ownership Certificate

Certificate and Notice under Regulation 15 of the Town and Country Planning (Development Management Procedure) (Scotland) Regulations 2013

Certificate A

I hereby certify that –

(1) - No person other than myself/the applicant was an owner (Any person who, in respect of any part of the land, is the owner or is the lessee under a lease thereof of which not less than 7 years remain unexpired.) of any part of the land to which the application relates at the beginning of the period of 21 days ending with the date of the accompanying application.

(2) - None of the land to which the application relates constitutes or forms part of an agricultural holding

Signed: DEAN ROSS

On behalf of: Mr ROBERT MACDONALD CLARKSTON

Date: 29/11/2018

☒ Please tick here to certify this Certificate. *

Checklist – Application for Planning Permission

Town and Country Planning (Scotland) Act 1997

The Town and Country Planning (Development Management Procedure) (Scotland) Regulations 2013

Please take a few moments to complete the following checklist in order to ensure that you have provided all the necessary information in support of your application. Failure to submit sufficient information with your application may result in your application being deemed invalid. The planning authority will not start processing your application until it is valid.

a) If this is a further application where there is a variation of conditions attached to a previous consent, have you provided a statement to that effect? *

☐ Yes ☐ No ☒ Not applicable to this application

b) If this is an application for planning permission or planning permission in principal where there is a crown interest in the land, have you provided a statement to that effect? *

☐ Yes ☐ No ☒ Not applicable to this application

c) If this is an application for planning permission, planning permission in principle or a further application and the application is for development belonging to the categories of national or major development (other than one under Section 42 of the planning Act), have you provided a Pre-Application Consultation Report? *

☒ Yes ☐ No ☐ Not applicable to this application

Town and Country Planning (Scotland) Act 1997

The Town and Country Planning (Development Management Procedure) (Scotland) Regulations 2013

d) If this is an application for planning permission and the application relates to development belonging to the categories of national or major developments and you do not benefit from exemption under Regulation 13 of The Town and Country Planning (Development Management Procedure) (Scotland) Regulations 2013, have you provided a Design and Access Statement? *

☒ Yes ☐ No ☐ Not applicable to this application

e) If this is an application for planning permission and relates to development belonging to the category of local developments (subject to regulation 13. (2) and (3) of the Development Management Procedure (Scotland) Regulations 2013) have you provided a Design Statement? *

☒ Yes ☐ No ☐ Not applicable to this application

f) If your application relates to installation of an antenna to be employed in an electronic communication network, have you provided an ICNIRP Declaration? *

☐ Yes ☐ No ☒ Not applicable to this application

g) If this is an application for planning permission, planning permission in principle, an application for approval of matters specified in conditions or an application for mineral development, have you provided any other plans or drawings as necessary:

☒ Site Layout Plan or Block plan.
☐ Elevations.
☐ Floor plans.
☐ Cross sections.
☐ Roof plan.
☐ Master Plan/Framework Plan.
☐ Landscape plan.
☐ Photographs and/or photomontages.
☒ Other.

If Other, please specify: * (Max 500 characters)

Flood Risk Analysis Peat Management Statement Coal Mining Risk Assessment Traffic Statement

Provide copies of the following documents if applicable:

A copy of an Environmental Statement. *	☐ Yes	☒ N/A
A Design Statement or Design and Access Statement. *	☒ Yes	☐ N/A
A Flood Risk Assessment. *	☒ Yes	☐ N/A
A Drainage Impact Assessment (including proposals for Sustainable Drainage Systems). *	☐ Yes	☒ N/A
Drainage/SUDS layout. *	☒ Yes	☐ N/A
A Transport Assessment or Travel Plan	☐ Yes	☒ N/A
Contaminated Land Assessment. *	☐ Yes	☒ N/A
Habitat Survey. *	☐ Yes	☒ N/A
A Processing Agreement. *	☐ Yes	☒ N/A

Other Statements (please specify). (Max 500 characters)

Declare – For Application to Planning Authority

I, the applicant/agent certify that this is an application to the planning authority as described in this form. The accompanying Plans/drawings and additional information are provided as a part of this application.

Declaration Name: Mr DEAN ROSS

Declaration Date: 29/11/2018

Payment Details

Online payment: 541585
Payment date: 29/11/2018 14:12:00

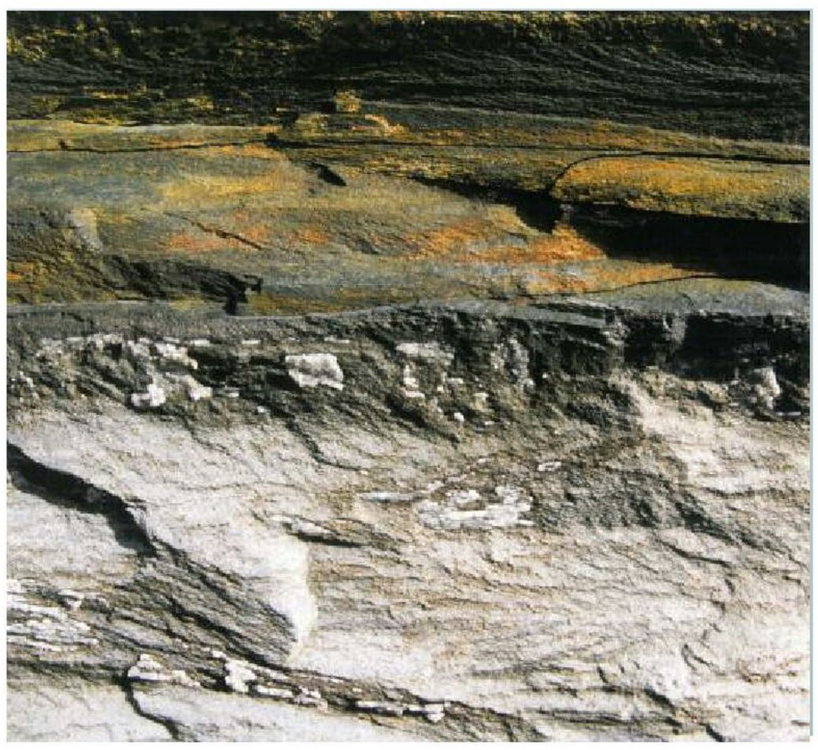
Created: 29/11/2018 14:12

Slamannan Road, Limerigg

Mining Stability Report Including Coal Mining Risk Assessment

June 2018









JWHROSS

JWHROSS

CONTROL SHEET

CLIENT: Ross Woods Architects

PROJECT TITLE: Slamannan Road, Limerigg

REPORT TITLE: Mining Stability Report including Coal Mining Risk Assessment

PROJECT REFERENCE: 126811/GL/J/R1

Issue and Approval Schedule:

ISSUE 1	Name	Signature	Date
Prepared by	Stuart Tennant Graduate Mining Engineer	[redacted]	06/06/2018
Reviewed by	Donald Robertson Senior Mining Engineer		06/06/2018
Approved by	Alan Blair Partner		06/06/2018

Revision Record:

Issue	Date	Status	Description	By	Chk	App
2						
3						
4						
5						

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JWHROSS

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Appendix 1

Drawing No. 126811/9001 – Site Location Plan

Drawing No. 126811/9002 – Composite Site Plan

Appendix 2

Coal Authority Report Dated 4th June 2018 – Ref 51001854734001

1.0 Title

Report relative to the mining stability under and adjacent to the Subjects at Slamannan Road, Limerigg (including Coal Mining Risk Assessment).

2.0 Instructions

This Report has been prepared by JWH Ross in accordance with the instruction of Messrs. Ross Woods Architects.

The extent of past mining in minerals other than coal, e.g., ironstone, fireclay and limestone, within Central Scotland is considerable, and often overlooked. This report addresses mining stability in relation to all mineral extraction. It is particularly noted that subsidence damage caused by the extraction of minerals other than coal is not covered by the Coal Mining (Subsidence) Act 1991.

This Report includes a Coal Mining Risk Assessment, as may be required under the Town and Country Planning (Development Management Procedure) (Scotland) Regulations 2008, where a project is located within a Coal Mining Development Referral Area.

3.0 Limitations

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The Report is based on the geological and mining records at present available. The contents of the Report are believed to be accurate but since mining records and information for this District may be incomplete, we cannot accept responsibility for any insufficiency or inaccuracy in the information provided.

We must advise that this Report only examines the solid geology and associated minerals; it is not to be construed as inferring that the engineering or chemical properties of the natural or man-made superficial deposits are satisfactory or otherwise, since these latter matters are outwith the scope of our Brief.

4.0 Subjects

The Subjects comprise an irregular shaped parcel of land, approximately 6.0 ha in area located in the north of the village of Limerigg, Falkirk as shown on Drawing No 126811/9001 and bound in red on Drawing No. 126811/9002. The approximate National Grid co-ordinates of the site are NS 85657 71370. The current proposals relate to the site being utilised for a mixed residential development including a village shop and associated roads and soft landscaping.

5.0 Researches

In connection with this investigation we have researched and taken into account information from the undernoted sources:-

- Published geological maps, namely, County Series Lanarkshire IV SW, National Grid Series NS 87 SE, the British Geological Survey's online Geoindex and the BGS 1:50,000 Series Sheet 31E Scotland: Falkirk – Solid (1997);
- Historical Ordnance Survey topographical maps prepared to scales of 1:2500 and 1:10560;
- Memoirs of the Economic Geology of the Central Coalfields of Scotland (Area V), published in 1926;
- Abandonment plan catalogues, mine plan records and previous mineral investigation Reports held in the mining Archives of JWH Ross;
- Non-confidential borehole data held by the British Geological Survey.

6.0 Geology

According to published geological map information, the solid strata underlying the Subjects belong to the Lower Coal Measures of the Carboniferous Period and dip towards the southwest at a very slight gradient. The foregoing series of rocks are sedimentary in nature and consist of sandstones, siltstones and mudstones together with occasional ironstones and numerous seams of coal.

In order that the relationship of each mineral horizon may be better appreciated, we have shown below, in tabular form, the general succession together with the average thickness and approximate depth to the principal seams, with the Virtuewell Coal taken as a convenient datum. Local seam names are shown in parentheses. This section is given as a guide only since the seam thicknesses and strata intervals may vary locally:-

Seam	***Average Thickness (m)***	***Approx. Depth (m)***
Virtuewell (Johnstone) Coal	*1.0*	*0 - relevant datum*
Ladygrange Coal	*0.8*	*13*
Kiltongue Coal	*0.2*	*42*
Splint Coal	*0.6*	*60*
Coxrod Coal	*0.6*	*84*

Particular to the Subjects, the relevant County Series Geological Map infers that the Virtuewell Coal, known locally as the Johnstone Coal, outcrops through the site in a northwest to southeast trend. Considering the prevailing strata dip towards the southwest, this infers that the seam will be present beneath the western part of the site and therefore represents the topmost significant mineral horizon thereunder.

The underlying Ladygrange Coal is inferred to outcrop some distance to the east of the site at an approximate north to south trend. Taking into account the prevailing strata dip, an outcrop position as such infers that the Ladygrange Coal will be present beneath the entire site and will be the topmost mineral seam beneath that part of the site to the east of the Virtuewell Coal's outcrop line.

Due to a lack of underground levels on available plans we are unable to predict with any great accuracy the depth at which the Virtuewell and Ladygrange Coal seams underlie the site. However, extrapolation from historical boreholes held in the archives of the British Geological Survey and sunk adjacent to the south western corner of the site, together with information from old pit shafts nearby gives some indication as to the anticipated depths of the seams. The boreholes indicate depths to the

Virtuewell Coal of between 8 and 9 metres below ground level, and given the proximity of these bores to the site it can reasonably be assumed that these depths may be representative of the seam's approximate depth where it underlies the Subjects.

The separation between the Virtuewell Coal and the Ladygrange Coal, as derived from the relevant geological memoir for the area would suggest that the Ladygrange Coal may be present beneath the site at depths in the approximate range of 20 to 23 metres. These anticipated depths are borne out by an old pit shaft situated some 60 metres to the east of the site which indicates a depth to the Ladygrange Coal of 11 fathoms (20.1 metres).

The abovementioned historical bores also suggest that rockhead may lie in the region of 3 to 5 metres below ground level beneath the site, while published geological mapping suggests that the superficial deposits will comprise Glacial Till.

7.0 Past Mining

Whilst the site is underlain by several economically significant mineral seams as indicated by the table in Section 6.0 above, in the current assessment of mineral stability cognisance need only be taken of the two topmost significant mineral horizons beneath the site, namely the Virtuewell Coal and Ladygrange Coal, the seams underlying these being sufficiently deep as to have no bearing on the surface stability. Our search of Abandoned Mine Plan Catalogues, "Unsigned" Mining Plans held by the Coal Authority together with records and plans held in the Archives of JWH Ross reveals records of past underground mining operations beneath or in the immediate vicinity of the Subjects in both of the aforementioned seams. Extraction of the coals was undertaken from the Limerigg and Balquatstone Collieries with operations finally being abandoned in 1905.

According to the relevant mine abandonment plans, the workings in the abovementioned seams were undertaken via both the Longwall and Stoop and Room techniques. At this juncture we should explain the different techniques of mining commonly employed in the extraction of underground minerals:

Where the Longwall method is employed the seam is completely extracted and the strata overlying the mined area are allowed to collapse. As a result thereof, subsidence of the ground surface is usually complete shortly after the extraction of the seam. Access roadways are provided and maintained through the worked out area, but these roadways quickly collapse after maintenance of them ceases, except in the case of workings at shallow depths where, depending on the nature of the superincumbent strata, they may remain intact for a considerable period after the cessation of workings. In such cases when the old underground roadways eventually collapse, isolated plump holes or sits may appear on the surface ground.

Where the Stoop and Room system of mining is employed, passageways, or rooms as they are called, are driven more or less at right angles to each other through the seam, which is thus formed into square or rectangular blocks or stoops. At a later stage as much as possible of the seam in the stoops is normally removed, but because the removal of a stoop in its entirety is an extremely difficult and dangerous procedure, part of the seam was generally left intact to support the roof at the time and safeguard the workmen. While these remaining stoops can continue to perform this function for an indefinite period, their edges may ultimately break down, resulting in collapse of the adjacent bridging strata and causing varying degrees of subsidence movement of the ground surface. The magnitude of surface effects diminishes with increasing depth and eventually ceases to reach the surface due to bulking of the collapsed strata.

The workings in the Virtuewell Coal beneath the site were carried out using the Longwall system of mining, the extents of which we have plotted on Drawing No. 126811/9002.

On the relevant mine abandonment plan, the eastern (up-dip) extent of the recorded Virtuewell Coal workings, are annotated with the term "*want*". This term was used on mining plans to indicate that the seam was no longer present or viable beyond this line and in this instance we have inferred that the seam was either at outcrop or was of insufficient thickness or quality to be workable close to outcrop.

Workings in the Ladygrange Coal are shown on the available mine plans to have been undertaken via a combination of both the longwall and stoop and room methods. The workings extend under a large proportion of the site as shown on appended Drawing No. 126811/9002 and are indicated to have been terminated against "*waste*", suggesting that older unrecorded workings were encountered during the course of mining operations. We have inferred that these uncharted workings will have been carried out prior to legislation being passed in 1850 requiring plans of mine workings to be kept, and it can reasonably be assumed that these unrecorded workings will extend beneath the remainder of the site in the west.

We have also shown on the appended Composite Site Plan the position of an underground roadway which appears to have been driven through the old wastes to connect to further recorded workings in the Ladygrange Coal to the northwest of the site.

8.0 JWH Ross Past Mining Risk Assessment

The information provided above in Section 6 (Geology) and Section 7 (Past Mining) forms the basis for the current assessment of mining instability risk.

8.1 Definition

"Risk" is a combination of the likelihood of an "occurrence" and the assessment of the severity of the consequences. This can be discussed with reference to a variety of scenarios, i.e., risk to life, risk to property and risk of financial loss.

The magnitude of risk relative to each scenario will depend on a number of factors (such as accessibility to personnel, existence of structures or the interruption of services). In addition the perception of risk will depend on such considerations as the background knowledge of the persons involved and the degree of their involvement.

The assessment of risk to proposed or existing surface development from subsidence effects due to historic mining is a difficult process requiring significant professional judgement and experience. This process is complicated by the fact that the information needed to make an assessment with a high degree of confidence is incomplete and involves uncertainty.

Unless otherwise stated, the JWH Ross risk rating of potential mining subsidence makes the following presumptions that the risk:

- is derived from underground mineral workings (including coal)
- excludes the risk of mine entries (covered separately in our separate section on old shafts and adits)
- relates to typical residential development
- excludes likelihood of occurrence within a timeframe

8.2 Recorded Mine workings

Where “Abandonment” or “Unsigned” mine plan record information exists, the principal contributing factors that influence the assessment of potential future mining subsidence are:

- The thickness of the mineral
- The inclination of the strata
- The extraction height of the workings
- The number of seams worked and any interaction between them
- The mining technique utilised
- The extraction ratio
- Roof conditions
- The date of the workings
- The extent of mine workings and the perceived accuracy thereof
- The layout of the workings in relation to the proposed development
- The thickness and nature of overlying rock strata
- The thickness and nature of overlying superficial deposits
- The condition of the working (void, collapsed, partially collapsed)
- The influence of geological faults and igneous intrusions
- Information obtained from boreholes

8.3 Unrecorded Mine Workings

Early mining was somewhat secretive due to lack of legislation regarding the keeping of plan records and rivalry between mining companies. Early mining was also generally at shallow depth in the best and thickest seams.

Under the “Past Mining” section of the Coal Authority Report may be/is contained the sentence *“However you may wish to know that the property is in an area where coal is believed to exist at or close to the surface that may have been worked at some time in the past”*. This is a direct reference to the possible presence of unrecorded extraction, i.e., workings that may have taken place prior to the time that it became a statutory requirement to keep or lodge Abandonment Plans.

An assessment of the potential for shallow unrecorded workings to exist must take into account additional wider ranging information sources and factors, including but not limited to:

- The degree of economic importance of the relevant seams to the early mineral operators
- Local thickness and quality of the seam(s) in question
- Evidence that may be obtained from plan record information in the wider surrounding area, e.g., did the up-dip recorded workings encounter “old waste”?
- The position of known old pit shafts and adits in the locality in relation to geological structure and recorded/unrecorded mining

- Borehole data on a wider basis providing information on the thickness and quality of the seam

8.4 JWH Ross Risk Rating Table

The table that follows below presents a summarised risk assessment of past mining activity (including coal mining) taking into account the information set out in the previous sections of this Report.

Column A represents the likelihood of an abandoned mine working being present (within the uppermost sequence of strata) under or within lateral influencing distance of the site. The 0 – 5 rating below is based on the following:-

0 – Underlying strata sequence known to be devoid of workable seams

1 – no workable seams recorded or suspected

2 – workable seam present, but no workings recorded. Unrecorded extraction unlikely

3 – workable seam present - condition unknown

4 – workable seam present and unrecorded workings suspected

5 – workings recorded or unrecorded workings established

Column B represents the estimated depth range. The 0 – 5 rating is based on the following:-

0 – seam/workings outwith critical depth

1 – seam/workings at or just within critical depth

2 – seam/workings with relatively high ratio of overlying rock strata to extraction height

3 – seam/workings with relatively low ratio of overlying rock strata to extraction height

4 – seam/workings close to outcrop

5 – seam/workings at outcrop

N.B. Critical depth is normally taken to equate to overlying rock strata being 10 times the extraction height, however, this can vary considerably due to the influence of other factors, e.g., the method of extraction.

Column C represents the overall Risk Rating (C = A x B). The 0 – 25 rating is a simplified classification system which may allow the site to be “cleared” with regard to the development or may identify aspects that should be considered in more detail or investigated further. The 0 – 25 rating provides the following general risk category:-

0	Negligible
1 – 5	Very low
6 – 10	Low
11 – 15	Moderate
16 – 20	High
21 – 25	Very High

The implications of the above categories in relation to the current proposals/situation are expanded in the Summary/Conclusions Section at the end of this Report.

Table 1 - Past Mining Risk Assessment

Slamannan Road, Limerigg	Column A Likelihood of workings.	Column B Estimated depth range	Column C (A x B) Overall Risk Rating
Assessed Category of Virtuewell Coal	5	4 - 5	**20 - 25**
Assessed Category of Ladygrange Coal	5	2 - 3	**10 - 15**

9.0 Future Mining

It is our understanding that there is no underground mining presently taking place under or in proximity to the site. On the basis of current economics, available technology and planning regulations, we consider that the possibility of underground mining can be ruled out in the foreseeable future.

10.0 Old Pit Shafts/Adits

We have located no plan information to indicate the presence of any old pit shafts or mine entrances either within the site boundaries or in such close proximity as to have an influence on surface stability. Similarly, The Coal Authority comments that there are no known coal mine entries within, or within 20 metres of the boundary of the property.

11.0 Mine Gas Emissions

The Coal Authority have confirmed that they have no record of a mine gas emission requiring action by the Coal Authority within the boundary of the property.

12.0 Conclusions/Recommendations

Our overall past mining risk assessment places the site of the Subjects in the category of High to Very High in relation to the Virtuewell Coal and Low to Moderate in relation to the Ladygrange Coal. In relation to the current proposal this may be reasonably interpreted as follows.

With respect to the shallow mine workings beneath the site, we should advise that the upward transmission, nature and extent of subsidence movement is directly related, amongst other factors, to the extraction height, inclination of the strata, method of mining, percentage extraction, degree of natural consolidation of the wastes and the thickness, nature and bulking factor of the overlying deposits.

Taking into account the foregoing factors, we are of the opinion that where recorded workings in the Virtuewell Coal underlie site of the Subjects, they will be at such shallow depths that they are likely to pose significant risk to the surface stability of the site and any structural development thereon.

Furthermore, we are apprehensive that there may be an insufficient thickness of rock strata overlying the workings in the Ladygrange Coal to preclude the risk of any collapse therein from propagating to the surface, particularly where the workings underlie those already established to exist in the overlying Virtuewell Coal. Given the anticipated depths to this seam, however, we would consider that the situation is marginal and that further investigation is required so clarify the situation.

Accordingly, we would recommend that intrusive investigation in the form of a series of rotary boreholes should be undertaken in order to establish the following:

- The depth to rockhead beneath the site;
- the depth to and nature of workings in the Virtuewell Coal;
- the separation between the Virtuewell Coal and the underlying Ladygrange Coal;
- the thickness of rock strata overlying the Ladygrange Coal;
- the condition of recorded workings in the Ladygrange Coal and;
- the extent and condition of unrecorded workings in the Ladygrange Coal.

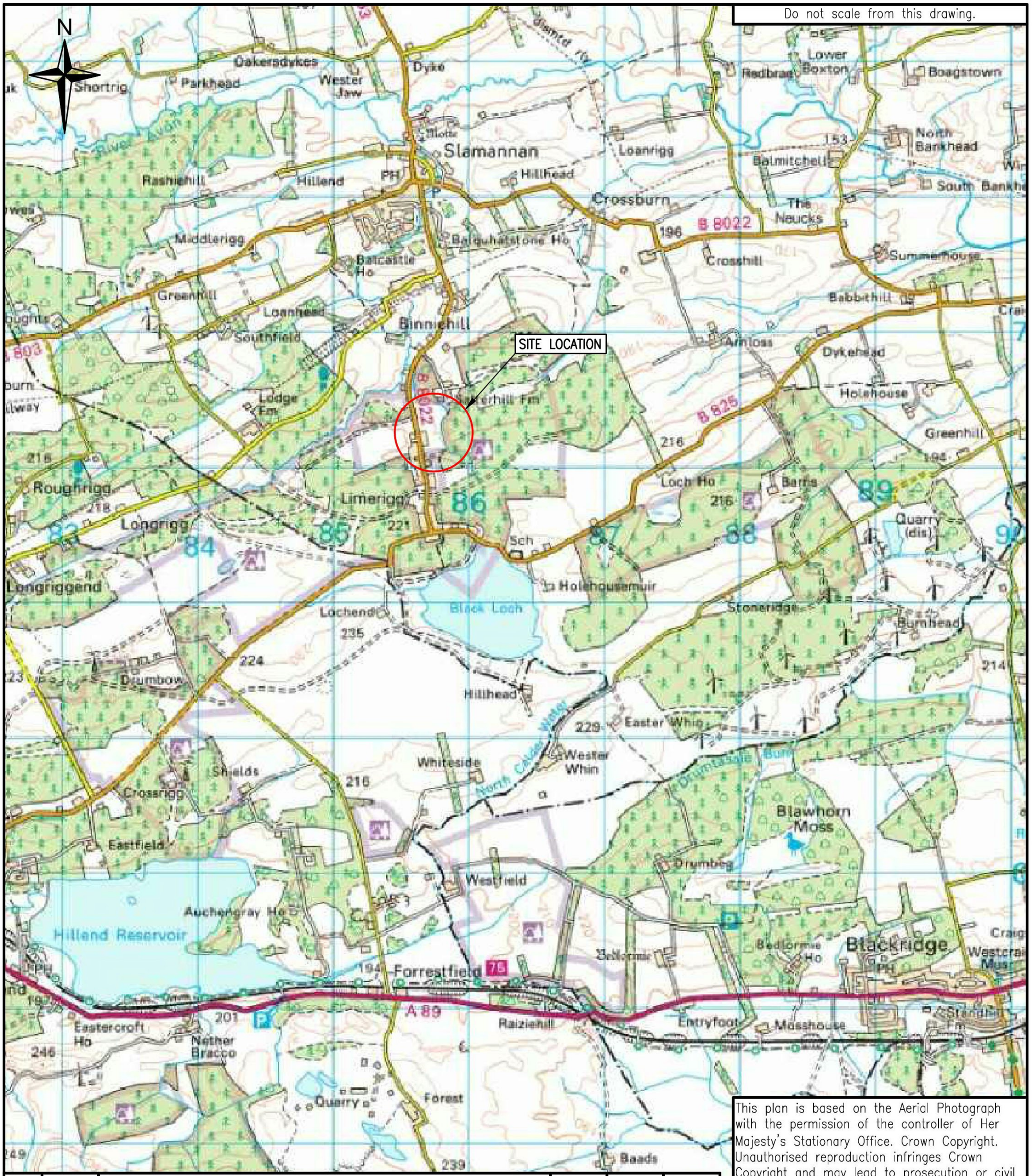
Following the intrusive investigation works it is likely that consolidation of the mine workings will be required, in the form of drilling and grouting beneath the western part of the site and possibly beneath the entire site, in order to mitigate the risk of belated mineral subsidence from affecting the integrity of any proposed development.

Appendix 1

Drawing No. 126811/9001 – Site Location Plan

Drawing No. 126811/9002 – Composite Site Plan

Do not scale from this drawing.



