Technical Note

Date: 13 August 2025

Project: Millom Leisure Centre

Title: Transport Assessment Addendum Report

1. Introduction

1.1 In 2023 SK prepared a Transport Assessment (TA) and Travel Plan for a new purpose-built leisure centre with swimming pool at the Millom School and Millom Hub site. Planning permission was granted for the development in 2025 under application reference: 4/24/2355/OF1.

1.2 It is now the intention to modify the consented pedestrian/cycle access and servicing and disabled parking access arrangements to the development. The layouts for this have been prepared by another member of the design team (Paragon Highways). The layout has also been subject to a Road Safety Audit (RSA1) prepared by Sevenairs Consulting Limited, who is independent of the design team.

1.3 This TA Addendum Report has been prepared to set out the consented situation and provide details of the revised access arrangements and the transport implications of said revisions.

1.4 For completeness, details of the modified access arrangements prepared by Paragon Highways and the RSA1 prepared by Sevenairs Consulting Ltd are set out later in this report.

2. Consented Situation

Site Location & Characteristics

2.1 The location of the site is shown on Figure 2.1.

2.2 The site is located within an existing school complex (Millom School), just to the north of the centre of Millom. The school complex includes secondary education facilities and community facilities at Millom Hub.

2.3 Vehicle access to the site is provided from Salthouse Lane (A5093), which routes north-south along the site's western boundary. The vehicle access is a simple priority layout with setback gates. Keep clear zig zag markings are provided across the give-way line and opposite the access double yellow lines are provided on the western carriageway edge of Salthouse Lane.

Consented Development Overview

2.4 The development comprises a new leisure centre at the site with a floor area of 1,950sqm. The leisure centre includes swimming facilities and changing facilities. The existing gym building (125sqm) is retained by the proposal.

2.5 The consented layout is attached as Appendix A.

Figure 2.1: Site Location
[source: OpenStreetMap Foundation licensed under the Open Database License]

Vehicle Access Arrangements

2.6 The consented vehicle access is retained from the existing school (priority) access on Salthouse Lane.

2.7 A new coach drop-off bay is provided outside the Millom Hub.

2.8 The leisure centre will be served via a vehicle access route connecting the main car park to the building via a vehicle access route.

Car Parking Arrangements

2.9 The parking area to the west of the Millom Hub is modified to provide a total of 67 standard parking spaces and four disabled parking spaces. Seven of the parking spaces are EV and seven are ducted for future adaptation.

2.10 A further four disabled parking spaces are provided outside the leisure centre (of which one is EV and one is ducted for future adaptation).

2.11 The existing car park to the south of the site will be unchanged by the proposal and will continue to provide circa 40 spaces.

2.12 Following the development the site will be served by a total of 115 parking spaces, including eight disabled spaces and eight active EV spaces.

Pedestrian & Cycle Access Arrangements

2.13 Appendix A shows that pedestrian and cycle access will be provided from a new traffic free location off Salthouse Lane to the north of the school complex. From this point a 3m wide shared footway/cycleway provides access to the leisure centre site. The shared route sits to the north of the vehicle route that will be used by leisure centre servicing traffic and disabled car park traffic. New zebra crossings are provided at either end of the vehicle route and surface hatching, and signage is provided to denote service vehicles/disabled parking beyond this point.

2.14 A new gated access is provided from the shared route to the existing ramped access to the playing field and running track.

2.15 A new length of footway is provided outside the Millom Hub and Manchester Building to provide a connection to the vehicle access junction. A new zebra crossing is provided to connect the new footway to the existing footway connecting to the vehicle access.

Cycle Parking Arrangements

2.16 12 new cycle parking spaces (six stands) are provided under the leisure centre canopy. The existing site cycle parking spaces are re-provided with 13 stands (26 spaces) outside the Millom Hub.

Development Trip Generation

2.17 The trips associated with the development were based on TRICS rates for comparably located leisure centre sites across the UK. The trip forecast is replicated in Table 2.1 below.

	Public Transport Trips			Pedestrian Trips			Cycle Trips		
	In	Out	Total	In	Out	Total	In	Out	Total
AM Peak Hour	4	0	4	5	2	7	1	1	2
School Peak Hour	3	7	9	13	10	23	2	1	2
PM Peak Hour	4	3	7	16	15	32	1	1	3
	Vehicle Trips			OGV Trips			Coach Trips		
	In	Out	Total	In	Out	Total	In	Out	Total
AM Peak Hour	9	8	17	0	0	0	0	0	0
School Peak Hour	17	11	28	0	0	0	0	0	0
PM Peak Hour	22	21	43	0	0	0	0	0	0

Table 2.1: Leisure Centre Trip Generation

Traffic Impact

2.18 The TA includes modelling assessments at the site access junction and the Station Road/St George's Road roundabout. The modelling confirms that the junctions will continue to operate within capacity following the addition of the development traffic.

Parking Assessment

2.19 The TA includes a parking assessment that examines the existing maximum demand associated with activity at the school complex and the situation that will occur with the additional demand created by the development.

2.20 The existing demand is based on a 12 hour in/out survey at the site access which confirms that the maximum demand is 63 spaces.

2.21 The additional demand created by the development was derived using the TRICS forecast and a parking accumulation method. This assessment is replicated in Table 2.2.

	Leisure Centre Traffic			Total Future Use Parking Demand
	In	Out	Total	
06:00-07:00	9	1	10	9
07:00-08:00	9	6	15	9
08:00-09:00	9	8	17	9
09:00-10:00	13	7	20	13
10:00-11:00	13	10	23	13
11:00-12:00	11	10	21	11
12:00-13:00	11	11	22	11
13:00-14:00	9	13	23	9
14:00-15:00	9	10	19	9
15:00-16:00	17	11	28	17
16:00-17:00	22	16	38	22
17:00-18:00	22	21	43	