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Rev.	Date	Description	Drawn	Checked	Approved

Client:
ROSS WOODS ARCHITECTS

Project Title:
SLAMANNAN ROAD, LIMERIGG

Drawing Title:
SITE LOCATION PLAN

JWH ROSS
225 Bath Street,
GLASGOW, G2 4GZ
Tel: 0141 285 8700 Fax: 0844 381 4412

Scale at A4:	Status:		
NTS	For Report		
Drawn:	Checked:	Approved:	
CMCC	ST	DR	
Date:	Date:	Date:	
05/06/18	05/06/18	05/06/18	
Drawing No.:			Revision:
126811/9001			–

Do not scale from this drawing.

N

Farm

"WASTE"

671500

177.9m

184.7m

"WASTE"

Sinks

Strata Dip

"WANT"

CONJECTURAL OUTCROP OF VIRTUEWELL COAL

671400

671300

Track

Cameron Terrace

"WASTE"

"WANT"

198.3m

Shieldaig

1 to 4

8

5

THOMSON PLACE

Knockespie

Hall

Pineview

Schiehallion

SLAMANNAN ROAD

Ruin

Pond

LEGEND:

- SITE BOUNDARY
- RECORDED UNDERGROUND ROADWAY DRIVEN THROUGH OLD WORKINGS
- RECORDED EXTENT OF WORKINGS IN LADYGRANGE COAL
- RECORDED EXTENT OF WORKINGS IN VIRTUEWELL COAL

NOTES:

1. CONJECTURAL OUTCROP OF VIRTUEWELL COAL PLOTTED FROM COUNTY SERIES GEOLOGICAL MAP SHEET LK IV SW

Client:

ROSS WOODS ARCHITECTS

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Rev.	Date	Description	Drawn	Checked	Approved

Project Title:

SLAMANNAN ROAD, LIMERIGG

Drawing Title:

COMPOSITE SITE PLAN

JWH ROSS

225 Bath Street,
GLASGOW, G2 4GZ
Tel: 0141 285 8700 Fax: 0844 381 4412

Scale at A3:	Status:	
1:1250	For Report	
Drawn:	Checked:	Approved:
CMCC	ST	DR
Date:	Date:	Date:
05/06/18	05/06/18	05/06/18

Drawing No.: 126811/9002

Revision: –

Appendix 2

Coal Authority Report, dated 4th June 2018 – Ref 51001854734001

The Coal Authority

Resolving the **impacts** of mining

CON29M Non-Residential Mining Report

2 SLAMANNAN ROAD
LIMERIGG
FALKIRK
FK1 3BW

Date of enquiry:	04 June 2018
Date enquiry received:	04 June 2018
Issue date:	04 June 2018
Our reference:	51001854734001
Your reference:	126811-Slamannan Rd, Limerigg







CON29M Non-Residential Mining Report

This report is based on, and limited to, the records held by the Coal Authority, at the time we answer the search.

Client name

FAIRHURST

Enquiry address

2 SLAMANNAN ROAD, LIMERIGG, FALKIRK, FK1 3BW



Approximate position of property

Map data

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Summary

Has the search report highlighted evidence or potential of		
1	Past underground coal mining	Yes
2	Present underground coal mining	No
3	Future underground coal mining	Yes
4	Mine entries	Yes
5	Coal mining geology	No
6	Past opencast coal mining	No
7	Present opencast coal mining	No
8	Future opencast coal mining	No
9	Coal mining subsidence	No
10	Mine gas	No
11	Hazards related to coal mining	No
12	Withdrawal of support	No
13	Working facilities order	No
14	Payments to owners of former copyhold land	No

For detailed findings, please go to page 4.

Detailed findings

1. Past underground coal mining

The property is in a surface area that could be affected by underground mining in 4 seams of coal at shallow to 90m depth, and last worked in 1904.

2. Present underground coal mining

The property is not within a surface area that could be affected by present underground mining.

3. Future underground coal mining

The property is not in an area where the Coal Authority has plans to grant a licence to remove coal using underground methods.

The property is not in an area where a licence has been granted to remove or otherwise work coal using underground methods.

The property is not in an area likely to be affected from any planned future underground coal mining.

However, reserves of coal exist in the local area which could be worked at some time in the future.

No notices have been given, under section 46 of the Coal Mining Subsidence Act 1991, stating that the land is at risk of subsidence.

4. Mine entries

There are no known coal mine entries within, or within 20 metres of, the boundary of the property.

There may however be mine entries/additional mine entries in the local area which the Coal Authority has no knowledge of.

5. Coal mining geology

The Coal Authority is not aware of any damage due to geological faults or other lines of weakness that have been affected by coal mining.

6. Past opencast coal mining

The property is not within the boundary of an opencast site from which coal has been removed by opencast methods.

7. Present opencast coal mining

The property does not lie within 200 metres of the boundary of an opencast site from which coal is being removed by opencast methods.

8. Future opencast coal mining

There are no licence requests outstanding to remove coal by opencast methods within 800 metres of the boundary.

The property is not within 800 metres of the boundary of an opencast site for which a licence to remove coal by opencast methods has been granted.

9. Coal mining subsidence

The Coal Authority has not received a damage notice or claim for the subject property, or any property within 50 metres of the enquiry boundary, since 31st October 1994.

There is no current Stop Notice delaying the start of remedial works or repairs to the property.

The Coal Authority is not aware of any request having been made to carry out preventive works before coal is worked under section 33 of the Coal Mining Subsidence Act 1991.

10. Mine gas

The Coal Authority has no record of a mine gas emission requiring action.

11. Hazards related to coal mining

The property has not been subject to remedial works, by or on behalf of the Authority, under its Emergency Surface Hazard Call Out procedures.

12. Withdrawal of support

The property is not in an area where a notice to withdraw support has been given.

The property is not in an area where a notice has been given under section 41 of the Coal Industry Act 1994, cancelling the entitlement to withdraw support.

13. Working facilities order

The property is not in an area where an order has been made, under the provisions of the Mines (Working Facilities and Support) Acts 1923 and 1966 or any statutory modification or amendment thereof.

14. Payments to owners of former copyhold land

The property is not in an area where a relevant notice has been published under the Coal Industry Act 1975/Coal Industry Act 1994.

Comments on the Coal Authority information

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In view of the mining circumstances a prudent developer would seek appropriate technical advice before any works are undertaken.

Therefore if development proposals are being considered, technical advice relating to both the investigation of coal and former coal mines and their treatment should be obtained before beginning work on site. All proposals should apply good engineering practice developed for mining areas. No development should be undertaken that intersects, disturbs or interferes with any coal or mines of coal without the permission of the Coal Authority. Developers should be aware that the investigation of coal seams/former mines of coal may have the potential to generate and/or displace underground gases and these risks both under and adjacent to the development should be fully considered in developing any proposals. The need for effective measures to prevent gases entering into public properties either during investigation or after development also needs to be assessed and properly addressed. This is necessary due to the public safety implications of any development in these circumstances.

Additional remarks

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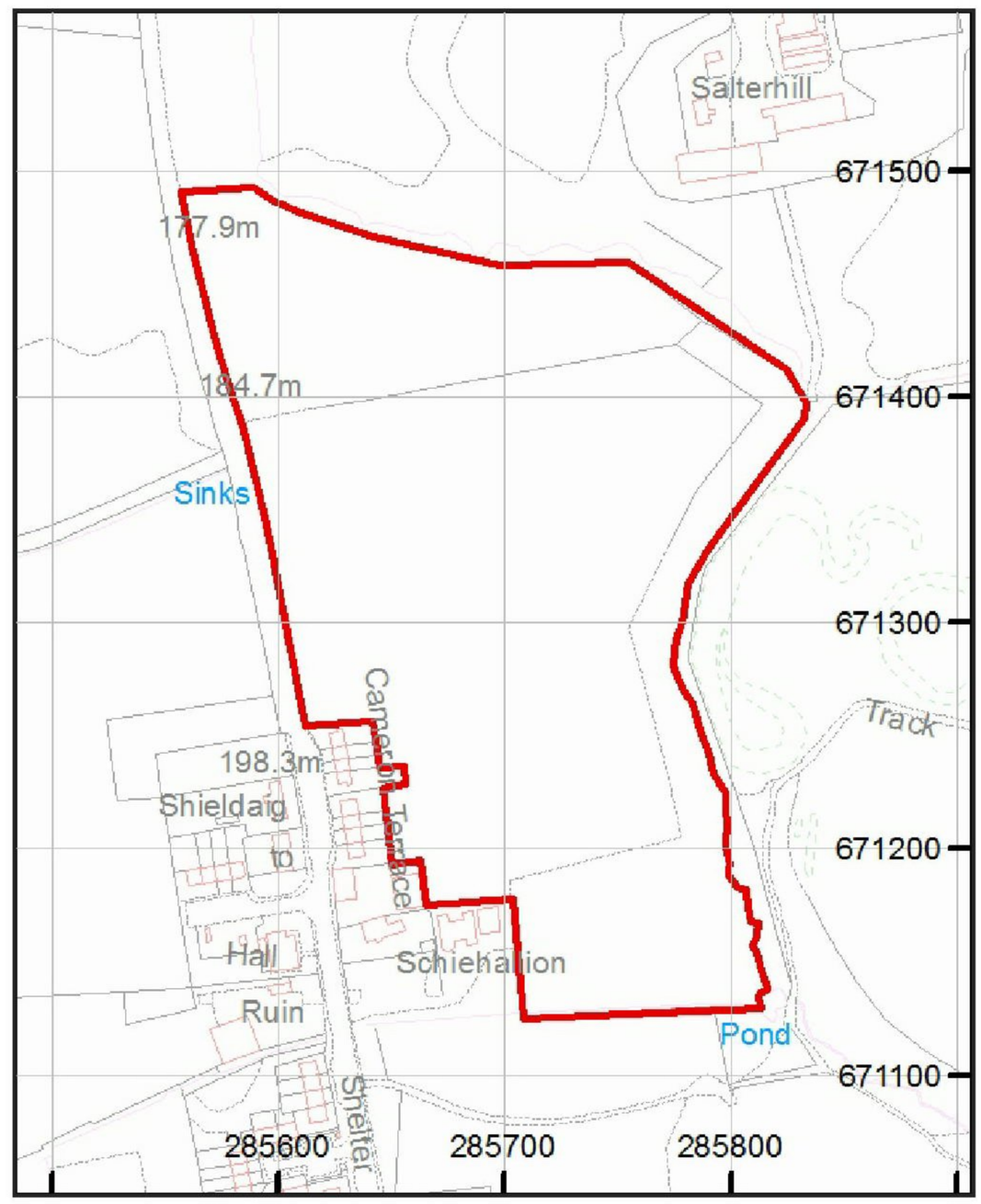
Alternative formats

If you would like this report in an alternative format, please contact our communications team.

Enquiry boundary

Key

Approximate position of enquiry boundary shown



Map data

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Our Ref: DM/SP/126811

12th October 2018

Falkirk Council
Municipal Buildings
West Bridge Street
Falkirk
FK1 5RS

FAO Julie Seidel

Dear Sirs,

PROPOSED RESIDENTIAL DEVELOPMENT – SLAMANNAN ROAD, LIMERIGG
PEAT MANAGEMENT PLAN

I refer to our recent email correspondence dated 27th September 2018, in respect of a pending planning application relative to the above development and the requirement to provide a Peat Management Plan in connection therewith. I note at this time that the requirement to provide said plan extends from a previous consultation with SEPA in connection with a planning application within the site, now withdrawn.

We are aware that, to date, a Geo-Environmental desk study relative to the proposed development has not yet been carried out, nor has a detailed site investigation been undertaken. As such, the presence or otherwise of peat within the development boundary is currently unknown.

A cursory search for relevant geological and drift information in this regard, suggests that the site may be free from peat altogether, with local accumulations noted to the east of the site boundary. Furthermore, a small number of historic boreholes sunk within the southern section of the site, found superficial deposits to consist of predominantly glacial till with no peat recorded. This would be consistent with the conditions inferred on the relevant geological map. We do note however, that the boreholes were not sunk for the purposes of investigating the condition of the superficial deposits at this location and any reference to their composition is based on observations made by the driller at the time.

In view of the foregoing, we are unable at present to provide a Peat Management Plan relative to the site as the extent and nature of ay peat accumulations therein are yet to be determined. We recognise that in the normal course of events, a geo-environmental desk study and subsequent intrusive site investigation will ultimately be undertaken to inform the development layout. At such time, the site conditions with respect to peat will be appropriately investigated, and at which point, a Peat Management Plan relative to the final development layout can be developed.

Taking account of the above, we would recommend that the provision of a Peat Management Plan be deferred at this stage, until such time as the detailed site investigation within the site has been completed and the presence or otherwise of peat has been confirmed.

We trust the foregoing is sufficient for your present purpose, but if further discussion or clarification is required, please do not hesitate to contact us. In the meantime, we await your further instructions.

Yours sincerely

For and on behalf of JWH Ross/Fairhurst

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Proposed Residential Development
Limerigg

Transport Statement

November 2018









FAIRHURST

CONTROL SHEET

CLIENT: **Robert MacDonald Clarkston**

PROJECT TITLE: **Proposed Residential Development, Limerigg**

REPORT TITLE: **Transport Statement**

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This report has been prepared in accordance with procedure OP/P02 of the Fairhurst Quality and Environmental Management System.

This document has been prepared in accordance with the instructions of the client, Robert MacDonald Clarkston, for the client's sole and specific use. Any other persons who use any information contained herein do so at their own risk.

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1 Introduction

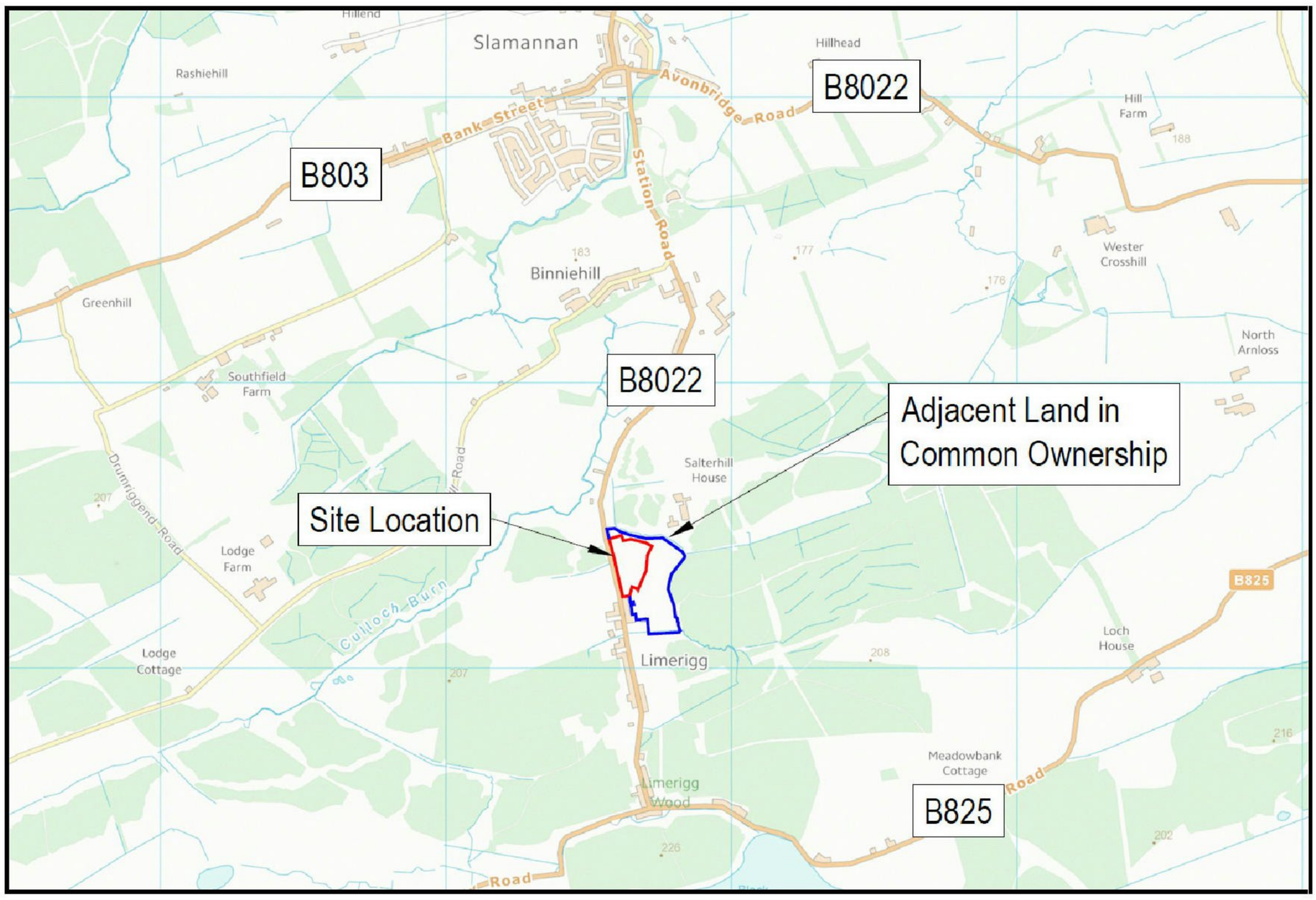
1.1 General

1.1.1 This Transport Statement (TS) has been prepared by Fairhurst on behalf of Robert MacDonald Clarkston in support of a planning application for a proposed residential development with convenience store in Limerigg.

1.2 Site Location

1.2.1 The site is located at the north end of Limerigg, on the east side of the B8082. The location of the proposed development is illustrated in Figure 1.1.

Figure 1.1 - Site Location Plan



1.3 Development Proposals

1.3.1 The proposed development will comprise 90 residential units and a 155m^2 village shop. The residential units will be provided as a mixture of semi-detached and terraced houses.

1.3.2 Access to the development is to be provided by a new simple priority junction access onto the B802 Slamannan Road.

1.3.3 The development layout is yet to be finalised, although a land ownership boundary plan highlighting the location of the proposed junction has been prepared by Ross Woods Architects. The plan is presented in Appendix A.

1.4 Scope of Assessment

1.4.1 The development proposals are below the threshold for the provision of a Transport Assessment for residential development of 100 units identified in Transport Assessment guidance. The location of the proposed development is in an area where general traffic levels are very modest, with free-flow conditions being the norm.

1.4.2 No requirement for detailed traffic assessment is therefore required.

1.5 Report Structure

1.5.1 The report will be structured as follows:

- Introduction
- Policy Review
- Existing Site Accessibility Review, including Safe Routes to School
- Development Access Proposals
- Travel Plan Framework
- Travel Demand
- Summary and Conclusions

2 Policy Review

2.1 Introduction

2.1.1 This section will provide a brief overview of National, Regional and Local Policy documents applicable to the proposal.

2.2 National Policy

2.2.1 The National Policy Context is defined by the following documents:

- Scottish Planning Policy (2014)
- Scottish Planning Advice Note 75 - Planning for Transport (2005)
- Transport Assessment Guidance (2012)
- Designing Streets (2010)
- National Roads Development Guide (2014)

2.2.2 **Scottish Planning Policy 2014** (SPP) was issued in June 2014 as a replacement for the first SPP document issued in 2010. SPP consolidated all of the earlier individual planning policies into one document.



2.2.3 SPP identifies that "*The planning system should:*

- *"promote business and industrial development that increases economic activity while safeguarding and enhancing the natural and built environments as national assets"*
- *"allocate sites that meet the diverse needs of the different sectors and sizes of business which are important to the plan area in a way which is flexible enough to accommodate changing circumstances and allow the realisation of new opportunities"*
- *"give due weight to net economic benefit of proposed development"*

2.2.4 The objective to prioritise the opportunities for personal travel by mode in the order – walking, cycling, public transport, car and other motorised vehicles is summarised within the Transport Section of SPP which states:

"Buildings and facilities should be accessible on foot and by cycle. Improvements to active transport networks, such as paths and cycle routes, in urban and rural areas will support more sustainable travel choices".

"New development areas should be served by public transport accessing a range of potential destinations, or proposals should be put in place to provide public transport".

"Reducing emissions from transport sources as a contribution to achieving Scottish Government greenhouse gas emission targets requires a shift to more sustainable modes of transport. For people this means a shift from car-based travel to walking, cycling and public transport".

"All significant travel generating developments should be encouraged to develop travel plans - as a package of measures aimed at promoting more sustainable travel choices and reducing reliance on car"

2.2.5 **Scottish Planning Advice Note 75 – Planning for Transport** (PAN 75) identifies the need for the integration of land use planning with transport, taking into account policies on economic growth, education, health and the objective of a more inclusive society.



2.2.6 PAN 75 identifies in Annex B the undernoted thresholds:

- *"For accessibility of public transport the recommended guidelines are less than 400m to bus services and 800m to rail services"*
- *"A maximum threshold of 1600m for walking is broadly in line with observed travel behaviour".*

2.2.7 The **Transport Assessment Guidance** document was issued by the Scottish Government in 2012 replacing 'Transport Assessment and Implementation: A Guide'. The main objective of the document is to assist in the preparation of Transport Assessments for development proposals in Scotland. The guidance sets out requirements according to the scale of development being proposed; ranging from a local development which requires a Transport Statement providing an explanation of transport issues through to a major development where detailed technical analysis will be required in a Transport Assessment accompanied by a supporting Travel Plan.



2.2.8 **Designing Streets** (DS) was published by the Scottish Government in 2010 as the first street design focused policy statement in Scotland, marking a change in emphasis away from vehicle-dominated streets towards place-making. The two key policies outlined in DS 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"*

2.2.9 The first of these policies is the most significant, with DS emphasising the importance of creating a "*sense of place"*, and stating that developments should aim to achieve "*the right balance between place and movement".*

2.2.10 The **National Roads Development Guide** (NRDG) has been produced by the Society for Chief Officers of Transport in Scotland (SCOTS) and is designed to support Designing Streets (DS). NRDG expands on the principles of DS and provides clarification on the circumstances in which DS can be used.

2.2.11 NRDG identifies under 'purpose' a number of matters which include:

- *"Provide a consistent, accessible and relevant source of information that links related detailed and complex infrastructure requirements in one place."*
- *"Advocate a re-designation of road hierarchy to user hierarchy."*
- *"Accommodate Local Authority Variances, such as parking standards or road details. These local departures are intended to be easily identified and accessed and as such form a section appended to this baseline document."*
- *"Encourage high quality environments that place a focus on people and enable developments to be designed on an individual methodology rather than following standard and rigid specifications where possible."*
- *"Support a more holistic, integrated approach to the planning and approvals process with early discussions between all parties actively encouraged."*

2.3 Regional Policy

- The regional policy context for Limerigg is largely defined by the SEStrans Regional Transport Strategy Refresh (2015-2025)

2.3.1 The **Regional Transport Strategy Refresh** (RTSR) for the South East of Scotland Transport Partnership (SEStran) 2008-2023.

2.3.2 This document sets out SEStran's vision for transport for the eight council areas within the south east of Scotland as follows:

"South East Scotland is a dynamic and growing area which aspires to become one of northern Europe's leading economic regions. Essential to this is the development of a transport system which enables businesses to function effectively, allows all groups in society to share in the region's success through high quality access to services and opportunities, respects the environment, and contributes to better health."

2.3.3 The document goes on to outline four main objectives as follows:

- *Economy – to ensure transport facilities encourage economic growth, regional prosperity and vitality in a sustainable manner;*
- *Accessibility – to improve accessibility for those with limited transport choice or no access to a car, particularly those who live in rural areas;*
- *Environment – to ensure that development is achieved in an environmentally sustainable manner; and*
- *Safety and Health – to promote a healthier and more active SEStran area population.*

2.4 Local Policy

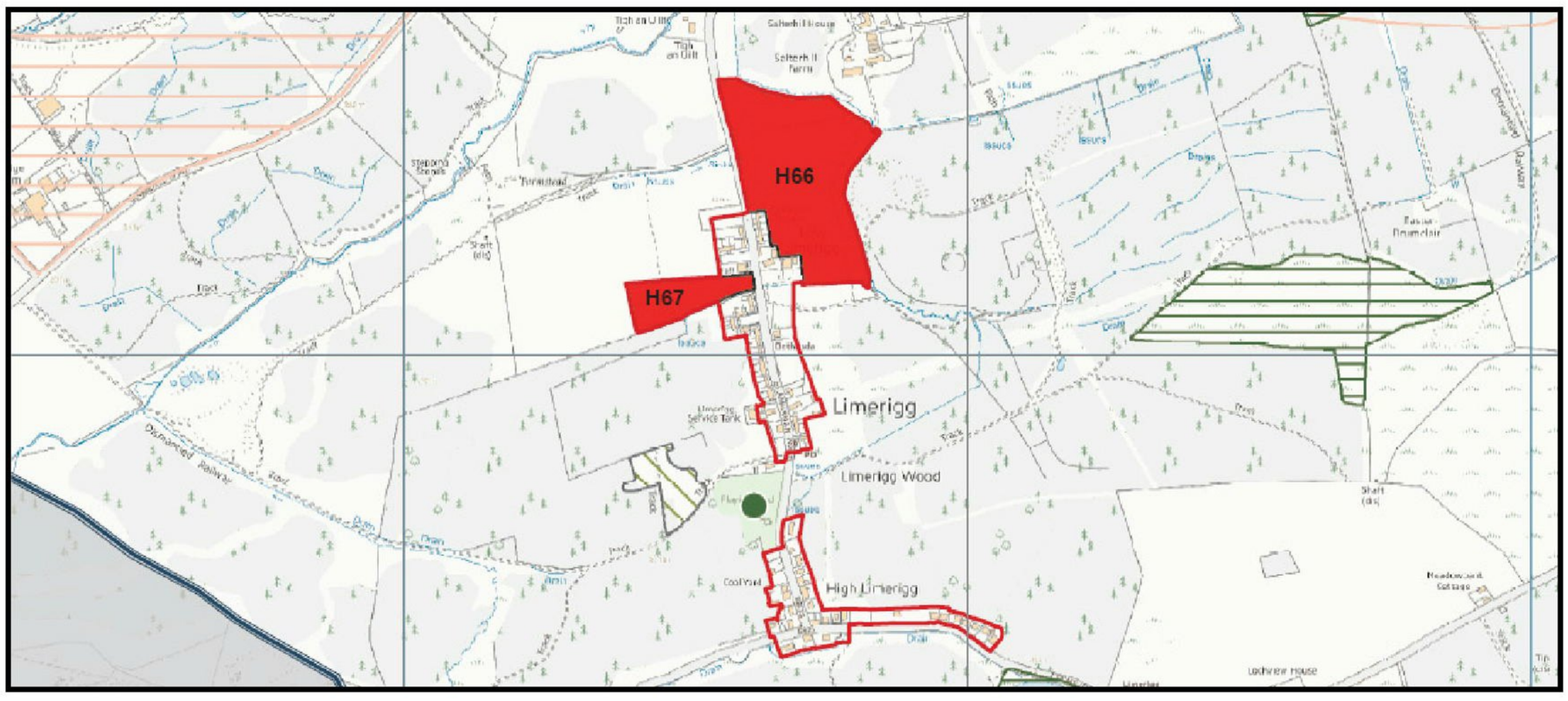
2.4.1 The local policy context for the proposed development is defined by the following documents:

- Falkirk Council Local Development Plan (2015)
- Falkirk Council Local Transport Strategy (2014)

2.4.2 The **Falkirk Council Local Development Plan** (LDP) was adopted in July 2015 "*to guide the future use and development of land within the Falkirk Council area over the next 20 years*". The LDP sets out a range of policies and proposals to identify where development should or should not occur. The LDP replaced the previous Structure Plan and Local Plan to provide a strategy for the period from 2014 to 2034, and is currently under review.

2.4.3 The development site falls within the area identified as H66 in the LDP, identified as an Existing Supply Site for up to 65 residential units, covering an area of 6.3Ha. The location of H66 is highlighted in the LDP Map Extract in Figure 2.1.

Figure 2.1 – Local Development Plan Map Extract



2.4.4 The following comments are included within the LDP:

- *Greenfield extension to village*
- *Careful siting, design, structure planting and landscaping required to mitigate landscape impact, including 6m buffer strip along boundary watercourse*
- *Flood risk assessment required*
- *Peat management plan required*
- *Developer contributions towards enhanced path network required*
- *Developer contributions towards education required*
- *25% contribution required for affordable housing*

2.4.5 The relevant transport-specific policies in the LDP include INF07 – Walking and Cycling, INF08 – Bus Travel and New Development, INF10 – Transport Assessments, and INF11 – Parking. These policies are summarised as follows:

- *INF07 – Walking and Cycling*
  - *The Council will safeguard and promote the core path network, and will seek, where appropriate, developer contributions towards the network*
  - *New development infrastructure should support active travel by walking and cycling in line with agreed Travel Plan objectives*
  - *New development should provide suitable pedestrian and cycle links to existing networks and amenities*
  - *The design of new routes should promote their safe use*
  - *Pedestrian routes, where practical, should be accessible to the mobility impaired*
- *INF08 – Bus Travel and New Development*
  - *New development should provide suitable access to bus services, taking into account the 400m walking distance specified in SPP.*
  - *Bus infrastructure provision and phasing to be agreed with the council, designed to council guidelines*
  - *Bus service routes should be incorporated into new developments where appropriate*
- *INF10 – Transport Assessments*
  - *Transport Assessments (TAs) are required for developments that are likely to result in a significant increase in the number of trips on the transport network*
  - *TAs will include travel plans (TPs) and, where necessary, safety audits of proposed mitigation and air quality assessments.*

- *FC will only support development proposals where the TA and TP has been appropriately scoped, the network impacts defined and mitigation identified.*

- *INF11 – Parking*
  - *The maximum parking standards set out in SPP will be applied to new development, where relevant, in tandem with the Council's minimum standards. Developer contributions may be required where minimum standards cannot be met.*

2.4.6 The **Falkirk Council Local Transport Strategy** (LTS) was adopted in 2014 and sets out the council's vision *"to provide a transport network… which allows people a reasonable choice of travel options as part of a safe, reliable, convenient, accessible and sustainable transport system."*

2.4.7 To achieve this vision FC have set out a number of objectives, summarised below:

- *1 - To support the growth of the local economy in a sustainable way*
- *2 - To contribute to community regeneration through promoting social inclusion*
- *3 - To protect the environment by minimising the impact that transport can have on it and to improve health by promoting more active travel*
- *4 - To improve safety for all those using the transport network*
- *5 - To improve integration between different forms of transport*

2.5 Summary

2.5.1 The development proposals are broadly in accordance with established policy documentation at local, regional and national level.

2.5.2 The development site is allocated within the Falkirk Council Local Development Plan as a potential development site for housing, noted as a greenfield extension to the existing village. 25% of the housing provided at the site will be allocated for affordable housing, in line with the LDP.

2.5.3 The site will benefit from its close proximity to established walking, cycling and public transport links, as detailed in Chapter 3 of this report.

3 Existing Site Accessibility Review

3.1 Introduction

3.1.1 This Chapter of the report considers the existing accessibility of the site by each travel mode in turn, which will inform the development of the Residential Travel Pack Framework outlined in Chapter 5 of this report.

3.2 Pedestrian Network

3.2.1 As the site will occupy an area of undeveloped land immediately north of Limerigg the pedestrian facilities are currently limited. The development proposals, described in Chapter 4, will include the provision of a new footway on the site frontage and a number of links between the site and the external network.

3.2.2 A core path is accessed directly opposite the site on the west side of the B8022 Station Road that runs west and links with other recreational routes.

Photograph 3.1 – Core Path opposite Site



3.2.3 The core path, number 023/977, is unsurfaced and opens directly onto the B8022 carriageway. The core path is signed for Limerigg Forest Paths, and the route surface is described as ‘farm track’ in the FC Core Path Plan, with a gentle gradient and covering a length of 445m.

Photograph 3.2 – Core Path Signage



3.2.4 The nearest footway to the site currently terminates at the north end of Cameron Terrace immediately south of the southern boundary of the development. Cameron Terrace is a row of 8 properties that lie on the east side of the B8022 Slamannan Road that is provided with a layby for residents parking.

3.2.5 The footway is wide and lit, with a good quality surface. It runs continuously south to the junction formed by the B8022 and the B825. There are a number of dropped kerbs to serve numerous driveway accesses and a single break in the footway for a minor field access that is provided with dropped kerbs to facilitate the crossing.

Photograph 3.3 – Footway on West Side of B8022



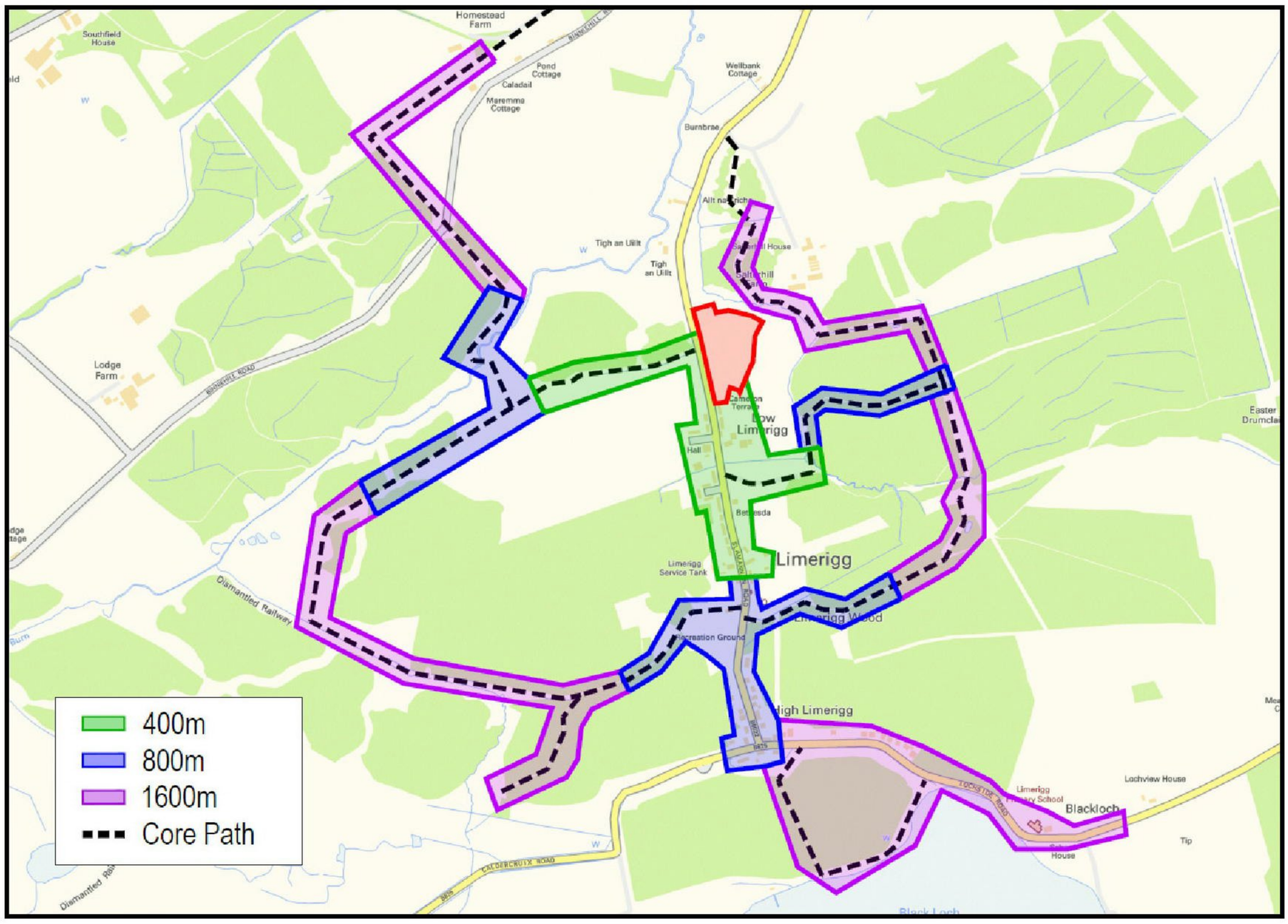
3.2.6 A footway of a similar quality, albeit narrower, begins on the west side of the B8022 approximately 15m south of the eastern footway. It runs south in a similar manner to the eastern footway, crossed by a number of driveway and minor accesses with dropped kerbs.

3.2.7 The western footway terminates at the B825 junction bellmouth, while the eastern footway forms a continuous link eastwards from the junction along to Limerigg Primary School.

3.2.8 A footway is provided for a brief section on the development frontage on the south side of the B825 directly opposite the B8022 junction, and a core path that runs south and alongside Black Loch is also accessible here.

3.2.9 Figure illustrates the 400m, 800m and 1,600m pedestrian walking isochrones for the development as set out in *PAN 75*. It also highlights the location of core paths and other pedestrian facilities in the area. The Figure demonstrates that the majority of Limerigg lies within 800m of the proposed development.

Figure 3.1 - Pedestrian Walking Isochrones



3.3 Public Transport Routes & Facilities

3.3.1 The nearest bus stop to the development is the southbound stop located on Cameron Terrace, approximately 40m south of the southern edge of the site. A

northbound stop is located a further 100m to the south. These stops are served by the First Midland Bluebird service 17, which operates between Limerigg and Falkirk town centre, running via Slamannan and Lionthorn. One journey is extended to Graeme High School in the morning, and starts from Graeme High School in the afternoon on schooldays only.

Photograph 3.4 – First Midland Bluebird service 17 at Limerigg turning circle



3.3.2 Service 17 runs at a typical weekday and Saturday frequency of one every hour, reducing to one every two hours on Sundays.

Photograph 3.5 – Bus Stop on B8022 at Cameron Terrace



3.3.3 A summary of bus services operating in Limerigg can be found in Table 3.1, while the location of the stops is illustrated in Figure 3.3.

Figure 3.3 – Bus Stop Locations

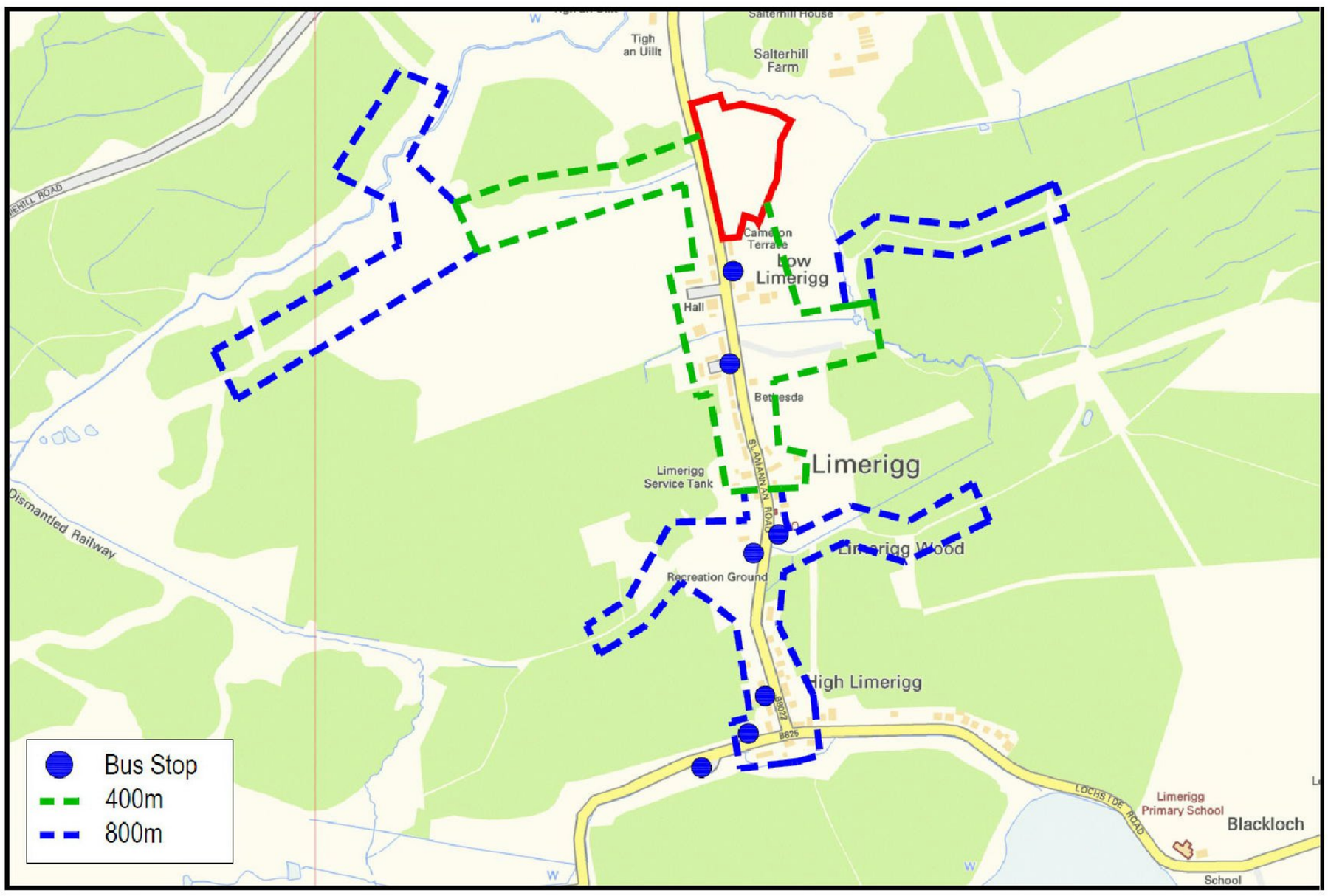


Table 3.1 – Summary of Services in Limerigg

Service No.	Route	General Frequencies		
		Mon – Fri	Sat	Sun
Operator – First Midland Bluebird				
17	Limerigg → Slamannan → Lionthorn → Falkirk → *Graeme High School*	60 mins	60 mins	120 mins

3.4 Existing Road Network

3.4.1 The development site is located on the east side of the B8022 and does not currently feature an access junction. The development proposals include the provision of a new priority junction, further details of which are set out in Chapter 4 of this report.

3.4.2 The B8022 is a local distributor class road that runs north-south through Limerigg, linking the settlement with Slammanan to the north. It is subject to a 40mph speed limit between the two villages, and a 30mph limit within them, marked by gateway speed limit signage.

3.4.3 It was noted during the site visit that the speed limit signage at the entry to Limerigg was partially obscured by overgrown vegetation, as shown in Photograph 3.6. It is recommended that the roadside vegetation is suitably maintained

Photograph 3.6 – Speed Limit Gateway Signage on B8022



3.4.4 The B8022 has an undulating surface running northwards from the edge of Limerigg, generally on a downward gradient. The carriageway has a good quality surface and is approximately 6m wide. The verges on both sides are overgrown with vegetation, and the east side (i.e. the site frontage) is lined with telegraph poles.

Photograph 3.7 – B8022 Site Frontage (Looking North from Limerigg)



3.4.5 The B8022 runs south and connects to the B825 as the minor approach to a priority junction. The B825 runs broadly northeast to southwest, linking Limerigg with Avonbridge to the northeast and Caldercruix to the southwest. The southwest connection also provides the main route to destinations to the west such as Airdrie and Glasgow.

3.4.6 To the east the B825 is subject to a 30mph speed limit up to Limerigg Primary School, beyond which it is subject to the national speed limit. The section of the B825

in the vicinity of the school is also subject to a part time 20mph speed limit, as shown in Photograph 3.8.

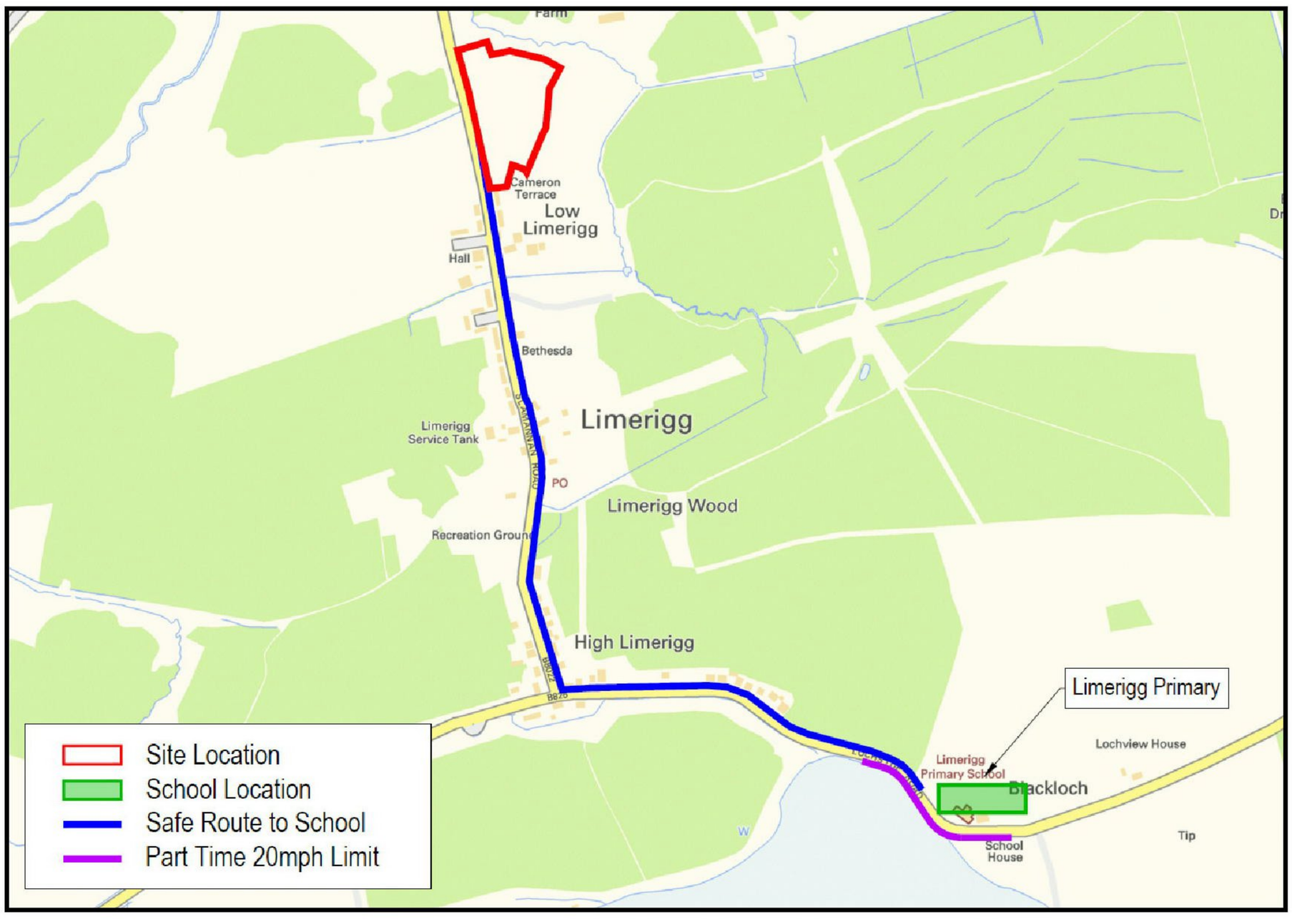
Photograph 3.8 – Part Time 20mph Signage



3.5 Safe Routes to School

3.5.1 Figure 3.4 illustrates the most direct route to the nearest school to the development, Limerigg Primary School. The route is relatively straightforward and simply follows the footways on the B8022 and B825. Road crossings are limited to driveways and a minor field access, which features a dropped kerb crossing.

Figure 3.4 – Safe Routes to School



3.5.2 Figure 3.4 also highlights the length of the part time 20mph limit, which runs along the school frontage and extends west, covering a distance of approximately 250m.

3.5.3 As noted at section 3.3, a service bus is extended to and from Graeme High School for secondary school age pupils.

3.6 Summary

3.6.1 The development is located in close proximity to established links to the existing pedestrian, cycling and bus networks in the wider local area.

3.6.2 Direct links between the site and these local networks are limited and will be improved as part of the development proposals. This includes footway provision along the site frontage to link the site with the existing network within Limerigg. Further details of these improvements are set out in Chapter 4.

3.6.3 Safe Routes to School in the area have been investigated on the existing pedestrian network, which benefits from part time 20mph speed limits in the vicinity of Limerigg Primary School.

3.6.4 The site does not currently have a point of access, and the development proposals include the provision of a new priority junction access on the east side of the B8022. The access is to be improved as part of the development proposals, details of which are set out in Chapter 4.

3.6.5 The local road network provides links to the principal network via the A89 at Caldercruix and to the north at Falkirk.

4 Site Accessibility Proposals

4.1 Introduction

4.1.1 This chapter provides details of the accessibility proposals for the development, considering the pedestrian, vehicular and service arrangements, parking, accessibility improvements and internal linkages.

4.2 Vehicular Access

4.2.1 The site will be accessed via a new roundabout on the B8002 approximately 65m north of Cameron Terrace. The 30mph speed limit, which currently begins at Cameron Terrace, will be extended north to the northern edge of the development. This will be indicated by relocating the existing gateway signage to the northern boundary of the site, immediately north of Core Path 023/977

4.2.2 The development layout is yet to be confirmed, however it is anticipated that the internal road network will feature a looped section to allow refuse vehicles to navigate the site entirely in forward gear.

4.2.3 The indicative layout of the proposed site access roundabout is presented in Appendix D.

4.3 Pedestrian and Cycle Access

4.3.1 A new footway will be provided on the site frontage on the east side of the B8022, extending north to the northern edge of the site and south to link with the existing footway at Cameron Terrace. These footways will run into the development along the site access road to form continuous links between the internal footways and the external network.

4.3.2 The proposed roundabout will be provided with dropped kerb, tactile paved crossing points that will utilise the splitter island across the site access approach as a pedestrian refuge.

4.3.3 A dropped kerb crossing will also be provided to the north of the proposed roundabout to link with existing Core Path 023/977. The entrance to the Core Path will be formalised with a short footway leading into the path.

4.4 Car Parking

4.4.1 The standards for parking are based on those set out in the SCOTS National Roads Development Guide (NRDG). An extract from the NRDG is reproduced in Table 4.1. Falkirk Council has not notified any variations to Parking Standards for Residential developments.

4.4.2 Residential parking standards are based on the number of bedrooms per dwelling. The number of bedrooms per dwelling is currently unknown as the development layout is yet to be finalised. The level of car and cycle parking provision will however be provided in line with the standards outlined in Table 4.1.

Table 4.1 – NRDG Parking Requirements

Type of Development	Appropriate Provision *(spaces per 100 m² gross floor area, GFA)*	Cycle Minimum	PTW Minimum	Disabled Minimum
1 Bedroom	1 space per dwelling	1 secure covered space per dwelling. None if garage or secure area is provided within cartilage of dwelling.	N/A	N/A if parking is in cartilage of dwelling, otherwise as Visitor/ Unallocated
2-3 Bedroom	2 spaces per dwelling*			
4 Bedroom	3 spaces per dwelling			
Retirement Developments ***(eg warden assisted independent living accommodation)***	1 space per dwelling	1 space per 8 units (visitors)	1 space + 1 per 20 car spaces (for 1st 100 car spaces), then 1 space per 30 car spaces (over 100 car spaces)	N/A if parking is in cartilage of dwelling, otherwise as Visitor/ Unallocated

4.5 Service Access

4.5.1 Refuse collection within the site will be conducted on-street within the development. Refuse vehicles will be able to utilise the provided loop road and turning heads to ensure that they arrive at and depart from the site in forward gear.

5 Residential Travel Pack Framework

5.1 Introduction

5.1.1 This framework outlines the key objectives, monitoring and implementation methods that a Travel Plan may implement.

5.1.2 The travel plan is a key tool in ensuring that travel generated by the development is more sustainable (less polluting and damaging to the environment), healthier (using active transport methods such as walking or cycling, which provide children and adults with valuable exercise) and safer for all residents and visitors.

5.1.3 Travel Plans have conventionally focused on employment-only developments but similar principles are increasingly being applied to residential developments. Travel Plans for residential developments are tailored to the needs, location and scale of the development.

5.1.4 It is envisaged that the practical implementation of a Travel Plan for this development would require the preparation of a Residential Travel Pack that will provide all of the key Travel Plan features in a concise, attractive and easy to read format.

5.2 Policy Context

5.2.1 Scottish Planning Policy (SPP), at paragraph 167, encourages the preparation of Travel Plans for all significant travel generating developments. It defines a Travel Plan as:

> *"A travel plan is a package of measures aimed at promoting more sustainable travel choices and reducing reliance on the car, and should be encouraged for all significant travel generating developments."*

5.3 Travel Plan Objectives

5.3.1 A Travel Plan provides the opportunity to deliver more sustainable travel patterns to and from the development in an attempt to reduce the level of private car traffic generated by the site. The primary aim of this Travel Plan is therefore to minimise the level of single occupancy private car trips generated by the development, particularly for local and commuter journeys.

5.3.2 The main objective of this Travel Plan, presented in Pack format, will be to promote alternative travel choices to car use by offering incentives to choose more sustainable travel alternatives as well as disincentives to the use of the car. Reductions in commuting costs along with the improved health are anticipated to form additional objectives.

5.4 Residential Travel Pack Contents

5.4.1 The provision of a Travel Pack that can be distributed to residents will form a crucial role in communicating the aims and measures of the TP.

5.4.2 As a new development the Travel Pack will be coordinated by the developer, who will focus on increasing awareness of the benefits of the Travel Plan initiative.

5.4.3 The Travel Pack will typically contain a range of information relating to active and sustainable travel modes, with a view to increasing the general awareness of the availability of these travel modes. This can include, but is not limited to:

- Walking route maps
- Cycling route maps
- A walking and cycling isochrone map, similar to that in Chapter 3 of this report, highlighting the travel times to key local destinations
- Bus route maps with associated timetable information
- Details of local shops and services, along with any special offers, that would encourage people to access those facilities locally rather than travelling out of the area
- Information regarding School Travel Plans where available
- Encouraging more sustainable patterns by setting and maintaining targets
- Car sharing scheme information
- Information detailing the health benefits of active travel modes

5.5 Residential Travel Plan Implementation

5.5.1 This Framework shall form the basis of the Residential Travel Plan, which will be developed in line with local and national policies and guidance. The existing conditions at the site, outlined earlier in this report, shall inform the development of the Residential Travel Pack. Together with the accessibility improvements outlined in Chapter 4 of this report they will provide the facilities, measures and schemes to ensure that users of the development have access to safe and viable transport alternative for onward travel.

5.5.2 The successful implementation of the Travel Plan requires a full package of measures and a partnership between the developer, Falkirk Council and other relevant local stakeholders.

6 Travel Demands

6.1 Introduction

6.1.1 This chapter provides an estimate of People Trips by all modes of transport generated by the development, along with the anticipated distribution of the generated traffic and its likely impact on the road network.

6.2 People Trip Prediction - Residential

6.2.1 The TRICS database has been interrogated to identify the estimated people trip rates for the proposed development. A TRICS report for 'Residential – Houses Privately Owned' is presented in Appendix B and has been used to estimate the people trips by each mode during the weekday AM and PM peak hours. The TRICS report includes sites in 'Edge of Town Centre', 'Suburban Area' and 'Edge of Town' locations and excludes sites in Greater London.

6.2.2 Table 6.1 sets out the identified vehicle trip rates and trip generation for 90 residential units.

Table 6.1 – Estimated TRICS Vehicle Trip Generation - Residential

Time Period	Trip Rate		Trip Generation		
	Arrivals	Departures	Arrivals	Departures	Two-way
AM Peak	0.160	0.434	14	39	53
PM Peak	0.365	0.208	33	19	52

6.2.3 It is anticipated that the development will produce a maximum of 53 two-way vehicle trips, occurring in the AM peak hour, equivalent to less than one vehicle per minute.

6.2.4 The TRICS data has also provided the estimated mode share at the development based on the predicted people trips. The data for the mode share and associated trips by each mode is presented in Table 6.2.

6.2.5 The data indicates that car trips will account for 61% of trips generated by the development, with car passengers accounting for a further 22% of trips. Very few cyclist and public transport trips are predicted, with the remainder largely comprising pedestrian trips.

Table 6.2 – Estimated TRICS People Trip Generation by Mode - Residential

Mode of Travel	Average Mode Share	AM Peak		PM Peak	
		In	Out	In	Out
Pedestrian	19%	5	16	10	5
Cyclist	2%	0	2	1	1
Public Transport	2%	0	2	1	0
Car Driver	55%	14	39	33	19
Car Passenger	22%	3	19	13	8
Other	0%	0	0	0	0
Total	100%	23	78	59	33

6.2.6 To ensure a robust prediction of vehicle trips a comparison has been made with travel to work data for Slamannan from the Scotland Census 2011. This data is presented in the Table below, and the Census outputs for Slamannan are presented in Appendix C.

Table 6.3 – Estimated Census People Trip Generation by Mode - Residential

Mode of Travel	Census Mode Share	AM Peak		PM Peak	
		In	Out	In	Out
Pedestrian	14%	3	10	7	4
Cyclist	1%	0	0	0	0
Public Transport	23%	5	16	12	7
Car Driver	50%	10	35	26	15
Car Passenger	10%	2	7	5	3
Other	2%	0	1	1	1
Total	100%	20	69	53	29

6.2.7 The Census Mode Share data indicates that a lower proportion of trips (14% compared to 19%) will be made by pedestrians, and a much higher proportion will be made by public transport (23% compared to 2%).

6.3 People Trip Prediction - Retail

6.3.1 A trip generation assessment has also been undertaken for the 155m^2 retail unit, assumed to be a convenience store, using TRICS. The identified vehicle trip rates and trip generation are summarised in Table 6.4, and the TRICS outputs are provided in Appendix B.

Table 6.4 – Estimated TRICS Vehicle Trip Generation - Retail

Time Period	Trip Rate		Trip Generation	
	Arrivals	Departures	Arrivals	Departures
AM Peak	6.729	6.275	10	10
PM Peak	8.768	8.79	14	14

6.3.2 It is anticipated that the development will produce a maximum of 28 two-way vehicle trips, occurring in the PM peak hour, approximately one vehicle every two minutes. No allowance has been made for 'pass by' trips, or higher levels of walk trips due to the 'local' nature of the facility.

6.3.3 The TRICS data has also provided the estimated mode share at the development based on the predicted people trips. The data for the mode share and associated trips by each mode is presented in Table 6.5.

Table 6.5 – Estimated TRICS People Trip Generation by Mode - Retail

Mode of Travel	Average Mode Share	AM Peak		PM Peak	
		In	Out	In	Out
Pedestrian	43%	11	11	13	13
Cyclist	2%	0	0	1	1
Public Transport	3%	1	1	1	1
Car Driver	43%	10	10	14	14
Car Passenger	9%	2	2	3	3
Other	0%	0	0	0	0
Total	100%	25	23	31	32

6.3.4 The data indicates that car and pedestrian trips will account for a similar level of trips generated by the retail unit, both accounting for approximately 43% of trips. Given the nature of the site as a small convenience store for a small village this is considered a relatively conservative estimate, and that the number of trips on foot is likely to be higher due to the short distances involved.

6.3.5 As the trips generated by the retail unit are not anticipated to be 'travel to work' trips a comparison with the Census mode share has not been made.

6.4 Summary

6.4.1 The predicted level of peoples trips by all modes from the proposed development are at modest levels, which can be comfortably accommodated on the existing road network.

7 Summary and Conclusions

7.1 Summary

7.1.1 This Transport Statement (TS) has been prepared by Fairhurst on behalf of Robert MacDonald Clarkston in support of a planning application for a proposed residential development in Limerigg.

7.1.2 The proposed development is anticipated to comprise 90 residential units and a 155m^2 village shop. The residential units will be provided as a mixture of semi-detached and terraced houses.

7.1.3 Access to the development is to be provided by a new simple priority junction access onto the B802 Slamannan Road.

7.1.4 The TS provides a review of National, Regional and Local Policy context, and concludes that while the development proposals are broadly in accordance with policy.

7.1.5 The TS provides a summary of existing and proposed accessibility to the site by all modes of transport, and concludes that the site accessibility is provided to a suitable standard.

7.1.6 The TS states that the proposed level of car and cycle parking provision will be in accordance with established guidelines standards.

7.1.7 The estimated travel patterns generated by the development were identified using the TRICS database in conjunction with Scotland Census travel to work data. It is estimated that the residential development will generate approximately 53 and 52 two-way car trips in the AM and PM weekday peak hours respectively. The Census data indicates that over a third of residents (37%) will travel to work either on foot or via public transport.

7.1.8 The retail unit is anticipated to generate approximately 20 and 28 two-way car trips in the AM and PM weekday peak hours respectively. This is however anticipated to be much lower in practice, as due to the short distances between the retail unit and the rest of Limerigg the majority of trips are expected to be made on foot.

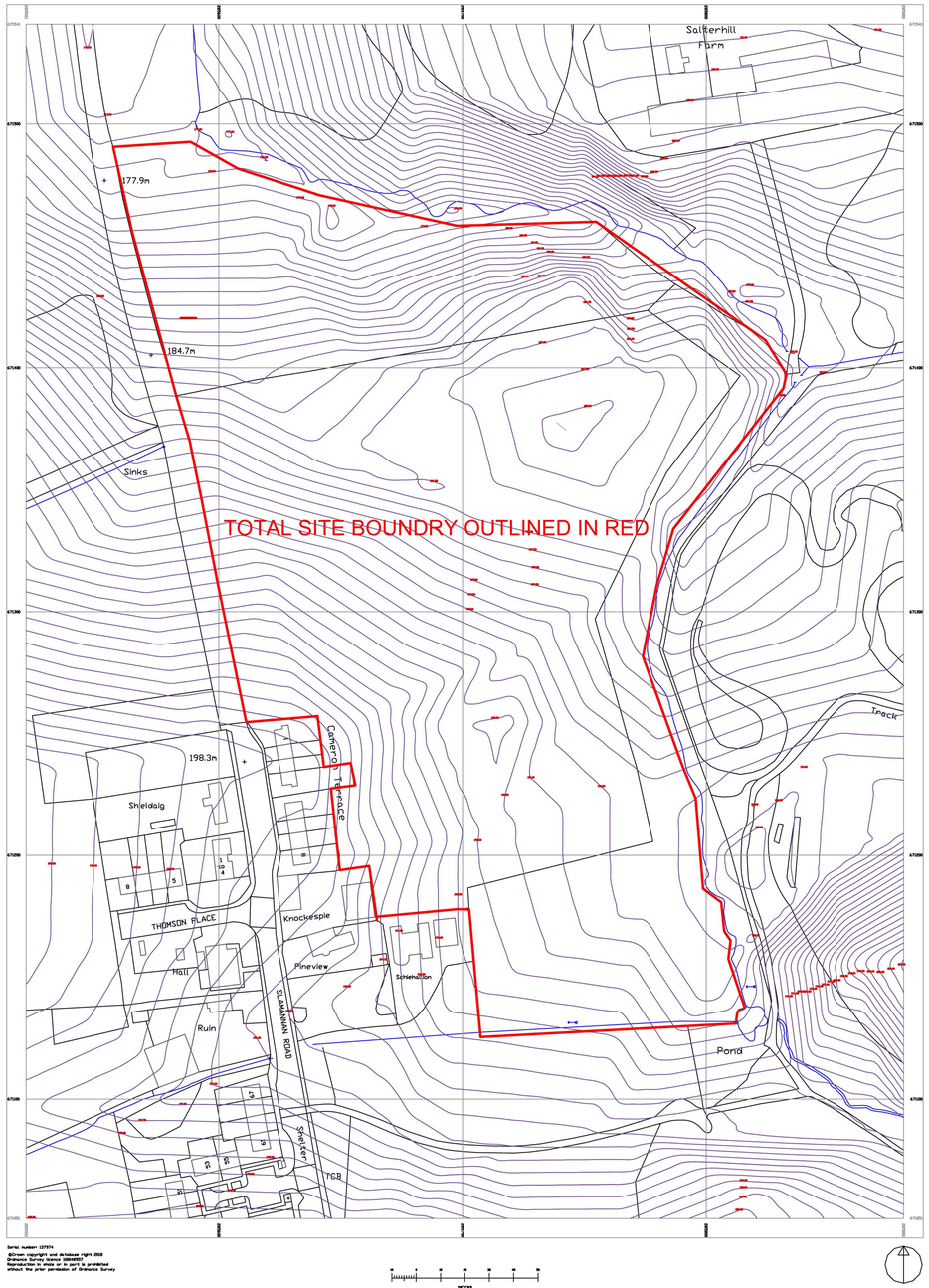
7.1.9 The TA provides a framework for the development of a residential travel pack.

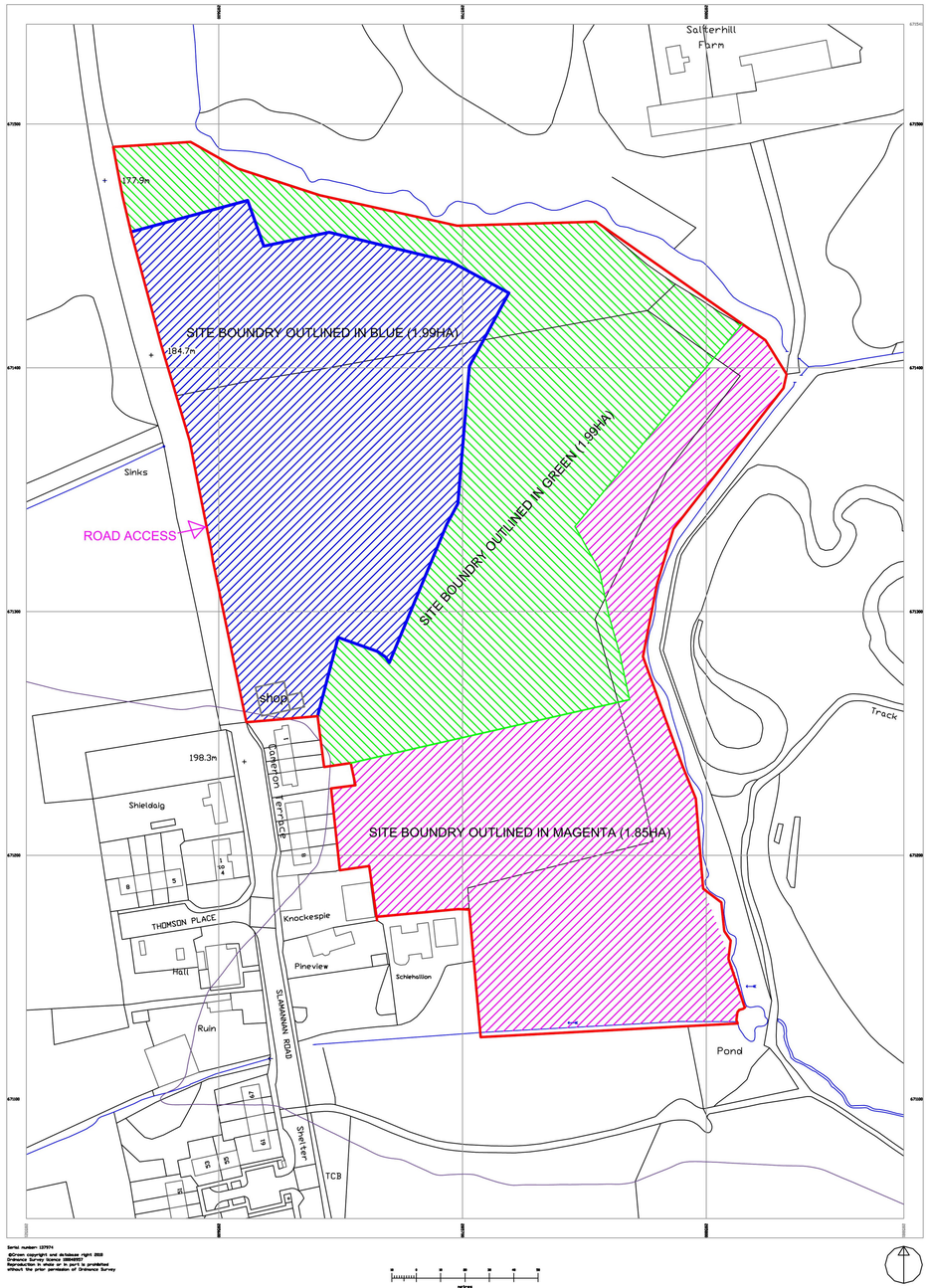
7.2 Conclusions

7.2.1 It is therefore concluded that there are no transport related issues preventing the award of planning consent.

Appendix A

Site Boundary Plan





LOCATION PLANS 1:1250 @ A1

APPENDIX 1

THIS DOCUMENT IS THE PROPOERTY OF ROSS WOODS ARCHITECTS. THE DESIGN INFORMATION CONTAINED HEREIN IS STRICTLY CONFIDENTIAL. THIS DOCUMENT IS NOT TO BE USED, REPRODUCED, DISCLOSED OR CIRCULATED IN WHOLE OR IN PART, WITHOUT THE PRIOR WRITTEN PERMISSION OF ROSS WOODS ARCHITECTS, IN EACH INSTANCE.

Do NOT scale from this drawing.

If in doubt ask.

TOTAL SITE BOUNDRY OUTLINED IN RED

PP1 HATCHED BLUE (1.99ha)

PP2 HATCHED GREEN (1.99ha)

PP3 HATCHED MAGENTA (1.85ha)

NORTH

REV	DATE		INT
-	-	-	-
-	-	-	-
D	030818	SHOP AND ACCESS SHOW	DR
C	160718	PAN DRAWING	DR
B	240518	PLANNING REQUEST	DR
A	230518	SITE REDUCED	DR

Proposed Residential Development
Limerigg
for Robert MacDonald Clarkston

Title:	SITE SURVEY / OS MAP		
Client:	RM Clarkston		
Job No. :	RWA/18/09	Drawn:	DR
Scale	1:1250 @ A1	Date:	150518
Drg No. :	P001	Rev:	D

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PLANNING

Appendix B

TRICS Outputs

Calculation Reference: AUDIT-109303-180716-0705

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 03 - RESIDENTIAL
Category : A - HOUSES PRIVATELY OWNED

MULTI-MODAL VEHICLES

Selected regions and areas:

03	**SOUTH WEST**		
	DV	DEVON	2 days
	SM	SOMERSET	1 days
	WL	WILTSHIRE	1 days
04	**EAST ANGLIA**		
	CA	CAMBRIDGESHIRE	2 days
	NF	NORFOLK	3 days
	SF	SUFFOLK	2 days
05	**EAST MIDLANDS**		
	LN	LINCOLNSHIRE	2 days
06	**WEST MIDLANDS**		
	SH	SHROPSHIRE	2 days
	WK	WARWICKSHIRE	2 days
07	**YORKSHIRE & NORTH LINCOLNSHIRE**		
	NY	NORTH YORKSHIRE	6 days
08	**NORTH WEST**		
	CH	CHESHIRE	2 days
09	**NORTH**		
	CB	CUMBRIA	1 days
	DH	DURHAM	1 days
10	**WALES**		
	PS	POWYS	2 days
	VG	VALE OF GLAMORGAN	1 days
11	**SCOTLAND**		
	AG	ANGUS	1 days
	FA	FALKIRK	1 days
	HI	HIGHLAND	1 days
	PK	PERTH & KINROSS	1 days
12	**CONNAUGHT**		
	GA	GALWAY	1 days
	LT	LEITRIM	1 days
	MA	MAYO	1 days
	RO	ROSCOMMON	3 days
14	**LEINSTER**		
	WX	WEXFORD	1 days
15	**GREATER DUBLIN**		
	DL	DUBLIN	1 days
16	**ULSTER (REPUBLIC OF IRELAND)**		
	CV	CAVAN	1 days
	DN	DONEGAL	3 days
17	**ULSTER (NORTHERN IRELAND)**		
	AN	ANTRIM	1 days
	DO	DOWN	1 days

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

Secondary Filtering 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:	6 to 98 (units:)
Range Selected by User:	4 to 100 (units:)

Public Transport Provision:
Selection by: Include all surveys

Date Range: 01/01/10 to 22/09/17

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	12 days
Tuesday	13 days
Wednesday	8 days
Thursday	10 days
Friday	5 days

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

Selected survey types:

Manual count	48 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:

Edge of Town Centre	6
Suburban Area (PPS6 Out of Centre)	26
Edge of Town	16

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:

Residential Zone	44
No Sub Category	4

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.

Secondary Filtering selection:

Use Class:

C3	47 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	13 days
5,001 to 10,000	7 days
10,001 to 15,000	12 days
15,001 to 20,000	9 days
20,001 to 25,000	3 days
25,001 to 50,000	4 days

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

Secondary Filtering selection (Cont.):

Population within 5 miles:

5,000 or Less	3 days
5,001 to 25,000	13 days
25,001 to 50,000	7 days
50,001 to 75,000	5 days
75,001 to 100,000	9 days
100,001 to 125,000	1 days
125,001 to 250,000	10 days

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

Car ownership within 5 miles:

0.5 or Less	1 days
0.6 to 1.0	13 days
1.1 to 1.5	33 days
1.6 to 2.0	1 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	48 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.

PTAL Rating:

No PTAL Present	48 days

This data displays the number of selected surveys with PTAL Ratings.

LIST OF SITES relevant to selection parameters

1 AG-03-A-01 BUNGALOWS/DET. ANGUS
KEPTIE ROAD

ARBROATH
Suburban Area (PPS6 Out of Centre)
Residential Zone
Total Number of dwellings: 7
Survey date: TUESDAY 22/05/12 Survey Type: MANUAL

2 AN-03-A-07 SEMI DETACHED/TERRACED HOUSING ANTRIM
CASTLE WAY

ANTRIM
Suburban Area (PPS6 Out of Centre)
Residential Zone
Total Number of dwellings: 55
Survey date: TUESDAY 20/12/11 Survey Type: MANUAL

3 CA-03-A-04 DETACHED CAMBRIDGESHIRE

THORPE PARK ROAD
PETERBOROUGH
Suburban Area (PPS6 Out of Centre)
Residential Zone
Total Number of dwellings: 9
Survey date: TUESDAY 18/10/11 Survey Type: MANUAL

4 CA-03-A-05 DETACHED HOUSES CAMBRIDGESHIRE
EASTFIELD ROAD

PETERBOROUGH
Suburban Area (PPS6 Out of Centre)
Residential Zone
Total Number of dwellings: 28
Survey date: MONDAY 17/10/16 Survey Type: MANUAL

5 CB-03-A-05 DETACHED/TERRACED HOUSING CUMBRIA
MACADAM WAY

PENRITH
Edge of Town
Residential Zone
Total Number of dwellings: 50
Survey date: TUESDAY 21/06/16 Survey Type: MANUAL

6 CH-03-A-08 DETACHED CHESHIRE
WHITCHURCH ROAD
BOUGHTON HEATH
CHESTER
Suburban Area (PPS6 Out of Centre)
Residential Zone
Total Number of dwellings: 11
Survey date: TUESDAY 22/05/12 Survey Type: MANUAL

7 CH-03-A-09 TERRACED HOUSES CHESHIRE
GREYSTOKE ROAD
HURDSFIELD
MACCLESFIELD
Edge of Town
Residential Zone
Total Number of dwellings: 24
Survey date: MONDAY 24/11/14 Survey Type: MANUAL

8 CV-03-A-01 DETACHED CAVAN
DUBLIN ROAD

CAVAN
Edge of Town
No Sub Category
Total Number of dwellings: 37
Survey date: TUESDAY 18/12/12 Survey Type: MANUAL

LIST OF SITES relevant to selection parameters (Cont.)

9 DH-03-A-01 SEMI DETACHED DURHAM
GREENFIELDS ROAD

BISHOP AUCKLAND
Suburban Area (PPS6 Out of Centre)
Residential Zone
Total Number of dwellings: 50
Survey date: TUESDAY 28/03/17 Survey Type: MANUAL

10 DL-03-A-07 SEMI DET./TERRACED DUBLIN
CASTLE DAWSON
BLACKROCK
DUBLIN
Edge of Town Centre
Residential Zone
Total Number of dwellings: 56
Survey date: MONDAY 26/09/11 Survey Type: MANUAL

11 DN-03-A-02 DETACHED DONEGAL
GLENFIN ROAD

BALLYBOFEY
Edge of Town
Residential Zone
Total Number of dwellings: 7
Survey date: THURSDAY 05/09/13 Survey Type: MANUAL

12 DN-03-A-03 DETACHED/SEMI-DETACHED DONEGAL
THE GRANGE
GLENCAR IRISH
LETTERKENNY
Edge of Town
Residential Zone
Total Number of dwellings: 50
Survey date: MONDAY 01/09/14 Survey Type: MANUAL

13 DN-03-A-04 SEMI-DETACHED DONEGAL
GORTLEE ROAD
GORTLEE
LETTERKENNY
Edge of Town
Residential Zone
Total Number of dwellings: 83
Survey date: FRIDAY 26/09/14 Survey Type: MANUAL

14 DO-03-A-03 DETACHED/SEMI DETACHED DOWN
OLD MILL HEIGHTS
DUNDONALD
BELFAST
Edge of Town
Residential Zone
Total Number of dwellings: 79
Survey date: WEDNESDAY 23/10/13 Survey Type: MANUAL

15 DV-03-A-01 TERRACED HOUSES DEVON
BRONSHILL ROAD

TORQUAY
Suburban Area (PPS6 Out of Centre)
Residential Zone
Total Number of dwellings: 37
Survey date: WEDNESDAY 30/09/15 Survey Type: MANUAL

16 DV-03-A-03 TERRACED & SEMI DETACHED DEVON
LOWER BRAND LANE

HONITON
Suburban Area (PPS6 Out of Centre)
Residential Zone
Total Number of dwellings: 70
Survey date: MONDAY 28/09/15 Survey Type: MANUAL

17 FA-03-A-01 SEMI-DETACHED/TERRACED FALKIRK
MANDELA AVENUE

FALKIRK
Suburban Area (PPS6 Out of Centre)
Residential Zone
Total Number of dwellings: 37
Survey date: THURSDAY 30/05/13 Survey Type: MANUAL

LIST OF SITES relevant to selection parameters (Cont.)

18 GA-03-A-04 SEMi DET. & BUNGALOWS GALWAY
R347 CAHEROYN ROAD

ATHENRY
Edge of Town Centre
Residential Zone
Total Number of dwellings: 21
Survey date: TUESDAY 09/10/12 Survey Type: MANUAL

19 HI-03-A-14 SEMI-DETACHED & TERRACED HIGHLAND
KING BRUDE ROAD
SCORGUIE
INVERNESS
Suburban Area (PPS6 Out of Centre)
Residential Zone
Total Number of dwellings: 40
Survey date: WEDNESDAY 23/03/16 Survey Type: MANUAL

20 LN-03-A-03 SEMI DETACHED LINCOLNSHIRE
ROOKERY LANE
BOULTHAM
LINCOLN
Suburban Area (PPS6 Out of Centre)
Residential Zone
Total Number of dwellings: 22
Survey date: TUESDAY 18/09/12 Survey Type: MANUAL

21 LN-03-A-04 DETACHED & SEMI-DETACHED LINCOLNSHIRE
EGERTON ROAD

LINCOLN
Edge of Town Centre
Residential Zone
Total Number of dwellings: 30
Survey date: MONDAY 29/06/15 Survey Type: MANUAL

22 LT-03-A-01 SEMI-DETACHED & DETACHED LEITRIM
ARD NA SI
ATTIRORY
CARRICK-ON-SHANNON
Suburban Area (PPS6 Out of Centre)
Residential Zone
Total Number of dwellings: 90
Survey date: FRIDAY 24/04/15 Survey Type: MANUAL

23 MA-03-A-01 SEMI-DET. & TERRACED MAYO
N26 STATION ROAD

BALLINA
Suburban Area (PPS6 Out of Centre)
Residential Zone
Total Number of dwellings: 74
Survey date: FRIDAY 15/07/11 Survey Type: MANUAL

24 NF-03-A-01 SEMI DET. & BUNGALOWS NORFOLK
YARMOUTH ROAD

CAISTER-ON-SEA
Suburban Area (PPS6 Out of Centre)
Residential Zone
Total Number of dwellings: 27
Survey date: TUESDAY 16/10/12 Survey Type: MANUAL

25 NF-03-A-02 HOUSES & FLATS NORFOLK
DEREHAM ROAD

NORWICH
Suburban Area (PPS6 Out of Centre)
Residential Zone
Total Number of dwellings: 98
Survey date: MONDAY 22/10/12 Survey Type: MANUAL

LIST OF SITES relevant to selection parameters (Cont.)

26 NF-03-A-03 DETACHED HOUSES NORFOLK
HALING WAY

THETFORD
Edge of Town
Residential Zone
Total Number of dwellings: 10
Survey date: WEDNESDAY 16/09/15 Survey Type: MANUAL

27 NY-03-A-08 TERRACED HOUSES NORTH YORKSHIRE
NICHOLAS STREET

YORK
Suburban Area (PPS6 Out of Centre)
Residential Zone
Total Number of dwellings: 21
Survey date: MONDAY 16/09/13 Survey Type: MANUAL

28 NY-03-A-09 MIXED HOUSING NORTH YORKSHIRE
GRAMMAR SCHOOL LANE

NORTHALLERTON
Suburban Area (PPS6 Out of Centre)
Residential Zone
Total Number of dwellings: 52
Survey date: MONDAY 16/09/13 Survey Type: MANUAL

29 NY-03-A-10 HOUSES AND FLATS NORTH YORKSHIRE
BOROUGHBRIDGE ROAD

RIPON
Edge of Town
No Sub Category
Total Number of dwellings: 71
Survey date: TUESDAY 17/09/13 Survey Type: MANUAL

30 NY-03-A-11 PRIVATE HOUSING NORTH YORKSHIRE
HORSEFAIR

BOROUGHBRIDGE
Edge of Town
Residential Zone
Total Number of dwellings: 23
Survey date: WEDNESDAY 18/09/13 Survey Type: MANUAL

31 NY-03-A-12 TOWN HOUSES NORTH YORKSHIRE
RACECOURSE LANE

NORTHALLERTON
Edge of Town Centre
Residential Zone
Total Number of dwellings: 47
Survey date: TUESDAY 27/09/16 Survey Type: MANUAL

32 NY-03-A-13 TERRACED HOUSES NORTH YORKSHIRE
CATTERICK ROAD
OLD HOSPITAL COMPOUND
CATTERICK GARRISON
Suburban Area (PPS6 Out of Centre)
Residential Zone
Total Number of dwellings: 10
Survey date: WEDNESDAY 10/05/17 Survey Type: MANUAL

33 PK-03-A-01 DETAC. & BUNGALOWS PERTH & KINROSS
TULLYLUMB TERRACE
GORNHILL
PERTH
Suburban Area (PPS6 Out of Centre)
Residential Zone
Total Number of dwellings: 36
Survey date: WEDNESDAY 11/05/11 Survey Type: MANUAL

34 PS-03-A-01 MIXED HOUSES POWYS
BRYN GLAS

WELSHPOOL
Edge of Town Centre
Residential Zone
Total Number of dwellings: 16
Survey date: MONDAY 11/05/15 Survey Type: MANUAL

LIST OF SITES relevant to selection parameters (Cont.)

35 PS-03-A-02 DETACHED/SEMI-DETACHED POWYS
GUNROG ROAD

WELSHPOOL
Suburban Area (PPS6 Out of Centre)
Residential Zone
Total Number of dwellings: 28
Survey date: MONDAY 11/05/15 Survey Type: MANUAL

36 RO-03-A-02 SEMI DET. & BUNGALOWS ROSCOMMON
SLIGO ROAD

BALLAGHADERREEN
Suburban Area (PPS6 Out of Centre)
Residential Zone
Total Number of dwellings: 31
Survey date: THURSDAY 14/07/11 Survey Type: MANUAL

37 RO-03-A-03 DETACHED HOUSES ROSCOMMON
N61
GREATMEADOW
BOYLE
Edge of Town
No Sub Category
Total Number of dwellings: 23
Survey date: THURSDAY 25/09/14 Survey Type: MANUAL

38 RO-03-A-04 SEMI DET. & BUNGALOWS ROSCOMMON
EAGLE COURT
ARDNANAGH
ROSCOMMON
Suburban Area (PPS6 Out of Centre)
Residential Zone
Total Number of dwellings: 39
Survey date: FRIDAY 26/09/14 Survey Type: MANUAL

39 SF-03-A-04 DETACHED & BUNGALOWS SUFFOLK
NORMANSTON DRIVE

LOWESTOFT
Suburban Area (PPS6 Out of Centre)
Residential Zone
Total Number of dwellings: 7
Survey date: TUESDAY 23/10/12 Survey Type: MANUAL

40 SF-03-A-05 DETACHED HOUSES SUFFOLK
VALE LANE

BURY ST EDMUNDS
Edge of Town
Residential Zone
Total Number of dwellings: 18
Survey date: WEDNESDAY 09/09/15 Survey Type: MANUAL

41 SH-03-A-05 SEMI-DETACHED/TERRACED SHROPSHIRE
SANDCROFT
SUTTON HILL
TELFORD
Edge of Town
Residential Zone
Total Number of dwellings: 54
Survey date: THURSDAY 24/10/13 Survey Type: MANUAL

42 SH-03-A-06 BUNGALOWS SHROPSHIRE
ELLESMERE ROAD

SHREWSBURY
Edge of Town
Residential Zone
Total Number of dwellings: 16
Survey date: THURSDAY 22/05/14 Survey Type: MANUAL

43 SM-03-A-01 DETACHED & SEMI SOMERSET
WEMBDON ROAD
NORTHFIELD
BRIDGWATER
Edge of Town
Residential Zone
Total Number of dwellings: 33
Survey date: THURSDAY 24/09/15 Survey Type: MANUAL

LIST OF SITES relevant to selection parameters (Cont.)

44 VG-03-A-01 SEMI-DETACHED & TERRACED VALE OF GLAMORGAN
ARTHUR STREET

BARRY
Edge of Town
Residential Zone
Total Number of dwellings: 12
Survey date: MONDAY 08/05/17 Survey Type: MANUAL

45 WK-03-A-01 TERRACED/SEMI/DET. WARWICKSHIRE
ARLINGTON AVENUE

LEAMINGTON SPA
Suburban Area (PPS6 Out of Centre)
Residential Zone
Total Number of dwellings: 6
Survey date: FRIDAY 21/10/11 Survey Type: MANUAL

46 WK-03-A-02 BUNGALOWS WARWICKSHIRE
NARBERTH WAY
POTTERS GREEN
COVENTRY
Edge of Town
Residential Zone
Total Number of dwellings: 17
Survey date: THURSDAY 17/10/13 Survey Type: MANUAL

47 WL-03-A-02 SEMI DETACHED WILTSHIRE
HEADLANDS GROVE

SWINDON
Suburban Area (PPS6 Out of Centre)
Residential Zone
Total Number of dwellings: 27
Survey date: THURSDAY 22/09/16 Survey Type: MANUAL

48 WX-03-A-01 SEMI-DETACHED WEXFORD
CLONARD ROAD

WEXFORD
Suburban Area (PPS6 Out of Centre)
No Sub Category
Total Number of dwellings: 34
Survey date: THURSDAY 25/09/14 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

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	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	48	36	0.060	48	36	0.249	48	36	0.309
08:00 - 09:00	48	36	0.160	**48**	**36**	**0.434**	**48**	**36**	**0.594**
09:00 - 10:00	48	36	0.178	48	36	0.221	48	36	0.399
10:00 - 11:00	48	36	0.132	48	36	0.144	48	36	0.276
11:00 - 12:00	48	36	0.154	48	36	0.163	48	36	0.317
12:00 - 13:00	48	36	0.183	48	36	0.179	48	36	0.362
13:00 - 14:00	48	36	0.207	48	36	0.211	48	36	0.418
14:00 - 15:00	48	36	0.204	48	36	0.222	48	36	0.426
15:00 - 16:00	48	36	0.265	48	36	0.185	48	36	0.450
16:00 - 17:00	48	36	0.345	48	36	0.217	48	36	0.562
17:00 - 18:00	**48**	**36**	**0.365**	48	36	0.208	48	36	0.573
18:00 - 19:00	48	36	0.283	48	36	0.184	48	36	0.467
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			2.536			2.617			5.153

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.*

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Parameter summary

Trip rate parameter range selected:	6 - 98 (units:)
Survey date date range:	01/01/10 - 22/09/17
Number of weekdays (Monday-Friday):	48
Number of Saturdays:	0
Number of Sundays:	0
Surveys automatically removed from selection:	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.

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

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	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	48	36	0.003	48	36	0.003	48	36	0.006
08:00 - 09:00	48	36	0.005	48	36	0.005	48	36	0.010
09:00 - 10:00	48	36	0.005	48	36	0.003	48	36	0.008
10:00 - 11:00	48	36	0.002	48	36	0.003	48	36	0.005
11:00 - 12:00	48	36	0.004	48	36	0.003	48	36	0.007
12:00 - 13:00	48	36	0.003	48	36	0.003	48	36	0.006
13:00 - 14:00	48	36	0.004	48	36	0.005	48	36	0.009
14:00 - 15:00	48	36	0.002	48	36	0.002	48	36	0.004
15:00 - 16:00	48	36	0.005	48	36	0.005	48	36	0.010
16:00 - 17:00	**48**	**36**	**0.006**	**48**	**36**	**0.007**	**48**	**36**	**0.013**
17:00 - 18:00	48	36	0.006	48	36	0.006	48	36	0.012
18:00 - 19:00	48	36	0.004	48	36	0.004	48	36	0.008
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.049			0.049			0.098

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.*

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Parameter summary

Trip rate parameter range selected:	6 - 98 (units:)
Survey date date range:	01/01/10 - 22/09/17
Number of weekdays (Monday-Friday):	48
Number of Saturdays:	0
Number of Sundays:	0
Surveys automatically removed from selection:	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.

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

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	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	48	36	0.001	48	36	0.002	48	36	0.003
08:00 - 09:00	48	36	0.002	**48**	**36**	**0.003**	**48**	**36**	**0.005**
09:00 - 10:00	**48**	**36**	**0.003**	48	36	0.002	48	36	0.005
10:00 - 11:00	48	36	0.003	48	36	0.002	48	36	0.005
11:00 - 12:00	48	36	0.003	48	36	0.002	48	36	0.005
12:00 - 13:00	48	36	0.001	48	36	0.002	48	36	0.003
13:00 - 14:00	48	36	0.002	48	36	0.002	48	36	0.004
14:00 - 15:00	48	36	0.002	48	36	0.002	48	36	0.004
15:00 - 16:00	48	36	0.003	48	36	0.001	48	36	0.004
16:00 - 17:00	48	36	0.001	48	36	0.003	48	36	0.004
17:00 - 18:00	48	36	0.002	48	36	0.001	48	36	0.003
18:00 - 19:00	48	36	0.001	48	36	0.000	48	36	0.001
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.024			0.022			0.046

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.*

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Parameter summary

Trip rate parameter range selected:	6 - 98 (units:)
Survey date date range:	01/01/10 - 22/09/17
Number of weekdays (Monday-Friday):	48
Number of Saturdays:	0
Number of Sundays:	0
Surveys automatically removed from selection:	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.

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

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	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	48	36	0.000	48	36	0.000	48	36	0.000
08:00 - 09:00	**48**	**36**	**0.006**	**48**	**36**	**0.006**	**48**	**36**	**0.012**
09:00 - 10:00	48	36	0.001	48	36	0.001	48	36	0.002
10:00 - 11:00	48	36	0.000	48	36	0.000	48	36	0.000
11:00 - 12:00	48	36	0.002	48	36	0.002	48	36	0.004
12:00 - 13:00	48	36	0.000	48	36	0.000	48	36	0.000
13:00 - 14:00	48	36	0.000	48	36	0.000	48	36	0.000
14:00 - 15:00	48	36	0.002	48	36	0.002	48	36	0.004
15:00 - 16:00	48	36	0.004	48	36	0.003	48	36	0.007
16:00 - 17:00	48	36	0.001	48	36	0.002	48	36	0.003
17:00 - 18:00	48	36	0.000	48	36	0.000	48	36	0.000
18:00 - 19:00	48	36	0.000	48	36	0.000	48	36	0.000
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.016			0.016			0.032

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.

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Parameter summary

Trip rate parameter range selected:	6 - 98 (units:)
Survey date date range:	01/01/10 - 22/09/17
Number of weekdays (Monday-Friday):	48
Number of Saturdays:	0
Number of Sundays:	0
Surveys automatically removed from selection:	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.

TRIP RATE for Land Use 03 - RESIDENTIAL/A - HOUSES PRIVATELY OWNED

MULTI-MODAL CYCLISTS

Calculation factor: 1 DWELLS

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	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	48	36	0.004	48	36	0.020	48	36	0.024
08:00 - 09:00	48	36	0.001	**48**	**36**	**0.021**	48	36	0.022
09:00 - 10:00	48	36	0.002	48	36	0.010	48	36	0.012
10:00 - 11:00	48	36	0.005	48	36	0.009	48	36	0.014
11:00 - 12:00	48	36	0.002	48	36	0.005	48	36	0.007
12:00 - 13:00	48	36	0.006	48	36	0.006	48	36	0.012
13:00 - 14:00	48	36	0.008	48	36	0.003	48	36	0.011
14:00 - 15:00	48	36	0.007	48	36	0.008	48	36	0.015
15:00 - 16:00	48	36	0.020	48	36	0.005	48	36	0.025
16:00 - 17:00	48	36	0.020	48	36	0.006	48	36	0.026
17:00 - 18:00	**48**	**36**	**0.022**	48	36	0.008	**48**	**36**	**0.030**
18:00 - 19:00	48	36	0.007	48	36	0.006	48	36	0.013
19:00 - 20:00	1	7	0.000	1	7	0.000	1	7	0.000
20:00 - 21:00	1	7	0.000	1	7	0.000	1	7	0.000
21:00 - 22:00	1	7	0.000	1	7	0.000	1	7	0.000
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.104			0.107			0.211

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.*

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Parameter summary

Trip rate parameter range selected:	6 - 98 (units:)
Survey date date range:	01/01/10 - 22/09/17
Number of weekdays (Monday-Friday):	48
Number of Saturdays:	0
Number of Sundays:	0
Surveys automatically removed from selection:	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.

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

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	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	48	36	0.074	48	36	0.312	48	36	0.386
08:00 - 09:00	48	36	0.194	**48**	**36**	**0.641**	**48**	**36**	**0.835**
09:00 - 10:00	48	36	0.207	48	36	0.300	48	36	0.507
10:00 - 11:00	48	36	0.163	48	36	0.196	48	36	0.359
11:00 - 12:00	48	36	0.198	48	36	0.204	48	36	0.402
12:00 - 13:00	48	36	0.232	48	36	0.230	48	36	0.462
13:00 - 14:00	48	36	0.263	48	36	0.286	48	36	0.549
14:00 - 15:00	48	36	0.279	48	36	0.284	48	36	0.563
15:00 - 16:00	48	36	0.416	48	36	0.259	48	36	0.675
16:00 - 17:00	48	36	0.483	48	36	0.294	48	36	0.777
17:00 - 18:00	**48**	**36**	**0.512**	48	36	0.296	48	36	0.808
18:00 - 19:00	48	36	0.388	48	36	0.252	48	36	0.640
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			3.409			3.554			6.963

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.*

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Parameter summary

Trip rate parameter range selected:	6 - 98 (units:)
Survey date date range:	01/01/10 - 22/09/17
Number of weekdays (Monday-Friday):	48
Number of Saturdays:	0
Number of Sundays:	0
Surveys automatically removed from selection:	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.

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

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	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	48	36	0.019	48	36	0.069	48	36	0.088
08:00 - 09:00	48	36	0.053	**48**	**36**	**0.179**	48	36	0.232
09:00 - 10:00	48	36	0.041	48	36	0.079	48	36	0.120
10:00 - 11:00	48	36	0.048	48	36	0.070	48	36	0.118
11:00 - 12:00	48	36	0.054	48	36	0.048	48	36	0.102
12:00 - 13:00	48	36	0.059	48	36	0.049	48	36	0.108
13:00 - 14:00	48	36	0.076	48	36	0.076	48	36	0.152
14:00 - 15:00	48	36	0.076	48	36	0.056	48	36	0.132
15:00 - 16:00	**48**	**36**	**0.152**	48	36	0.094	**48**	**36**	**0.246**
16:00 - 17:00	48	36	0.131	48	36	0.071	48	36	0.202
17:00 - 18:00	48	36	0.110	48	36	0.059	48	36	0.169
18:00 - 19:00	48	36	0.077	48	36	0.050	48	36	0.127
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.896			0.900			1.796

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.*

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Parameter summary

Trip rate parameter range selected:	6 - 98 (units:)
Survey date date range:	01/01/10 - 22/09/17
Number of weekdays (Monday-Friday):	48
Number of Saturdays:	0
Number of Sundays:	0
Surveys automatically removed from selection:	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.

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

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	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	48	36	0.003	48	36	0.009	48	36	0.012
08:00 - 09:00	48	36	0.002	**48**	**36**	**0.016**	48	36	0.018
09:00 - 10:00	48	36	0.002	48	36	0.010	48	36	0.012
10:00 - 11:00	48	36	0.005	48	36	0.004	48	36	0.009
11:00 - 12:00	48	36	0.005	48	36	0.005	48	36	0.010
12:00 - 13:00	48	36	0.007	48	36	0.005	48	36	0.012
13:00 - 14:00	48	36	0.003	48	36	0.003	48	36	0.006
14:00 - 15:00	48	36	0.008	48	36	0.005	48	36	0.013
15:00 - 16:00	48	36	0.009	48	36	0.007	48	36	0.016
16:00 - 17:00	**48**	**36**	**0.016**	48	36	0.006	**48**	**36**	**0.022**
17:00 - 18:00	48	36	0.010	48	36	0.005	48	36	0.015
18:00 - 19:00	48	36	0.010	48	36	0.001	48	36	0.011
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.080			0.076			0.156

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.

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Parameter summary

Trip rate parameter range selected:	6 - 98 (units:)
Survey date date range:	01/01/10 - 22/09/17
Number of weekdays (Monday-Friday):	48
Number of Saturdays:	0
Number of Sundays:	0
Surveys automatically removed from selection:	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.

TRIP RATE for Land Use 03 - RESIDENTIAL/A - HOUSES PRIVATELY OWNED

MULTI-MODAL TOTAL RAIL PASSENGERS

Calculation factor: 1 DWELLS

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	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	48	36	0.000	48	36	0.003	48	36	0.003
08:00 - 09:00	48	36	0.000	**48**	**36**	**0.006**	**48**	**36**	**0.006**
09:00 - 10:00	48	36	0.000	48	36	0.001	48	36	0.001
10:00 - 11:00	48	36	0.000	48	36	0.001	48	36	0.001
11:00 - 12:00	48	36	0.000	48	36	0.001	48	36	0.001
12:00 - 13:00	48	36	0.000	48	36	0.001	48	36	0.001
13:00 - 14:00	48	36	0.000	48	36	0.000	48	36	0.000
14:00 - 15:00	48	36	0.001	48	36	0.001	48	36	0.002
15:00 - 16:00	48	36	0.000	48	36	0.000	48	36	0.000
16:00 - 17:00	48	36	0.001	48	36	0.000	48	36	0.001
17:00 - 18:00	**48**	**36**	**0.003**	48	36	0.000	48	36	0.003
18:00 - 19:00	48	36	0.003	48	36	0.000	48	36	0.003
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.008			0.014			0.022

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.

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Parameter summary

Trip rate parameter range selected:	6 - 98 (units:)
Survey date date range:	01/01/10 - 22/09/17
Number of weekdays (Monday-Friday):	48
Number of Saturdays:	0
Number of Sundays:	0
Surveys automatically removed from selection:	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.

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

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	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	48	36	0.000	48	36	0.000	48	36	0.000
08:00 - 09:00	48	36	0.000	**48**	**36**	**0.002**	**48**	**36**	**0.002**
09:00 - 10:00	48	36	0.000	48	36	0.000	48	36	0.000
10:00 - 11:00	48	36	0.000	48	36	0.000	48	36	0.000
11:00 - 12:00	48	36	0.000	48	36	0.000	48	36	0.000
12:00 - 13:00	48	36	0.000	48	36	0.000	48	36	0.000
13:00 - 14:00	48	36	0.000	48	36	0.000	48	36	0.000
14:00 - 15:00	48	36	0.001	48	36	0.000	48	36	0.001
15:00 - 16:00	**48**	**36**	**0.001**	48	36	0.000	48	36	0.001
16:00 - 17:00	48	36	0.000	48	36	0.000	48	36	0.000
17:00 - 18:00	48	36	0.000	48	36	0.000	48	36	0.000
18:00 - 19:00	48	36	0.000	48	36	0.000	48	36	0.000
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.002			0.002			0.004

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.

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Parameter summary

Trip rate parameter range selected:	6 - 98 (units:)
Survey date date range:	01/01/10 - 22/09/17
Number of weekdays (Monday-Friday):	48
Number of Saturdays:	0
Number of Sundays:	0
Surveys automatically removed from selection:	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.

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

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	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	48	36	0.003	48	36	0.013	48	36	0.016
08:00 - 09:00	48	36	0.002	**48**	**36**	**0.023**	**48**	**36**	**0.025**
09:00 - 10:00	48	36	0.002	48	36	0.012	48	36	0.014
10:00 - 11:00	48	36	0.005	48	36	0.005	48	36	0.010
11:00 - 12:00	48	36	0.005	48	36	0.005	48	36	0.010
12:00 - 13:00	48	36	0.007	48	36	0.006	48	36	0.013
13:00 - 14:00	48	36	0.003	48	36	0.003	48	36	0.006
14:00 - 15:00	48	36	0.009	48	36	0.006	48	36	0.015
15:00 - 16:00	48	36	0.010	48	36	0.007	48	36	0.017
16:00 - 17:00	**48**	**36**	**0.017**	48	36	0.006	48	36	0.023
17:00 - 18:00	48	36	0.013	48	36	0.005	48	36	0.018
18:00 - 19:00	48	36	0.013	48	36	0.001	48	36	0.014
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.089			0.092			0.181

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.

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Parameter summary

Trip rate parameter range selected:	6 - 98 (units:)
Survey date date range:	01/01/10 - 22/09/17
Number of weekdays (Monday-Friday):	48
Number of Saturdays:	0
Number of Sundays:	0
Surveys automatically removed from selection:	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.

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

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	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	48	36	0.100	48	36	0.413	48	36	0.513
08:00 - 09:00	48	36	0.250	**48**	**36**	**0.865**	**48**	**36**	**1.115**
09:00 - 10:00	48	36	0.252	48	36	0.400	48	36	0.652
10:00 - 11:00	48	36	0.221	48	36	0.280	48	36	0.501
11:00 - 12:00	48	36	0.259	48	36	0.261	48	36	0.520
12:00 - 13:00	48	36	0.303	48	36	0.292	48	36	0.595
13:00 - 14:00	48	36	0.351	48	36	0.369	48	36	0.720
14:00 - 15:00	48	36	0.371	48	36	0.353	48	36	0.724
15:00 - 16:00	48	36	0.597	48	36	0.365	48	36	0.962
16:00 - 17:00	48	36	0.651	48	36	0.377	48	36	1.028
17:00 - 18:00	**48**	**36**	**0.658**	48	36	0.367	48	36	1.025
18:00 - 19:00	48	36	0.484	48	36	0.309	48	36	0.793
19:00 - 20:00	1	7	0.000	1	7	0.000	1	7	0.000
20:00 - 21:00	1	7	0.000	1	7	0.000	1	7	0.000
21:00 - 22:00	1	7	0.000	1	7	0.000	1	7	0.000
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			4.497			4.651			9.148

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.

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Parameter summary

Trip rate parameter range selected:	6 - 98 (units:)
Survey date date range:	01/01/10 - 22/09/17
Number of weekdays (Monday-Friday):	48
Number of Saturdays:	0
Number of Sundays:	0
Surveys automatically removed from selection:	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.

Calculation Reference: AUDIT-109303-181011-1011

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 01 - RETAIL
Category : O - CONVENIENCE STORE
MULTI-MODAL VEHICLES

Selected regions and areas:

03	**SOUTH WEST**		
	WL	WILTSHIRE	1 days
04	**EAST ANGLIA**		
	CA	CAMBRIDGESHIRE	1 days
	NF	NORFOLK	1 days
07	**YORKSHIRE & NORTH LINCOLNSHIRE**		
	NE	NORTH EAST LINCOLNSHIRE	1 days
	NY	NORTH YORKSHIRE	1 days
	SY	SOUTH YORKSHIRE	1 days
	WY	WEST YORKSHIRE	1 days
09	**NORTH**		
	CB	CUMBRIA	1 days
	DH	DURHAM	1 days
	TW	TYNE & WEAR	1 days

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

Secondary Filtering 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: Gross floor area
Actual Range: 292 to 1200 (units: sqm)
Range Selected by User: 70 to 1500 (units: sqm)

Public Transport Provision:
Selection by: Include all surveys

Date Range: 01/01/10 to 07/04/17

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
Friday	4 days
Saturday	2 days

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

Selected survey types:

Manual count	10 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
Neighbourhood Centre (PPS6 Local Centre)	3

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:

Residential Zone	8
Built-Up Zone	1
High Street	1

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.

Secondary Filtering selection:

Use Class:

A1	10 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	3 days
10,001 to 15,000	2 days
15,001 to 20,000	2 days
25,001 to 50,000	2 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	2 days
25,001 to 50,000	1 days
75,001 to 100,000	1 days
100,001 to 125,000	1 days
125,001 to 250,000	5 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	5 days
1.1 to 1.5	5 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.

Petrol filling station:

Included in the survey count	0 days
Excluded from count or no filling station	10 days

This data displays the number of surveys within the selected set that include petrol filling station activity, and the number of surveys that do not.

Travel Plan:

No	10 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.

PTAL Rating:

No PTAL Present	10 days

This data displays the number of selected surveys with PTAL Ratings.

LIST OF SITES relevant to selection parameters

1 CA-01-O-01 CO-OP CAMBRIDGESHIRE
MAYORS WALK
PETERBOROUGH
NETHERTON
Neighbourhood Centre (PPS6 Local Centre)
Residential Zone
Total Gross floor area: 375 sqm
Survey date: MONDAY 17/10/11 Survey Type: MANUAL

2 CB-01-O-01 CO-OPERATIVE CUMBRIA
DENTON STREET
CARLISLE

Suburban Area (PPS6 Out of Centre)
Built-Up Zone
Total Gross floor area: 300 sqm
Survey date: SATURDAY 25/06/16 Survey Type: MANUAL

3 DH-01-O-01 SAINSBURY'S LOCAL DURHAM
132 STATION LANE
HARTLEPOOL
SEATON CAREW
Suburban Area (PPS6 Out of Centre)
Residential Zone
Total Gross floor area: 469 sqm
Survey date: MONDAY 26/11/12 Survey Type: MANUAL

4 NE-01-O-01 TESCO EXPRESS NORTH EAST LINCOLNSHIRE
311 ASHBY HIGH STREET
SCUNTHORPE

Suburban Area (PPS6 Out of Centre)
Residential Zone
Total Gross floor area: 1200 sqm
Survey date: SATURDAY 17/05/14 Survey Type: MANUAL

5 NF-01-O-01 TESCO EXPRESS NORFOLK
DEREHAM ROAD
NORWICH

Suburban Area (PPS6 Out of Centre)
Residential Zone
Total Gross floor area: 298 sqm
Survey date: FRIDAY 26/10/12 Survey Type: MANUAL

6 NY-01-O-03 CO-OPERATIVE NORTH YORKSHIRE
FOREST ROAD
NORTHALLERTON

Suburban Area (PPS6 Out of Centre)
Residential Zone
Total Gross floor area: 305 sqm
Survey date: MONDAY 19/09/16 Survey Type: MANUAL

7 SY-01-O-02 SAINSBURY'S LOCAL SOUTH YORKSHIRE
ECCLESALL ROAD
SHEFFIELD

Neighbourhood Centre (PPS6 Local Centre)
High Street
Total Gross floor area: 306 sqm
Survey date: FRIDAY 14/12/12 Survey Type: MANUAL

8 TW-01-O-02 CO-OPERATIVE TYNE & WEAR
ETHEL TERRACE
SUNDERLAND
CASTLETOWN
Suburban Area (PPS6 Out of Centre)
Residential Zone
Total Gross floor area: 330 sqm
Survey date: FRIDAY 07/04/17 Survey Type: MANUAL

LIST OF SITES relevant to selection parameters (Cont.)

9 **WL-01-O-01** **ONE STOP** **WILTSHIRE**
THE CIRCLE
SWINDON

Suburban Area (PPS6 Out of Centre)
Residential Zone
Total Gross floor area: 292 sqm
Survey date: FRIDAY *23/09/16* *Survey Type: MANUAL*

10 **WY-01-O-02** **CO-OPERATIVE** **WEST YORKSHIRE**
AINSTY ROAD
WETHERBY

Neighbourhood Centre (PPS6 Local Centre)
Residential Zone
Total Gross floor area: 539 sqm
Survey date: MONDAY *26/09/16* *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 01 - RETAIL/O - CONVENIENCE STORE

MULTI-MODAL VEHICLES

Calculation factor: 100 sqm

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	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	4	379	3.560	4	379	3.098	4	379	6.658
07:00 - 08:00	10	441	5.596	10	441	5.392	10	441	10.988
08:00 - 09:00	10	441	6.729	10	441	6.275	10	441	13.004
09:00 - 10:00	10	441	5.754	10	441	5.460	10	441	11.214
10:00 - 11:00	10	441	5.868	10	441	5.596	10	441	11.464
11:00 - 12:00	10	441	5.777	10	441	5.890	10	441	11.667
12:00 - 13:00	10	441	8.088	10	441	7.522	10	441	15.610
13:00 - 14:00	10	441	5.890	10	441	5.800	10	441	11.690
14:00 - 15:00	10	441	6.819	10	441	6.570	10	441	13.389
15:00 - 16:00	10	441	7.182	10	441	7.272	10	441	14.454
16:00 - 17:00	10	441	8.632	10	441	7.703	10	441	16.335
17:00 - 18:00	10	441	8.768	10	441	8.790	10	441	17.558
18:00 - 19:00	**10**	**441**	**9.447**	**10**	**441**	**9.968**	**10**	**441**	**19.415**
19:00 - 20:00	10	441	7.046	10	441	7.703	10	441	14.749
20:00 - 21:00	9	458	3.130	9	458	4.221	9	458	7.351
21:00 - 22:00	9	458	2.572	9	458	3.033	9	458	5.605
22:00 - 23:00	3	681	0.587	3	681	0.978	3	681	1.565
23:00 - 24:00									
Total Rates:			101.445			101.271			202.716

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.*

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Parameter summary

Trip rate parameter range selected:	292 - 1200 (units: sqm)
Survey date date range:	01/01/10 - 07/04/17
Number of weekdays (Monday-Friday):	8
Number of Saturdays:	2
Number of Sundays:	0
Surveys automatically removed from selection:	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.

TRIP RATE for Land Use 01 - RETAIL/O - CONVENIENCE STORE

MULTI-MODAL TAXIS

Calculation factor: 100 sqm

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	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	4	379	0.000	4	379	0.000	4	379	0.000
07:00 - 08:00	10	441	0.068	10	441	0.068	10	441	0.136
08:00 - 09:00	10	441	0.136	10	441	0.091	10	441	0.227
09:00 - 10:00	10	441	0.045	10	441	0.068	10	441	0.113
10:00 - 11:00	10	441	0.045	10	441	0.045	10	441	0.090
11:00 - 12:00	10	441	0.068	10	441	0.091	10	441	0.159
12:00 - 13:00	**10**	**441**	**0.159**	**10**	**441**	**0.136**	**10**	**441**	**0.295**
13:00 - 14:00	10	441	0.091	10	441	0.113	10	441	0.204
14:00 - 15:00	10	441	0.091	10	441	0.068	10	441	0.159
15:00 - 16:00	10	441	0.045	10	441	0.068	10	441	0.113
16:00 - 17:00	10	441	0.068	10	441	0.045	10	441	0.113
17:00 - 18:00	10	441	0.068	10	441	0.045	10	441	0.113
18:00 - 19:00	10	441	0.068	10	441	0.091	10	441	0.159
19:00 - 20:00	10	441	0.000	10	441	0.023	10	441	0.023
20:00 - 21:00	9	458	0.049	9	458	0.049	9	458	0.098
21:00 - 22:00	9	458	0.049	9	458	0.049	9	458	0.098
22:00 - 23:00	3	681	0.000	3	681	0.000	3	681	0.000
23:00 - 24:00									
Total Rates:			1.050			1.050			2.100

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.*

TRIP RATE for Land Use 01 - RETAIL/O - CONVENIENCE STORE

MULTI-MODAL OGVS

Calculation factor: 100 sqm

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	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	4	379	0.000	4	379	0.000	4	379	0.000
07:00 - 08:00	**10**	**441**	**0.204**	**10**	**441**	**0.204**	**10**	**441**	**0.408**
08:00 - 09:00	10	441	0.159	10	441	0.113	10	441	0.272
09:00 - 10:00	10	441	0.068	10	441	0.113	10	441	0.181
10:00 - 11:00	10	441	0.023	10	441	0.023	10	441	0.046
11:00 - 12:00	10	441	0.068	10	441	0.068	10	441	0.136
12:00 - 13:00	10	441	0.068	10	441	0.045	10	441	0.113
13:00 - 14:00	10	441	0.023	10	441	0.045	10	441	0.068
14:00 - 15:00	10	441	0.000	10	441	0.000	10	441	0.000
15:00 - 16:00	10	441	0.023	10	441	0.023	10	441	0.046
16:00 - 17:00	10	441	0.023	10	441	0.000	10	441	0.023
17:00 - 18:00	10	441	0.000	10	441	0.023	10	441	0.023
18:00 - 19:00	10	441	0.000	10	441	0.000	10	441	0.000
19:00 - 20:00	10	441	0.000	10	441	0.000	10	441	0.000
20:00 - 21:00	9	458	0.000	9	458	0.000	9	458	0.000
21:00 - 22:00	9	458	0.000	9	458	0.000	9	458	0.000
22:00 - 23:00	3	681	0.000	3	681	0.000	3	681	0.000
23:00 - 24:00									
Total Rates:			0.659			0.657			1.316

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.*

TRIP RATE for Land Use 01 - RETAIL/O - CONVENIENCE STORE

MULTI-MODAL CYCLISTS

Calculation factor: 100 sqm

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	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	4	379	0.330	4	379	0.264	4	379	0.594
07:00 - 08:00	10	441	0.272	10	441	0.227	10	441	0.499
08:00 - 09:00	10	441	0.181	10	441	0.227	10	441	0.408
09:00 - 10:00	10	441	0.159	10	441	0.136	10	441	0.295
10:00 - 11:00	10	441	0.068	10	441	0.045	10	441	0.113
11:00 - 12:00	10	441	0.204	10	441	0.227	10	441	0.431
12:00 - 13:00	10	441	0.272	10	441	0.227	10	441	0.499
13:00 - 14:00	10	441	0.091	10	441	0.136	10	441	0.227
14:00 - 15:00	10	441	0.204	10	441	0.204	10	441	0.408
15:00 - 16:00	10	441	0.295	10	441	0.317	10	441	0.612
16:00 - 17:00	10	441	0.408	10	441	0.295	10	441	0.703
17:00 - 18:00	10	441	0.408	**10**	**441**	**0.408**	**10**	**441**	**0.816**
18:00 - 19:00	**10**	**441**	**0.430**	10	441	0.340	10	441	0.770
19:00 - 20:00	10	441	0.317	10	441	0.272	10	441	0.589
20:00 - 21:00	9	458	0.049	9	458	0.146	9	458	0.195
21:00 - 22:00	9	458	0.073	9	458	0.073	9	458	0.146
22:00 - 23:00	3	681	0.000	3	681	0.000	3	681	0.000
23:00 - 24:00									
Total Rates:			3.761			3.544			7.305

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.*

TRIP RATE for Land Use 01 - RETAIL/O - CONVENIENCE STORE

MULTI-MODAL VEHICLE OCCUPANTS

Calculation factor: 100 sqm

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	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	4	379	4.021	4	379	3.296	4	379	7.317
07:00 - 08:00	10	441	6.638	10	441	6.411	10	441	13.049
08:00 - 09:00	10	441	8.088	10	441	7.612	10	441	15.700
09:00 - 10:00	10	441	7.318	10	441	6.525	10	441	13.843
10:00 - 11:00	10	441	7.363	10	441	6.910	10	441	14.273
11:00 - 12:00	10	441	7.386	10	441	7.499	10	441	14.885
12:00 - 13:00	10	441	9.515	10	441	8.881	10	441	18.396
13:00 - 14:00	10	441	7.023	10	441	7.114	10	441	14.137
14:00 - 15:00	10	441	8.156	10	441	8.020	10	441	16.176
15:00 - 16:00	10	441	9.175	10	441	9.175	10	441	18.350
16:00 - 17:00	10	441	11.441	10	441	10.240	10	441	21.681
17:00 - 18:00	10	441	10.716	10	441	10.761	10	441	21.477
18:00 - 19:00	**10**	**441**	**12.279**	**10**	**441**	**12.687**	**10**	**441**	**24.966**
19:00 - 20:00	10	441	8.609	10	441	9.198	10	441	17.807
20:00 - 21:00	9	458	4.221	9	458	5.580	9	458	9.801
21:00 - 22:00	9	458	3.154	9	458	3.639	9	458	6.793
22:00 - 23:00	3	681	0.783	3	681	1.076	3	681	1.859
23:00 - 24:00									
Total Rates:			125.886			124.624			250.510

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.*

TRIP RATE for Land Use 01 - RETAIL/O - CONVENIENCE STORE

MULTI-MODAL PEDESTRIANS

Calculation factor: 100 sqm

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	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	4	379	2.571	4	379	2.505	4	379	5.076
07:00 - 08:00	10	441	4.667	10	441	4.055	10	441	8.722
08:00 - 09:00	10	441	7.272	10	441	6.842	10	441	14.114
09:00 - 10:00	10	441	6.162	10	441	5.483	10	441	11.645
10:00 - 11:00	10	441	6.547	10	441	6.570	10	441	13.117
11:00 - 12:00	10	441	6.683	10	441	6.366	10	441	13.049
12:00 - 13:00	10	441	6.910	10	441	6.910	10	441	13.820
13:00 - 14:00	10	441	7.318	10	441	7.657	10	441	14.975
14:00 - 15:00	10	441	6.683	10	441	7.159	10	441	13.842
15:00 - 16:00	**10**	**441**	**9.334**	10	441	8.518	**10**	**441**	**17.852**
16:00 - 17:00	10	441	7.635	10	441	7.907	10	441	15.542
17:00 - 18:00	10	441	8.428	10	441	8.473	10	441	16.901
18:00 - 19:00	10	441	8.450	**10**	**441**	**8.586**	10	441	17.036
19:00 - 20:00	10	441	7.589	10	441	8.586	10	441	16.175
20:00 - 21:00	9	458	5.531	9	458	5.774	9	458	11.305
21:00 - 22:00	9	458	4.779	9	458	5.216	9	458	9.995
22:00 - 23:00	3	681	0.147	3	681	0.098	3	681	0.245
23:00 - 24:00									
Total Rates:			106.706			106.705			213.411

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.*

TRIP RATE for Land Use 01 - RETAIL/O - CONVENIENCE STORE
MULTI-MODAL BUS/TRAM PASSENGERS
Calculation factor: 100 sqm
BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	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	4	379	0.000	4	379	0.000	4	379	0.000
07:00 - 08:00	10	441	0.136	10	441	0.045	10	441	0.181
08:00 - 09:00	10	441	0.295	10	441	0.385	10	441	0.680
09:00 - 10:00	10	441	0.181	10	441	0.136	10	441	0.317
10:00 - 11:00	10	441	0.385	10	441	0.385	10	441	0.770
11:00 - 12:00	10	441	0.317	10	441	0.227	10	441	0.544
12:00 - 13:00	10	441	0.181	10	441	0.362	10	441	0.543
13:00 - 14:00	10	441	0.181	10	441	0.136	10	441	0.317
14:00 - 15:00	10	441	0.453	10	441	0.272	10	441	0.725
15:00 - 16:00	10	441	0.181	10	441	0.204	10	441	0.385
16:00 - 17:00	10	441	0.136	10	441	0.091	10	441	0.227
17:00 - 18:00	**10**	**441**	**0.657**	**10**	**441**	**0.657**	**10**	**441**	**1.314**
18:00 - 19:00	10	441	0.362	10	441	0.295	10	441	0.657
19:00 - 20:00	10	441	0.136	10	441	0.091	10	441	0.227
20:00 - 21:00	9	458	0.073	9	458	0.049	9	458	0.122
21:00 - 22:00	9	458	0.024	9	458	0.024	9	458	0.048
22:00 - 23:00	3	681	0.000	3	681	0.000	3	681	0.000
23:00 - 24:00									
Total Rates:			3.698			3.359			7.057

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.*

TRIP RATE for Land Use 01 - RETAIL/O - CONVENIENCE STORE
MULTI-MODAL TOTAL RAIL PASSENGERS
Calculation factor: 100 sqm
BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	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	4	379	0.000	4	379	0.000	4	379	0.000
07:00 - 08:00	10	441	0.000	10	441	0.000	10	441	0.000
08:00 - 09:00	10	441	0.045	10	441	0.000	10	441	0.045
09:00 - 10:00	10	441	0.000	10	441	0.023	10	441	0.023
10:00 - 11:00	10	441	0.023	10	441	0.000	10	441	0.023
11:00 - 12:00	10	441	0.000	10	441	0.000	10	441	0.000
12:00 - 13:00	10	441	0.000	10	441	0.000	10	441	0.000
13:00 - 14:00	10	441	0.000	10	441	0.000	10	441	0.000
14:00 - 15:00	10	441	0.000	10	441	0.000	10	441	0.000
15:00 - 16:00	10	441	0.023	10	441	0.000	10	441	0.023
16:00 - 17:00	10	441	0.000	10	441	0.000	10	441	0.000
17:00 - 18:00	**10**	**441**	**0.068**	**10**	**441**	**0.113**	**10**	**441**	**0.181**
18:00 - 19:00	10	441	0.045	10	441	0.045	10	441	0.090
19:00 - 20:00	10	441	0.023	10	441	0.023	10	441	0.046
20:00 - 21:00	9	458	0.000	9	458	0.000	9	458	0.000
21:00 - 22:00	9	458	0.000	9	458	0.000	9	458	0.000
22:00 - 23:00	3	681	0.000	3	681	0.000	3	681	0.000
23:00 - 24:00									
Total Rates:			0.227			0.204			0.431

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.*

TRIP RATE for Land Use 01 - RETAIL/O - CONVENIENCE STORE
MULTI-MODAL PUBLIC TRANSPORT USERS
Calculation factor: 100 sqm
BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	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	4	379	0.000	4	379	0.000	4	379	0.000
07:00 - 08:00	10	441	0.136	10	441	0.045	10	441	0.181
08:00 - 09:00	10	441	0.340	10	441	0.385	10	441	0.725
09:00 - 10:00	10	441	0.181	10	441	0.159	10	441	0.340
10:00 - 11:00	10	441	0.408	10	441	0.385	10	441	0.793
11:00 - 12:00	10	441	0.317	10	441	0.227	10	441	0.544
12:00 - 13:00	10	441	0.181	10	441	0.362	10	441	0.543
13:00 - 14:00	10	441	0.181	10	441	0.136	10	441	0.317
14:00 - 15:00	10	441	0.453	10	441	0.272	10	441	0.725
15:00 - 16:00	10	441	0.204	10	441	0.204	10	441	0.408
16:00 - 17:00	10	441	0.136	10	441	0.091	10	441	0.227
17:00 - 18:00	**10**	**441**	**0.725**	**10**	**441**	**0.770**	**10**	**441**	**1.495**
18:00 - 19:00	10	441	0.408	10	441	0.340	10	441	0.748
19:00 - 20:00	10	441	0.159	10	441	0.113	10	441	0.272
20:00 - 21:00	9	458	0.073	9	458	0.049	9	458	0.122
21:00 - 22:00	9	458	0.024	9	458	0.024	9	458	0.048
22:00 - 23:00	3	681	0.000	3	681	0.000	3	681	0.000
23:00 - 24:00									
Total Rates:			3.926			3.562			7.488

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.*

TRIP RATE for Land Use 01 - RETAIL/O - CONVENIENCE STORE

MULTI-MODAL TOTAL PEOPLE

Calculation factor: 100 sqm

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	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	4	379	6.922	4	379	6.065	4	379	12.987
07:00 - 08:00	10	441	11.713	10	441	10.739	10	441	22.452
08:00 - 09:00	10	441	15.881	10	441	15.066	10	441	30.947
09:00 - 10:00	10	441	13.820	10	441	12.302	10	441	26.122
10:00 - 11:00	10	441	14.386	10	441	13.910	10	441	28.296
11:00 - 12:00	10	441	14.590	10	441	14.318	10	441	28.908
12:00 - 13:00	10	441	16.878	10	441	16.380	10	441	33.258
13:00 - 14:00	10	441	14.613	10	441	15.043	10	441	29.656
14:00 - 15:00	10	441	15.496	10	441	15.655	10	441	31.151
15:00 - 16:00	10	441	19.008	10	441	18.215	10	441	37.223
16:00 - 17:00	10	441	19.619	10	441	18.532	10	441	38.151
17:00 - 18:00	10	441	20.276	10	441	20.412	10	441	40.688
18:00 - 19:00	**10**	**441**	**21.568**	**10**	**441**	**21.953**	**10**	**441**	**43.521**
19:00 - 20:00	10	441	16.674	10	441	18.169	10	441	34.843
20:00 - 21:00	9	458	9.874	9	458	11.548	9	458	21.422
21:00 - 22:00	9	458	8.030	9	458	8.952	9	458	16.982
22:00 - 23:00	3	681	0.930	3	681	1.174	3	681	2.104
23:00 - 24:00									
Total Rates:			240.278			238.433			478.711

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.*

TRIP RATE for Land Use 01 - RETAIL/O - CONVENIENCE STORE
MULTI-MODAL Servicing Vehicles
Calculation factor: 100 sqm
BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	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	4	379	0.000	4	379	0.000	4	379	0.000
07:00 - 08:00	**10**	**441**	**0.068**	**10**	**441**	**0.045**	**10**	**441**	**0.113**
08:00 - 09:00	10	441	0.023	10	441	0.045	10	441	0.068
09:00 - 10:00	10	441	0.000	10	441	0.000	10	441	0.000
10:00 - 11:00	10	441	0.000	10	441	0.000	10	441	0.000
11:00 - 12:00	10	441	0.000	10	441	0.000	10	441	0.000
12:00 - 13:00	10	441	0.000	10	441	0.000	10	441	0.000
13:00 - 14:00	10	441	0.000	10	441	0.000	10	441	0.000
14:00 - 15:00	10	441	0.000	10	441	0.000	10	441	0.000
15:00 - 16:00	10	441	0.000	10	441	0.000	10	441	0.000
16:00 - 17:00	10	441	0.000	10	441	0.000	10	441	0.000
17:00 - 18:00	10	441	0.000	10	441	0.000	10	441	0.000
18:00 - 19:00	10	441	0.000	10	441	0.000	10	441	0.000
19:00 - 20:00	10	441	0.000	10	441	0.000	10	441	0.000
20:00 - 21:00	9	458	0.000	9	458	0.000	9	458	0.000
21:00 - 22:00	9	458	0.000	9	458	0.000	9	458	0.000
22:00 - 23:00	3	681	0.000	3	681	0.000	3	681	0.000
23:00 - 24:00									
Total Rates:			0.091			0.090			0.181

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.*

Appendix C

Census Outputs

C11
Scotland's Census 2011 - National Records of Scotland
Table 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 the week before the census

Settlement/Locality 2010 by Transport to place of work or study by Term-time Address (Indicator) and In education or employment
Counting: Person

Filters:

Default Summation	Person
Term-time Address (Indicator)	Resident
In education or employment	In education or employment - Part time students

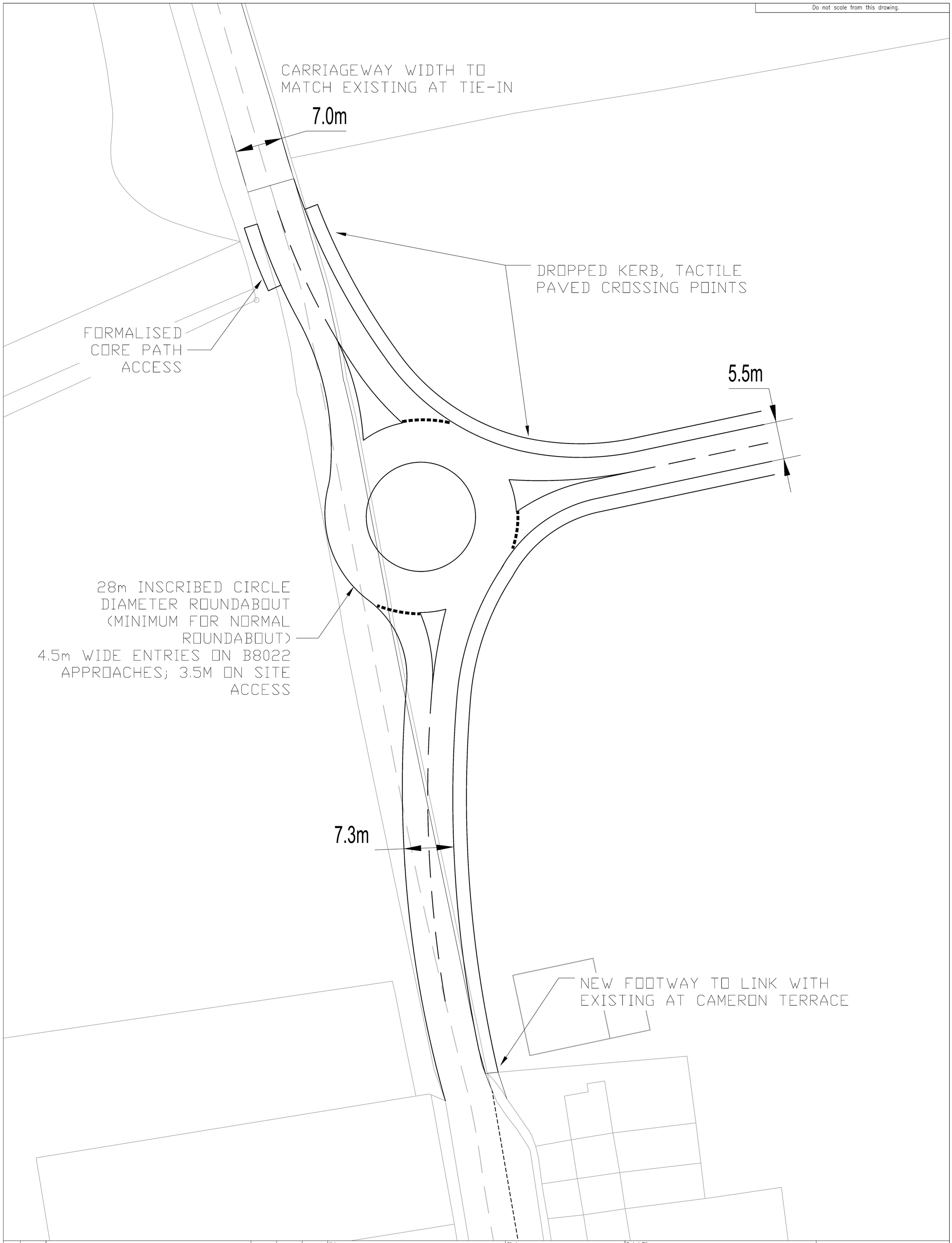
Transport to place of work or study	All people	Work or study mainly at or from home	Underground, metro, light rail or tram	Train	Bus, minibus or coach	Taxi or minicab	Driving a car or van	Passenger in a car or van	Motorcycle, scooter or moped	Bicycle	On foot	Other
Settlement/Locality 2010												
Slamannan	794	112	0	24	132	9	342	70	1	4	96	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.
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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.

Appendix D

Site Access Layout Drawing

Do not scale from this drawing.



Rev.	Date	Description	Drawn	Checked	Approved

Notes:

Client:

ROBERT MACDONALD CLARKSTON

Project Title:

PROPOSED RESIDENTIAL DEVELOPMENT, LIMERIGG

Drawing Title:

INDICATIVE SITE ACCESS ROUNDABOUT LAYOUT

FAIRHURST
43 George Street,
EDINBURGH, EH2 2HT
Tel: 0131 225 6741 Fax: 0844 381 4412

Scale at A1:	Status:	
1:250	For Information	
Drawn: CJ	Checked: DS	Approved: DS
Date: 28/11/18	Date: 28/11/18	Date: 28/11/18
Drawing No.: 126811/sk7001		Revision: –

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FAIRHURST

Reference No. P/18/0693/PPP

Please note: this permission does not carry with it any necessary consent or approval for the proposed development under any other statutory enactments.

Town and Country Planning (Scotland) Act 1997 as Amended
Issued under a Statutory Scheme of Delegation.

Falkirk Council

Planning Permission in Principle

Agent

Ross Wood Architects
Dean J Ross
54 Berkeley Street
Glasgow
G3 7DS

Applicant

Mr Robert MacDonald Clarkston
Whiteside Farm
California Road
Shieldhill
Falkirk
FK1 2BN

This Notice refers to your application registered on 30 November 2018 for permission in respect of the following development:-

Development Development of Land for Residential Purposes and Erection of Shop (Class 1) at

Location Land To The North Of 1 Cameron Terrace, Slamannan Road, Limerigg

The application was determined under Delegated Powers. Please see the attached guidance notes for further information, including how to request a review of the decision.

In respect of applications submitted on or after 1 January 2010, Falkirk Council does not issue paper plans. Plans referred to in the informatives below can be viewed online by inserting your application number P/18/0693/PPP at http://edevelopment.falkirk.gov.uk/online/

In accordance with the plans docquetted or itemised in the attached informatives as relative hereto, Falkirk Council, in exercise of its powers under the above legislation, hereby

Grants Planning Permission in Principle

This decision is issued subject to the following conditions:-

1. Plans and particulars of the matters specified below shall be submitted for consideration by the planning authority, in accordance with the timescales and other limitations in section 59 of the Town and Country Planning (Scotland) Act 1997 (as amended). No work shall begin until the written approval of the authority has been given, and the development shall be carried out in accordance with that approval. The specified matters are:

   (a) the siting of the building(s);
   (b) the design of the building(s);
   (c) the external appearance of the building(s);
   (d) details of the access arrangements;
   (e) details of landscaping of the site; and
   (f) details of proposed boundary treatments.

2. Further to condition 1(d) above, the details of the access arrangements shall include:-

   (a) The provision of a roundabout access [compliant with the Design Manual for Roads and Bridges (DMRB)] or other junction where it can be demonstrated that it complies with the DMRB and can safely serve the development and operate within capacity;
   (b) The provision of a bus layby and bus stop on the northern exit from the roundabout;
   (c) The provision of a 2 metre wide footway across the full frontage of the site to tie in with the existing footway at Cameron Terrace; and

(d) The provision of a pedestrian crossing island on the B8022 to link the site to the core path.

The approved works shall be fully completed prior to occupation of the proposed development.

3. Further to condition 1(e) above, the landscaping details shall include (as appropriate):-

(a) An indication of existing trees, shrubs and hedges to be removed, those to be retained and, in the case of damage, proposals for their restoration;
(b) The location of all new trees, shrubs, hedges and grassed areas;
(c) A schedule of plants to comprise species, plant sizes and proposed numbers/density;
(d) The provision of a 6 metre wide landscape buffer along the boundary watercourse; and
(e) A programme for completion and subsequent maintenance.

Thereafter the development shall be carried out in accordance with the approved details. No existing trees, hedges or shrubs shall be removed prior to approval of the landscaping details.

4. As part of the first application for the approval of Matters Specified in Conditions, the proposed surface water drainage strategy and associated design detail (as appropriate) shall be submitted for the written approval of this Planning Authority. Thereafter the development shall be carried out in accordance with the approved details.

5. As part of the first application for the approval of Matters Specified in Conditions, a Peat Management Plan (PMP) shall be submitted for the written approval of this Planning Authority. The PMP shall be informed by a detailed site investigation confirming, or otherwise, the presence of peat. The PMP should provide information on how to deal with peat deposits if found on site.

6. As part of the first application for the approval of Matters Specified in Conditions, a contaminated land assessment shall be submitted for the written approval of this Planning Authority. Before occupation of each dwellinghouse, (1) any necessary remedial works to make the ground safe shall be carried out in accordance with an approved remediation strategy and (2) any necessary remediation completion report/validation certificate shall be submitted to and approved in writing by this Planning Authority.

7. No development shall commence on site until an appropriate scheme of intrusive site investigation works has been undertaken to confirm coal mining conditions, including mine entries on site. The findings and details of any necessary remedial or other mitigation measures to ensure safety and stability of the proposed development shall be submitted to and approved in writing by this Planning Authority. The approved mitigation measures shall be implemented prior to the development commencing.

8. No development shall commence on site until a material schedule, of all external materials, has been submitted to and approved in writing by this Planning Authority. Thereafter, only the approved materials shall be used, unless otherwise agreed in writing.

9. There shall be no built development, including SUDs, located within the functional floodplain as shown on the drawing titled '1 in 200yr flood extents' (drawing number 126811/2001) of the approved Flood Risk Assessment, May 2019.

10. In-curtilage parking shall be provided in accordance with the National Roads Development Guide (NRDG).

11. The development hereby approved will not be occupied or brought into use until the following documents have been submitted to and approved in writing by the Planning Authority:

i) a copy of the appropriate sustainability label (i.e. at least Bronze Active); and

ii) a Statement of Conformity which confirms that 10%, of the required CO2 emissions reduction is achieved through the installation of low and zero carbon generating technologies.

Details and a timetable of how this is to be achieved, including details of physical works on site, shall be submitted to and approved in writing by Falkirk Council. The approved details shall be implemented in accordance with the approved timetable and retained as operational thereafter, unless otherwise agreed in writing by the Local Planning Authority.

12. The Class 1 shop, hereby approved, shall not exceed 1000 square metres gross floorspace.

13. No development shall commence on site until a public art proposal, to be developed on site, is submitted to and approved in writing by this Planning Authority. Thereafter, the public art proposal shall be implemented in accordance with the approved details prior to occupation of the last dwellinghouse on the site, unless otherwise agreed in writing.

14. For the avoidance of doubt the drawings forming part of this planning approval are indicative only, except for the approved location plan.

Reason(s):

1. To ensure that the matters specified are given full consideration and to accord with section 59 of the Town and Country Planning (Scotland) Act 1997 as amended by the Planning etc. (Scotland) Act 2006.

2. To ensure the provision of a suitable access to serve the proposed development.

3,8,13. To safeguard the visual amenity of the area.

4. To ensure that adequate drainage is provided.

5. To protect peat and carbon rich soil.

6,7. To ensure the ground is suitable for the proposed development.

8. To safeguard the visual amenity of the area.

9. To protect residents from flood risk.

10. To safeguard the interests of the users of the highway.

11. To ensure that full consideration is given to the achievement of Low and/or Zero Carbon Development in accordance with Falkirk Local Development Plan Policy D04 and Supplementary Guidance SG15, and to accord with section 59 of the Town and Country Planning (Scotland) Act 1997 as amended by the Planning etc. (Scotland) Act 2006.

12. To ensure the shop serves neighbourhood needs.

14. To enable the Planning Authority to consider this/these aspect(s) in detail.

A Planning Obligation in terms of Section 75 of the Town and Country Planning (Scotland) Act 1997 has been entered into in connection with this application. The terms of the Obligation can be viewed online by inserting the planning application number P/18/0693/PPP at http://edevelopment.falkirk.gov.uk/online/ or in person at Development Services, Abbotsford House, Davids Loan, Falkirk FK2 7YZ during normal office hours.

Informatives:

1. Plans and particulars of the matters listed above shall be submitted for consideration by the planning authority, in accordance with the timescales and other limitations in section 59 of the Town and Country Planning (Scotland) Act 1997 (as amended). No work shall begin until the written approval of Falkirk Council as planning authority has been given, and the development shall be carried out in accordance with that approval.

2. For the avoidance of doubt, the plan(s) to which this decision refer(s) bear our online reference number(s) 01A, 02A and Supporting Documents.

3. The applicant shall ensure that noisy work which is audible at the site boundary shall ONLY be conducted between the following hours:

Monday to Friday	08:00 - 19:00 Hours
Saturday	08:00 - 13:00 Hours
Sunday / Bank Holidays	No noise audible at site boundary

Deviation from these hours of work is not permitted unless in emergency circumstances and with the prior approval of the Environmental Protection Unit.

25 September 2019

[redacted]
Director of Development Services

19/40721

Books of Council and Session

Extract Registered 23 Sep 2019

PLANNING OBLIGATION

FALKIRK COUNCIL
RMC DEVELOPMENTS (SCOTLAND) LIMITED
ROBERT MACDONALD CLARKSON

Deed extract

Registers of Scotland

Registers of Scotland

19/40721
AT EDINBURGH the Twenty Third day of September Two thousand and nineteen the Deed hereinafter reproduced was presented for registration in the Books of the Lords of Council and Session for preservation and execution and is registered in the said Books as follows:-

PLANNING OBLIGATION

between

FALKIRK COUNCIL, constituted under the Local Government Etc (Scotland) Act 1994 and having its principal offices at Municipal Buildings, Falkirk FK1 5RS, as planning authority for the District of Falkirk in terms of the Town and Country Planning (Scotland) Act 1997 (who and whose statutory successors as planning authority are hereinafter referred to as "the Council")

and

RMC DEVELOPMENTS (SCOTLAND) LIMITED incorporated under the Companies Acts (Company Number SC611348) and having their Registered Office at 17 Wellgate Street, Larkhall ML9 2AG (who and whose successors in title in substitution therefor to the whole or any part of the Site are hereinafter referred to as "**the Landowner**")

with the consent of

ROBERT MACDONALD CLARKSON residing at Whiteside Farm, Slamannan, Falkirk FK1 3BX (hereinafter referred to as "**the Applicant**")

WHEREAS

1. The Council is the Planning Authority for inter alia the Site for the purposes of the Town and Country Planning (Scotland) Act 1997.

2. The Planning Application has been made to the Council by the Applicant.

3. The Council on 5 July 2019 was minded to grant planning permission for the Development subject to various conditions including the entering into of the Planning Obligation;

4. The Landowner is the proprietor of the Site;

5. In terms of Section 75 of the Town and Country Planning (Scotland) Act 1997, a person may, in respect of land in the district of a planning authority, by agreement with that

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planning authority, enter into a planning obligation for the purpose of restricting or regulating the development or use of the land either permanently or during such period as may be prescribed by the planning obligation and such planning obligation may contain provisions of a financial character and such incidental or consequential provisions as appear to the planning authority to be necessary or expedient for the purpose of that planning obligation. The Council as such planning authority considers it necessary and expedient to enter into the Planning Obligation in terms of the said Section 75 and has agreed with the Landowner and the Applicant to enter into the Planning Obligation; and

6. The Applicant consents to the parties hereto entering into the Planning Obligation for his interest in the Planning Application;

NOW THEREFORE the Council and the Landowner in terms of the said Section 75 DO HEREBY OBLIGE THEMSELVES as follows:-

1 Definitions

In the Planning Obligation, unless the context otherwise requires or admits, the following expressions shall have the following meanings:-

1.1 **"Affordable Housing"** means social rented residential accommodation as provided for in section 3 of the Affordable Housing SG;

1.2 **"Affordable Housing SG"** means Falkirk Council's Affordable Housing Supplementary Guidance SG12 of 2015 or any subsequent affordable housing policy formally adopted by the Council;

1.3 **"Commencement of Development"** means the initiation of any part of the Development in terms of the Planning Permission or any Further Planning Permission by the carrying out of a Material Operation;

1.4 **"Completion Date 1"** means the date on which an acceptance of a Completion Certificate is issued by Falkirk Council's Building Standards Unit relative to the nth Unit in respect of which an acceptance of a Completion Certificate is so issued where "n" is a number equal to 25% of the number of Units the building of which is permitted in terms of the Further Planning Permission to which it relates and where "n" is a whole number or is rounded up to the nearest whole number;

1.5 **"Completion Date 2"** means the date on which an acceptance of a Completion Certificate is issued by Falkirk Council's Building Standards Unit relative to the nth Unit in respect of which an acceptance of a Completion Certificate is so issued where "n" is a number equal to 50% of the number of Units the building of which is permitted in terms of the Further Planning Permission to which it relates and where "n" is a whole number or is rounded up to the nearest whole number;

1.6 **"Completion Date 3"** means the date on which an acceptance of a Completion Certificate is issued by Falkirk Council's Building Standards Unit relative to the nth Unit in respect of which an acceptance of a Completion Certificate is so issued where "n" is a number equal to 75% of the number of Units the building of which is permitted in terms of the Further Planning Permission to which it relates and where "n" is a whole number or is rounded up to the nearest whole number;

1.7 **"Development"** means the construction on the Site of Units and a shop (Class 1) as permitted by the Planning Permission and/or any Further Planning Permission;

1.8 **"Education Payment 1"** means 33% of the sum equal to £2,600 for each Unit the building of which is permitted in terms of the Further Planning Permission to which it relates;

1.9 **"Education Payment 2"** means 33% of the sum equal to £2,600 for each Unit the building of which is permitted in terms of the Further Planning Permission to which it relates;

1.10 **"Education Payment 3"** means 34% of the sum equal to £2,600 for each Unit the building of which is permitted in terms of the Further Planning Permission to which it relates;

1.11 **"Education SG"** means Falkirk Council's "Education and New Housing Development Supplementary Guidance SG10 July 2015" or any subsequent similar policy formally adopted by the Council;

1.12 **"Flatted Unit"** means any property for sale or rent existing, constructed and designed and having permission in terms of a Further Planning Permission for use as a dwellinghouse including a building or part of building which is occupied or intended to be occupied as a separate property and which comprises a flatted property;

1.13 **"Footpath Payment"** means the sum of £74,000;

1.14 **"Further Planning Application"** means any application which is submitted to the Council for approval of matters specified in conditions in the Planning Permission;

1.15 **"Further Planning Permission"** means the grant of permission to which a Further Planning Application relates;

1.16 **"Indexation Figure 1"** means the amount of the Footpath Payment multiplied by the percentage increase or decrease as the case may be in the General Building Cost Index issued by the Building Cost Information Service of the Royal Institute of Chartered Surveyors between 5 July 2019 and Payment Date 1;

1.17 **"Indexation Figure 2"** means the amount of Education Payment 1 plus Open Space Payment 1 multiplied by the percentage increase or decrease as the case may be in the General Building Cost Index issued by the Building Cost Information Service of the Royal Institute of Chartered Surveyors between 5 July 2019 and Payment Date 2;

1.18 **"Indexation Figure 3"** means the amount of Education Payment 2 plus Open Space Payment 2 multiplied by the percentage increase or decrease as the case may be in the General Building Cost Index issued by the Building Cost Information Service of the Royal Institute of Chartered Surveyors between 5 July 2019 and Payment Date 3;

1.19 **"Indexation Figure 4"** means the amount of Education Payment 3 plus Open Space Payment 3 multiplied by the percentage increase or decrease as the case may be in the General Building Cost Index issued by the Building Cost Information Service of the Royal Institute of Chartered Surveyors between 5 July 2019 and Payment Date 4;

1.20 **"Material Operation"** means a material operation as defined in Section 27(4) of the Town and Country Planning (Scotland) Act 1997;

1.21 **"Non-flatted Unit"** means any property for sale or rent existing, constructed and designed and having permission in terms of a Further Planning Permission for use as a dwellinghouse including a building or part of building which is occupied or intended to be occupied as a separate property other than a flatted property;

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1.22 **"Occupation Date 1"** means the date on which the nth Unit to be occupied becomes occupied where "n" is a number equal to 25% of the number of Units the building of which is permitted in terms of the Further Planning Permission to which it relates and where "n" is a whole number or is rounded up to the nearest whole number;

1.23 **"Occupation Date 2"** means the date on which the nth Unit to be occupied becomes occupied where "n" is a number equal to 50% of the number of Units the building of which is permitted in terms of the Further Planning Permission to which it relates and where "n" is a whole number or is rounded up to the nearest whole number;

1.24 **"Occupation Date 3"** means the date on which the nth Unit to be occupied becomes occupied where "n" is a number equal to 75% of the number of Units the building of which is permitted in terms of the Further Planning Permission to which it relates and where "n" is a whole number or is rounded up to the nearest whole number;

1.25 **"Open Space Payment 1"** means 33% of the sum equal to £955.50 for each Flatted Unit and 50% of the sum equal to £1,911 for each Non-flatted Unit the building of which is permitted in terms of the Further Planning Permission to which they relate;

1.26 **"Open Space Payment 2"** means 33% of the sum equal to £955.50 for each Flatted Unit and 50% of the sum equal to £1,911 for each Non-flatted Unit the building of which is permitted in terms of the Further Planning Permission to which they relate;

1.27 **"Open Space Payment 3"** means 34% of the sum equal to £955.50 for each Flatted Unit and 50% of the sum equal to £1,911 for each Non-flatted Unit the building of which is permitted in terms of the Further Planning Permission to which they relate;

1.28 **"Open Space SG"** means Falkirk Council's "Open Space and New Development Supplementary Guidance SG13 July 2015" or any subsequent similar policy formally adopted by the Council;

1.29 **"Payment Date 1"** means the day before the date of Commencement of Development;

1.30 **"Payment Date 2"** means the date 7 Working Days after Completion Date 1 and in any event prior to Occupation Date 1;

1.31 **"Payment Date 3"** means the date 7 Working Days after Completion Date 2 and in any event prior to Occupation Date 2;

1.32 **"Payment Date 4"** means the date 7 Working Days after Completion Date 3 and in any event prior to Occupation Date 3;

1.33 **"Planning Application"** means the application in respect of the Development submitted by the Applicant and allocated reference P/18/0693/PPP by the Council;

1.34 **"Planning Obligation"** means this planning obligation under Section 75 of the Town and Country Planning (Scotland) Act 1997 between the Council and the Landowner with consent of the Applicant;

1.35 **"Planning Permission"** means the planning permission for the Development to be issued following the registration of the Planning Obligation pursuant to the Planning Application and any planning permission subsequently issued following an application under Section 42 of the Town and Country Planning (Scotland) Act 1997 to develop land without compliance with conditions previously attached;

1.36 **"Registration Date"** means the date of registration of the Planning Obligation in the Land Register of Scotland against the Site;

1.37 **"Site"** means that area of ground which is to be affected by the terms of this Planning Obligation being the subjects on the east side of Slamannan Road, Falkirk and lying to the north of 1 Cameron Terrace, Slamannan Road, Limerigg, Falkirk registered in the Land Register of Scotland under Title Number STG71568;

1.38 **"Unit"** means any property which is a Flatted Unit or a Non-Flatted Unit;

1.39 **"Working Day"** means Monday to Friday inclusive throughout the year apart from (1) any days which are official public holidays within Falkirk or Bo'ness and (2) any days which are official bank holidays throughout the whole of Scotland.

2 Interpretation

2.1 In this Planning Obligation references to any Act of Parliament shall include any modification, extension or re-enactment thereof for the time being in force and shall include all instruments, orders, notices, plans, regulations, bye-laws, permissions and directions for the time being made, issued, or give thereunder or deriving validity therefrom.

2.2 Time shall be of the essence unless specified otherwise.

3 Landowner's Obligations

3.1 Payment

3.1.1 On or before Payment Date 1, the Footpath Payment, reduced/increased as the case may be by the Indexation Figure 1 will be paid in cleared funds by the Landowner to the Council.

3.1.2 On or before Payment Date 2, Education Payment 1 and Open Space Payment 1, reduced/increased as the case may be by the Indexation Figure 2 will be paid in cleared funds by the Landowner to the Council.

3.1.3 On or before Payment Date 3, Education Payment 2 and Open Space Payment 2, reduced/increased as the case may be by the Indexation Figure 3 will be paid in cleared funds by the Landowner to the Council.

3.1.4 On or before Payment Date 4, Education Payment 3 and Open Space Payment 3, reduced/increased as the case may be by the Indexation Figure 4 will be paid in cleared funds by the Landowner to the Council.

3.1.5 Notwithstanding the terms of 3.1.2, 3.1.3 and 3.1.4 above, Open Space Payment 1, Open Space Payment 2 and Open Space Payment 3 shall not become payable hereunder unless the open space requirement generated in accordance with the figures set out in the Open Space SG has not been accommodated in terms of any Further Planning Permission. In the event that the open space requirement generated in accordance with the figures set out in the Open Space SG has been partially but not fully accommodated in terms of any Further Planning Permission, Open Space Payment 1, Open Space Payment 2 and Open Space Payment 3 will be reduced in proportion to the extent to which the open space requirement has been accommodated in terms of any Further Planning Permission.

3.1.6 In the event of failure by the Landowner to pay the sums due under 3.1.1, 3.1.2, 3.1.3 or 3.1.4 above, or any part thereof, on the date on which the relevant sums fall due, they will pay to the Council interest on the relevant sums at the rate of four per centum per annum above the base rate fixed from time to time by the Royal Bank of Scotland plc from the dates on which the relevant sums fall due until settlement in full.

3.1.7 The Landowner binds and obliges itself to give 5 days written notice to the Council of Payment Date 1, Payment Date 2, Payment Date 3 and Payment Date 4.

3.2 **Affordable Housing**

3.2.1 The Landowner must build at least 25% of the Units as Affordable Housing, 25% being calculated to the nearest whole number, rounded down.

3.2.2 Prior to Commencement of Development, the Landowner will agree a written programme with the Council as to the type, method, timing and phasing of delivery of the Units to be built as Affordable Housing and thereafter the said Units will be delivered in accordance with that agreed programme, with both parties being obliged to act reasonably and expeditiously with regard to such agreement.

3.2.3 No Commencement of Development may occur before the Landowner has agreed the written programme with the Council referred to in 3.2.2 above.

3.3 **Occupation**

3.3.1 No Commencement of Development may occur before the Footpath Payment, Indexation Figure 1 and any interest due thereon has been paid to the Council.

3.3.2 There will be no occupation of any Unit beyond the Unit immediately prior to the nth Unit as defined in terms of Completion Date 1 and Occupation Date 1 before Education Payment 1, Open Space Payment 1, Indexation Figure 2 and any interest due thereon has been paid to the Council.

3.3.3 There will be no occupation of any Unit beyond the Unit immediately prior to the nth Unit as defined in terms of Completion Date 2 and Occupation Date 2 before Education Payment 2, Open Space Payment 2, Indexation Figure 3 and any interest due thereon has been paid to the Council.

3.3.4 There will be no occupation of any Unit beyond the Unit immediately prior to the nth Unit as defined in terms of Completion Date 3 and Occupation Date 3 before Education Payment 3, Open Space Payment 3, Indexation Figure 4 and any interest due thereon has been paid to the Council.

3.4 **Council's Obligations**

3.4.1 The Council binds and obliges itself to apply the Footpath Payment and Indexation Figure 1 only towards the provision or upgrading of footpaths to allow a safe route to Limerigg Primary School.

3.4.2 The Council binds and obliges itself to apply each sum of £2,600 received as Education Payment , Education Payment 2 and Education Payment 3 together with a pro rata proportion of Indexation Figure 2, Indexation Figure 3 and Indexation Figure 4 only in accordance with the Education SG towards addressing education provision deficiencies at Limerigg Primary School necessary as a result of the impact of the proposed Development.

3.4.3 The Council binds and obliges itself to apply Open Space Payment 1, Open Space Payment 2 and Open Space Payment 3 together with a pro rata proportion of Indexation Figure 2, Indexation Figure 3 and Indexation Figure 4 only towards the provision, improvement or maintenance of existing or new active open space in the surrounding area of the Site in accordance with the Open Space SG.

3.4.4 Upon receipt of each of the Footpath Payment, Education Payment 1, Education Payment 2, Education Payment 3, Open Space Payment 1, Open Space Payment 2, Open Space Payment 3, Indexation Figure 1, Indexation Figure 2, Indexation Figure 3 and Indexation Figure 4, the Council shall place the relevant sum or sums in an interest bearing suspense account until spent in their entirety. Declaring that a certificate issued by the Council for the purposes of this clause to the effect that the relevant sum or sums have been properly applied shall save in the case of manifest error, be final and conclusive that the relevant sum or sums have been spent on purposes within the remit of this clause 3.4. If the Council does not expend the sum or sums within the remit of this clause 3.4 within ten years of Payment Date 4, the Council shall refund the relevant sum or sums to the Landowner, together with interest thereon.

4 Effective Date of this Planning Obligation/Enforceability

4.1 If any provision contained in the Planning Obligation is held in any proceedings to be incompetent or unenforceable then all other provisions of the Planning Obligation will remain valid and enforceable.

4.2 If and to the extent that any provision contained in the Planning Obligation is held in any proceeding to be a provision which cannot be competently included or enforced in

an agreement entered into under the said Section 75, such provision shall be and remain enforceable to the same extent and effect as if the Planning Obligation were an agreement in contract entered into between the parties at the relevant time holding the interests respectively of the Council, the Landowner and the Applicant. Further, the whole rights and remedies of the parties arising from the Planning Obligation, with and under the foregoing proviso, shall be exercisable without prejudice to any other rights and remedies competent to them under statute or at common law, or otherwise.

4.3 The obligations, undertakings and others of the Landowner in terms of this Planning Obligation are joint and several by the parties comprising the Landowner at the relevant time.

4.4 Notwithstanding the terms of section 75C of the Town and Country Planning (Scotland) Act 1997, which is to have no application to this Planning Obligation, on ceasing to be registered proprietor of the Site or any part of it the Landowner shall cease to be liable for any obligations contained in this Planning Obligation insofar as relating to the part of the Site to which it has ceased to be registered proprietor save in the case of any antecedent breach.

4.5 The obligations in terms of Clause 3 of the Planning Obligation shall only come into full force and effect upon the date of issue of the Planning Permission.

4.6 Prior to completion of the Development and by prior appointment with the Landowner, the Landowner will allow (or procure that) any person authorised by the Council is able to enter any part of the Site (other than a completed Unit which has been sold or rented) at any reasonable time upon giving the Landowner not less than 48 hours notice of its intention to do so (save in an emergency) to ascertain whether there is or has been any breach of the obligations set out in this Planning Obligation. The Council will in the exercise of its rights hereunder make good to the reasonable satisfaction of the Landowner all damage caused to any part of the Site as relevant, buildings and/or structures thereon as well as fixtures, fittings and contents thereof by exercise of this right. If the Council becomes aware of any breach of any provision of this Planning Obligation, it shall give written notice to the Landowner specifying the breach in question and requiring that breach to be remedied within a reasonable period (having regard to the nature of the breach) specified in that notice. The Landowner shall intimate in writing whether there is any dispute regarding the alleged breach and if there

is no dispute the Landowner shall notify the Council in writing when that breach has been remedied. If any breach is not remedied timeously, the Council may enforce the provisions of this Planning Obligation by any competent action, including without prejudice to the foregoing generality an action or actions for interim interdict, interdict, specific implement of obligations and damages.

4.7 The Landowner and the Applicant agree that, should any remedial work be required to this Planning Obligation to be registered in the Land Register of Scotland, they will not object to any reasonable minor amendment so required and will execute a further Planning Obligation if necessary without undue delay.

4.8 The Parties agree that the terms of this Planning Obligation shall not apply to private residential proprietors of Units forming part of the Development, nor to statutory undertakers and utilities providers, under declaration that the foregoing provision shall not apply to private residential proprietors of (1) the n^{th} Unit as defined in terms of Completion Date 1 and Occupation Date 1 and subsequent Units until all sums due to the Council in terms of **Clauses 3.1.2 and 3.1.6** have been paid in full, (2) the n^{th} Unit as defined in terms of Completion Date 2 and Occupation Date 2 and subsequent Units until all sums due to the Council in terms of **Clauses 3.1.3 and 3.1.6** have been paid in full and (2) the n^{th} Unit as defined in terms of Completion Date 3 and Occupation Date 3 and subsequent Units until all sums due to the Council in terms of **Clauses 3.1.4 and 3.1.6** have been paid in full.

5 Registration of this Planning Obligation

5.1 The Council undertakes to present the Planning Obligation for registration in the Land Register of Scotland against the title to the Site within 5 Working Days of the date of execution of these presents by the Council.

5.2 The Council undertakes to notify the Landowner of the Registration Date within 5 Working Days of receiving the acknowledgement of the receipt of the application for registration of the Planning Obligation in the Land Register of Scotland from the Keeper of the Registers of Scotland.

5.3 The Landowner undertakes, within 7 Working Days of notification in terms of 5.2 hereof, to provide the Council with (1) a legal report against the Site, including a

personal search against the Landowner covering the period to the Registration Date disclosing no deed, decree or diligence (other than such as may be created by or against the Council) prejudicial to the Planning Obligation and (2) searches in the Register of Company Charges and Company file of the Landowner brought down to the Registration Date and disclosing no entry prejudicial to the Planning Obligation and no notices relating to the receivership, winding up or striking off of the Landowner.

5.4 The Council undertakes to issue the Planning Permission as soon as reasonably practicable and in any event within 5 Working Days of receiving and being satisfied as to any matters disclosed in the legal report and searches in the Register of Company Charges and Company files required in terms of clause 5.3 hereof;

6 No dealings with Site

The parties shall not assign, burden, convey, dispose, lease, nor in any other way deal with their respective interests in the Site or any part of parts thereof prior to the Registration Date, so long as the Council complies with its obligations in terms of clause 5 hereof.

7 Expenses/Outlays

The Landowner will bear the reasonable and properly incurred legal fees of the Council in connection with the preparation, negotiation, execution and implementation of the Planning Obligation together with any Value Added Tax payable thereon which shall be paid in return for a valid VAT invoice addressed to the Landowner and all outlays properly incurred by the Council in connection with the Planning Obligation including the cost of dues of registration in the Land Register of Scotland and the Books of Council and Session and dues of obtaining 2 Extracts of the Planning Obligation, 1 each for the Council and the Landowner.

8 Jurisdiction

This Planning Obligation shall be governed by and construed in accordance with the Law of Scotland and the parties hereto submit to the exclusive jurisdiction of the Scottish Courts.

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9 **Notices**

Any notice or document to be submitted or served on any person pursuant to the terms of this Planning Obligation shall be in writing. Any such notice or document issued to the Council shall only be validly served if sent by recorded delivery addressed to the Chief Governance Officer, Falkirk Council, Municipal Buildings, Falkirk (or any other address(es) intimated in writing by the Council's Chief Governance Officer for the purposes of this Clause). Any such notice or document issued to the Landowner shall be validly served if sent to the main or registered office of the Landowner, (if the Landowner is a company), to the address of the Landowner, (if the Landowner is an individual) or to the address of any partner or trustee or to the main office or clubhouse of the Landowner (if the Landowner is an unincorporated body).

10 **Consent to Registration**

The Council, the Landowner and the Applicant hereby consent to registration of the Planning Obligation for preservation and execution: IN WITNESS WHEREOF these presents consisting of this and the preceding 12 pages are executed by the parties as follows:-

They are sealed with the Common Seal of Falkirk Council and subscribed for them and on their behalf by

[redacted]

Chief Gove

At Falkirk on 13th September 2019

SEAL

Registers of Scotland

They are subscribed for and on behalf of **RMC Developments (Scotland) Limited** by
ROBERT MACDONALD CLARKSON

[redacted] Director/~~Secretary/Authorised Signatory~~

and by [redacted] ~~Director/Secretary/Authorised Signatory~~/Witness

(Signature)

BRIAN DANIEL LAWSON

..... ~~Address~~ (if Witness)

1/3 SOUTH STREET

BO'NESS

at BO'NESS on TWELFTH SEPTEMBER 2019

And they are subscribed by Robert MacDonald Clarkson

At BO'NESS on the TWELFTH day of SEPTEMBER 2019

in the [redacted]

[redacted] Witness (Signature)

BRIAN DANIEL LAWSON ..... Full Name

1/3 SOUTH STREET, BO'NESS ..... Address

SOLICITOR ..... Occupation

And the said Lords grant Warrant for lawful execution hereon.

EXTRACTED by me having commission to that effect from the Keeper of the Registers of Scotland.

14D/E

19/40721

Books of Council and Session

Extract Registered 23 Sep 2019

PLANNING OBLIGATION

FALKIRK COUNCIL
RMC DEVELOPMENTS (SCOTLAND) LIMITED
ROBERT MACDONALD CLARKSON

Deed extract

Registers of Scotland

Registers of Scotland

19/40721
AT EDINBURGH the Twenty Third day of September Two thousand and nineteen the Deed hereinafter reproduced was presented for registration in the Books of the Lords of Council and Session for preservation and execution and is registered in the said Books as follows:-

PLANNING OBLIGATION

between

FALKIRK COUNCIL, constituted under the Local Government Etc (Scotland) Act 1994 and having its principal offices at Municipal Buildings, Falkirk FK1 5RS, as planning authority for the District of Falkirk in terms of the Town and Country Planning (Scotland) Act 1997 (who and whose statutory successors as planning authority are hereinafter referred to as "the Council")

and

RMC DEVELOPMENTS (SCOTLAND) LIMITED incorporated under the Companies Acts (Company Number SC611348) and having their Registered Office at 17 Wellgate Street, Larkhall ML9 2AG (who and whose successors in title in substitution therefor to the whole or any part of the Site are hereinafter referred to as "**the Landowner**")

with the consent of

ROBERT MACDONALD CLARKSON residing at Whiteside Farm, Slamannan, Falkirk FK1 3BX (hereinafter referred to as "**the Applicant**")

WHEREAS

1. The Council is the Planning Authority for inter alia the Site for the purposes of the Town and Country Planning (Scotland) Act 1997.

2. The Planning Application has been made to the Council by the Applicant.

3. The Council on 5 July 2019 was minded to grant planning permission for the Development subject to various conditions including the entering into of the Planning Obligation;

4. The Landowner is the proprietor of the Site;

5. In terms of Section 75 of the Town and Country Planning (Scotland) Act 1997, a person may, in respect of land in the district of a planning authority, by agreement with that

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planning authority, enter into a planning obligation for the purpose of restricting or regulating the development or use of the land either permanently or during such period as may be prescribed by the planning obligation and such planning obligation may contain provisions of a financial character and such incidental or consequential provisions as appear to the planning authority to be necessary or expedient for the purpose of that planning obligation. The Council as such planning authority considers it necessary and expedient to enter into the Planning Obligation in terms of the said Section 75 and has agreed with the Landowner and the Applicant to enter into the Planning Obligation; and

6. The Applicant consents to the parties hereto entering into the Planning Obligation for his interest in the Planning Application;

NOW THEREFORE the Council and the Landowner in terms of the said Section 75 DO HEREBY OBLIGE THEMSELVES as follows:-

1 Definitions

In the Planning Obligation, unless the context otherwise requires or admits, the following expressions shall have the following meanings:-

1.1 **"Affordable Housing"** means social rented residential accommodation as provided for in section 3 of the Affordable Housing SG;

1.2 **"Affordable Housing SG"** means Falkirk Council's Affordable Housing Supplementary Guidance SG12 of 2015 or any subsequent affordable housing policy formally adopted by the Council;

1.3 **"Commencement of Development"** means the initiation of any part of the Development in terms of the Planning Permission or any Further Planning Permission by the carrying out of a Material Operation;

1.4 **"Completion Date 1"** means the date on which an acceptance of a Completion Certificate is issued by Falkirk Council's Building Standards Unit relative to the nth Unit in respect of which an acceptance of a Completion Certificate is so issued where "n" is a number equal to 25% of the number of Units the building of which is permitted in terms of the Further Planning Permission to which it relates and where "n" is a whole number or is rounded up to the nearest whole number;

1.5 **"Completion Date 2"** means the date on which an acceptance of a Completion Certificate is issued by Falkirk Council's Building Standards Unit relative to the nth Unit in respect of which an acceptance of a Completion Certificate is so issued where "n" is a number equal to 50% of the number of Units the building of which is permitted in terms of the Further Planning Permission to which it relates and where "n" is a whole number or is rounded up to the nearest whole number;

1.6 **"Completion Date 3"** means the date on which an acceptance of a Completion Certificate is issued by Falkirk Council's Building Standards Unit relative to the nth Unit in respect of which an acceptance of a Completion Certificate is so issued where "n" is a number equal to 75% of the number of Units the building of which is permitted in terms of the Further Planning Permission to which it relates and where "n" is a whole number or is rounded up to the nearest whole number;

1.7 **"Development"** means the construction on the Site of Units and a shop (Class 1) as permitted by the Planning Permission and/or any Further Planning Permission;

1.8 **"Education Payment 1"** means 33% of the sum equal to £2,600 for each Unit the building of which is permitted in terms of the Further Planning Permission to which it relates;

1.9 **"Education Payment 2"** means 33% of the sum equal to £2,600 for each Unit the building of which is permitted in terms of the Further Planning Permission to which it relates;

1.10 **"Education Payment 3"** means 34% of the sum equal to £2,600 for each Unit the building of which is permitted in terms of the Further Planning Permission to which it relates;

1.11 **"Education SG"** means Falkirk Council's "Education and New Housing Development Supplementary Guidance SG10 July 2015" or any subsequent similar policy formally adopted by the Council;

1.12 **"Flatted Unit"** means any property for sale or rent existing, constructed and designed and having permission in terms of a Further Planning Permission for use as a dwellinghouse including a building or part of building which is occupied or intended to be occupied as a separate property and which comprises a flatted property;

1.13 **"Footpath Payment"** means the sum of £74,000;

1.14 **"Further Planning Application"** means any application which is submitted to the Council for approval of matters specified in conditions in the Planning Permission;

1.15 **"Further Planning Permission"** means the grant of permission to which a Further Planning Application relates;

1.16 **"Indexation Figure 1"** means the amount of the Footpath Payment multiplied by the percentage increase or decrease as the case may be in the General Building Cost Index issued by the Building Cost Information Service of the Royal Institute of Chartered Surveyors between 5 July 2019 and Payment Date 1;

1.17 **"Indexation Figure 2"** means the amount of Education Payment 1 plus Open Space Payment 1 multiplied by the percentage increase or decrease as the case may be in the General Building Cost Index issued by the Building Cost Information Service of the Royal Institute of Chartered Surveyors between 5 July 2019 and Payment Date 2;

1.18 **"Indexation Figure 3"** means the amount of Education Payment 2 plus Open Space Payment 2 multiplied by the percentage increase or decrease as the case may be in the General Building Cost Index issued by the Building Cost Information Service of the Royal Institute of Chartered Surveyors between 5 July 2019 and Payment Date 3;

1.19 **"Indexation Figure 4"** means the amount of Education Payment 3 plus Open Space Payment 3 multiplied by the percentage increase or decrease as the case may be in the General Building Cost Index issued by the Building Cost Information Service of the Royal Institute of Chartered Surveyors between 5 July 2019 and Payment Date 4;

1.20 **"Material Operation"** means a material operation as defined in Section 27(4) of the Town and Country Planning (Scotland) Act 1997;

1.21 **"Non-flatted Unit"** means any property for sale or rent existing, constructed and designed and having permission in terms of a Further Planning Permission for use as a dwellinghouse including a building or part of building which is occupied or intended to be occupied as a separate property other than a flatted property;

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1.22 **"Occupation Date 1"** means the date on which the nth Unit to be occupied becomes occupied where "n" is a number equal to 25% of the number of Units the building of which is permitted in terms of the Further Planning Permission to which it relates and where "n" is a whole number or is rounded up to the nearest whole number;

1.23 **"Occupation Date 2"** means the date on which the nth Unit to be occupied becomes occupied where "n" is a number equal to 50% of the number of Units the building of which is permitted in terms of the Further Planning Permission to which it relates and where "n" is a whole number or is rounded up to the nearest whole number;

1.24 **"Occupation Date 3"** means the date on which the nth Unit to be occupied becomes occupied where "n" is a number equal to 75% of the number of Units the building of which is permitted in terms of the Further Planning Permission to which it relates and where "n" is a whole number or is rounded up to the nearest whole number;

1.25 **"Open Space Payment 1"** means 33% of the sum equal to £955.50 for each Flatted Unit and 50% of the sum equal to £1,911 for each Non-flatted Unit the building of which is permitted in terms of the Further Planning Permission to which they relate;

1.26 **"Open Space Payment 2"** means 33% of the sum equal to £955.50 for each Flatted Unit and 50% of the sum equal to £1,911 for each Non-flatted Unit the building of which is permitted in terms of the Further Planning Permission to which they relate;

1.27 **"Open Space Payment 3"** means 34% of the sum equal to £955.50 for each Flatted Unit and 50% of the sum equal to £1,911 for each Non-flatted Unit the building of which is permitted in terms of the Further Planning Permission to which they relate;

1.28 **"Open Space SG"** means Falkirk Council's "Open Space and New Development Supplementary Guidance SG13 July 2015" or any subsequent similar policy formally adopted by the Council;

1.29 **"Payment Date 1"** means the day before the date of Commencement of Development;

1.30 **"Payment Date 2"** means the date 7 Working Days after Completion Date 1 and in any event prior to Occupation Date 1;

1.31 **"Payment Date 3"** means the date 7 Working Days after Completion Date 2 and in any event prior to Occupation Date 2;

1.32 **"Payment Date 4"** means the date 7 Working Days after Completion Date 3 and in any event prior to Occupation Date 3;

1.33 **"Planning Application"** means the application in respect of the Development submitted by the Applicant and allocated reference P/18/0693/PPP by the Council;

1.34 **"Planning Obligation"** means this planning obligation under Section 75 of the Town and Country Planning (Scotland) Act 1997 between the Council and the Landowner with consent of the Applicant;

1.35 **"Planning Permission"** means the planning permission for the Development to be issued following the registration of the Planning Obligation pursuant to the Planning Application and any planning permission subsequently issued following an application under Section 42 of the Town and Country Planning (Scotland) Act 1997 to develop land without compliance with conditions previously attached;

1.36 **"Registration Date"** means the date of registration of the Planning Obligation in the Land Register of Scotland against the Site;

1.37 **"Site"** means that area of ground which is to be affected by the terms of this Planning Obligation being the subjects on the east side of Slamannan Road, Falkirk and lying to the north of 1 Cameron Terrace, Slamannan Road, Limerigg, Falkirk registered in the Land Register of Scotland under Title Number STG71568;

1.38 **"Unit"** means any property which is a Flatted Unit or a Non-Flatted Unit;

1.39 **"Working Day"** means Monday to Friday inclusive throughout the year apart from (1) any days which are official public holidays within Falkirk or Bo'ness and (2) any days which are official bank holidays throughout the whole of Scotland.

2 Interpretation

2.1 In this Planning Obligation references to any Act of Parliament shall include any modification, extension or re-enactment thereof for the time being in force and shall include all instruments, orders, notices, plans, regulations, bye-laws, permissions and directions for the time being made, issued, or give thereunder or deriving validity therefrom.

2.2 Time shall be of the essence unless specified otherwise.

3 Landowner's Obligations

3.1 Payment

3.1.1 On or before Payment Date 1, the Footpath Payment, reduced/increased as the case may be by the Indexation Figure 1 will be paid in cleared funds by the Landowner to the Council.

3.1.2 On or before Payment Date 2, Education Payment 1 and Open Space Payment 1, reduced/increased as the case may be by the Indexation Figure 2 will be paid in cleared funds by the Landowner to the Council.

3.1.3 On or before Payment Date 3, Education Payment 2 and Open Space Payment 2, reduced/increased as the case may be by the Indexation Figure 3 will be paid in cleared funds by the Landowner to the Council.

3.1.4 On or before Payment Date 4, Education Payment 3 and Open Space Payment 3, reduced/increased as the case may be by the Indexation Figure 4 will be paid in cleared funds by the Landowner to the Council.

3.1.5 Notwithstanding the terms of 3.1.2, 3.1.3 and 3.1.4 above, Open Space Payment 1, Open Space Payment 2 and Open Space Payment 3 shall not become payable hereunder unless the open space requirement generated in accordance with the figures set out in the Open Space SG has not been accommodated in terms of any Further Planning Permission. In the event that the open space requirement generated in accordance with the figures set out in the Open Space SG has been partially but not fully accommodated in terms of any Further Planning Permission, Open Space Payment 1, Open Space Payment 2 and Open Space Payment 3 will be reduced in proportion to the extent to which the open space requirement has been accommodated in terms of any Further Planning Permission.

3.1.6 In the event of failure by the Landowner to pay the sums due under 3.1.1, 3.1.2, 3.1.3 or 3.1.4 above, or any part thereof, on the date on which the relevant sums fall due, they will pay to the Council interest on the relevant sums at the rate of four per centum per annum above the base rate fixed from time to time by the Royal Bank of Scotland plc from the dates on which the relevant sums fall due until settlement in full.

3.1.7 The Landowner binds and obliges itself to give 5 days written notice to the Council of Payment Date 1, Payment Date 2, Payment Date 3 and Payment Date 4.

3.2 **Affordable Housing**

3.2.1 The Landowner must build at least 25% of the Units as Affordable Housing, 25% being calculated to the nearest whole number, rounded down.

3.2.2 Prior to Commencement of Development, the Landowner will agree a written programme with the Council as to the type, method, timing and phasing of delivery of the Units to be built as Affordable Housing and thereafter the said Units will be delivered in accordance with that agreed programme, with both parties being obliged to act reasonably and expeditiously with regard to such agreement.

3.2.3 No Commencement of Development may occur before the Landowner has agreed the written programme with the Council referred to in 3.2.2 above.

3.3 **Occupation**

3.3.1 No Commencement of Development may occur before the Footpath Payment, Indexation Figure 1 and any interest due thereon has been paid to the Council.

3.3.2 There will be no occupation of any Unit beyond the Unit immediately prior to the nth Unit as defined in terms of Completion Date 1 and Occupation Date 1 before Education Payment 1, Open Space Payment 1, Indexation Figure 2 and any interest due thereon has been paid to the Council.

3.3.3 There will be no occupation of any Unit beyond the Unit immediately prior to the nth Unit as defined in terms of Completion Date 2 and Occupation Date 2 before Education Payment 2, Open Space Payment 2, Indexation Figure 3 and any interest due thereon has been paid to the Council.

3.3.4 There will be no occupation of any Unit beyond the Unit immediately prior to the nth Unit as defined in terms of Completion Date 3 and Occupation Date 3 before Education Payment 3, Open Space Payment 3, Indexation Figure 4 and any interest due thereon has been paid to the Council.

3.4 **Council's Obligations**

3.4.1 The Council binds and obliges itself to apply the Footpath Payment and Indexation Figure 1 only towards the provision or upgrading of footpaths to allow a safe route to Limerigg Primary School.

3.4.2 The Council binds and obliges itself to apply each sum of £2,600 received as Education Payment , Education Payment 2 and Education Payment 3 together with a pro rata proportion of Indexation Figure 2, Indexation Figure 3 and Indexation Figure 4 only in accordance with the Education SG towards addressing education provision deficiencies at Limerigg Primary School necessary as a result of the impact of the proposed Development.

3.4.3 The Council binds and obliges itself to apply Open Space Payment 1, Open Space Payment 2 and Open Space Payment 3 together with a pro rata proportion of Indexation Figure 2, Indexation Figure 3 and Indexation Figure 4 only towards the provision, improvement or maintenance of existing or new active open space in the surrounding area of the Site in accordance with the Open Space SG.

3.4.4 Upon receipt of each of the Footpath Payment, Education Payment 1, Education Payment 2, Education Payment 3, Open Space Payment 1, Open Space Payment 2, Open Space Payment 3, Indexation Figure 1, Indexation Figure 2, Indexation Figure 3 and Indexation Figure 4, the Council shall place the relevant sum or sums in an interest bearing suspense account until spent in their entirety. Declaring that a certificate issued by the Council for the purposes of this clause to the effect that the relevant sum or sums have been properly applied shall save in the case of manifest error, be final and conclusive that the relevant sum or sums have been spent on purposes within the remit of this clause 3.4. If the Council does not expend the sum or sums within the remit of this clause 3.4 within ten years of Payment Date 4, the Council shall refund the relevant sum or sums to the Landowner, together with interest thereon.

4 Effective Date of this Planning Obligation/Enforceability

4.1 If any provision contained in the Planning Obligation is held in any proceedings to be incompetent or unenforceable then all other provisions of the Planning Obligation will remain valid and enforceable.

4.2 If and to the extent that any provision contained in the Planning Obligation is held in any proceeding to be a provision which cannot be competently included or enforced in

an agreement entered into under the said Section 75, such provision shall be and remain enforceable to the same extent and effect as if the Planning Obligation were an agreement in contract entered into between the parties at the relevant time holding the interests respectively of the Council, the Landowner and the Applicant. Further, the whole rights and remedies of the parties arising from the Planning Obligation, with and under the foregoing proviso, shall be exercisable without prejudice to any other rights and remedies competent to them under statute or at common law, or otherwise.

4.3 The obligations, undertakings and others of the Landowner in terms of this Planning Obligation are joint and several by the parties comprising the Landowner at the relevant time.

4.4 Notwithstanding the terms of section 75C of the Town and Country Planning (Scotland) Act 1997, which is to have no application to this Planning Obligation, on ceasing to be registered proprietor of the Site or any part of it the Landowner shall cease to be liable for any obligations contained in this Planning Obligation insofar as relating to the part of the Site to which it has ceased to be registered proprietor save in the case of any antecedent breach.

4.5 The obligations in terms of Clause 3 of the Planning Obligation shall only come into full force and effect upon the date of issue of the Planning Permission.

4.6 Prior to completion of the Development and by prior appointment with the Landowner, the Landowner will allow (or procure that) any person authorised by the Council is able to enter any part of the Site (other than a completed Unit which has been sold or rented) at any reasonable time upon giving the Landowner not less than 48 hours notice of its intention to do so (save in an emergency) to ascertain whether there is or has been any breach of the obligations set out in this Planning Obligation. The Council will in the exercise of its rights hereunder make good to the reasonable satisfaction of the Landowner all damage caused to any part of the Site as relevant, buildings and/or structures thereon as well as fixtures, fittings and contents thereof by exercise of this right. If the Council becomes aware of any breach of any provision of this Planning Obligation, it shall give written notice to the Landowner specifying the breach in question and requiring that breach to be remedied within a reasonable period (having regard to the nature of the breach) specified in that notice. The Landowner shall intimate in writing whether there is any dispute regarding the alleged breach and if there

is no dispute the Landowner shall notify the Council in writing when that breach has been remedied. If any breach is not remedied timeously, the Council may enforce the provisions of this Planning Obligation by any competent action, including without prejudice to the foregoing generality an action or actions for interim interdict, interdict, specific implement of obligations and damages.

4.7 The Landowner and the Applicant agree that, should any remedial work be required to this Planning Obligation to be registered in the Land Register of Scotland, they will not object to any reasonable minor amendment so required and will execute a further Planning Obligation if necessary without undue delay.

4.8 The Parties agree that the terms of this Planning Obligation shall not apply to private residential proprietors of Units forming part of the Development, nor to statutory undertakers and utilities providers, under declaration that the foregoing provision shall not apply to private residential proprietors of (1) the n^{th} Unit as defined in terms of Completion Date 1 and Occupation Date 1 and subsequent Units until all sums due to the Council in terms of **Clauses 3.1.2 and 3.1.6** have been paid in full, (2) the n^{th} Unit as defined in terms of Completion Date 2 and Occupation Date 2 and subsequent Units until all sums due to the Council in terms of **Clauses 3.1.3 and 3.1.6** have been paid in full and (2) the n^{th} Unit as defined in terms of Completion Date 3 and Occupation Date 3 and subsequent Units until all sums due to the Council in terms of **Clauses 3.1.4 and 3.1.6** have been paid in full.

5 Registration of this Planning Obligation

5.1 The Council undertakes to present the Planning Obligation for registration in the Land Register of Scotland against the title to the Site within 5 Working Days of the date of execution of these presents by the Council.

5.2 The Council undertakes to notify the Landowner of the Registration Date within 5 Working Days of receiving the acknowledgement of the receipt of the application for registration of the Planning Obligation in the Land Register of Scotland from the Keeper of the Registers of Scotland.

5.3 The Landowner undertakes, within 7 Working Days of notification in terms of 5.2 hereof, to provide the Council with (1) a legal report against the Site, including a

personal search against the Landowner covering the period to the Registration Date disclosing no deed, decree or diligence (other than such as may be created by or against the Council) prejudicial to the Planning Obligation and (2) searches in the Register of Company Charges and Company file of the Landowner brought down to the Registration Date and disclosing no entry prejudicial to the Planning Obligation and no notices relating to the receivership, winding up or striking off of the Landowner.

5.4 The Council undertakes to issue the Planning Permission as soon as reasonably practicable and in any event within 5 Working Days of receiving and being satisfied as to any matters disclosed in the legal report and searches in the Register of Company Charges and Company files required in terms of clause 5.3 hereof;

6 No dealings with Site

The parties shall not assign, burden, convey, dispose, lease, nor in any other way deal with their respective interests in the Site or any part of parts thereof prior to the Registration Date, so long as the Council complies with its obligations in terms of clause 5 hereof.

7 Expenses/Outlays

The Landowner will bear the reasonable and properly incurred legal fees of the Council in connection with the preparation, negotiation, execution and implementation of the Planning Obligation together with any Value Added Tax payable thereon which shall be paid in return for a valid VAT invoice addressed to the Landowner and all outlays properly incurred by the Council in connection with the Planning Obligation including the cost of dues of registration in the Land Register of Scotland and the Books of Council and Session and dues of obtaining 2 Extracts of the Planning Obligation, 1 each for the Council and the Landowner.

8 Jurisdiction

This Planning Obligation shall be governed by and construed in accordance with the Law of Scotland and the parties hereto submit to the exclusive jurisdiction of the Scottish Courts.

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9 **Notices**

Any notice or document to be submitted or served on any person pursuant to the terms of this Planning Obligation shall be in writing. Any such notice or document issued to the Council shall only be validly served if sent by recorded delivery addressed to the Chief Governance Officer, Falkirk Council, Municipal Buildings, Falkirk (or any other address(es) intimated in writing by the Council's Chief Governance Officer for the purposes of this Clause). Any such notice or document issued to the Landowner shall be validly served if sent to the main or registered office of the Landowner, (if the Landowner is a company), to the address of the Landowner, (if the Landowner is an individual) or to the address of any partner or trustee or to the main office or clubhouse of the Landowner (if the Landowner is an unincorporated body).

10 **Consent to Registration**

The Council, the Landowner and the Applicant hereby consent to registration of the Planning Obligation for preservation and execution: IN WITNESS WHEREOF these presents consisting of this and the preceding 12 pages are executed by the parties as follows:-

They are sealed with the Common Seal of Falkirk Council and subscribed for them and on their behalf by

[redacted]

IAIN WALLACE HENDERSON

~~Chief Governance Officer~~/ Legal Services Manager and Proper Officer

At Falkirk on 13th September 2019

SEAL

Registers of Scotland

They are subscribed for and on behalf of **RMC Developments (Scotland) Limited** by

ROBERT MACDONALD CLARKSON

[redacted]

Director/~~Secretary/Authorised Signatory~~

..ture)

and by

[redacted]

~~Director/Secretary/Authorised Signatory~~/Witness

....(Signature)

[redacted]

..... ~~Address~~ (if Witness)

1/3 SOUTH STREET

BO'NESS

at BO'NESS on TWELFTH SEPTEMBER 2019

And they are subscribed by Robert MacDonald Clarkson

At BO'NESS on the TWELFTH day of SEPTEMBER 2019

[redacted]

...ture)

in the pre[redacted]

..... Witness (Signature)

BRIAN DANIEL LAWSON ..... Full Name

1/3 SOUTH STREET, BO'NESS Address

SOLICITOR ..... Occupation

And the said Lords grant Warrant for lawful execution hereon.

EXTRACTED by me having commission to that effect from the Keeper of the Registers of Scotland.

14D/E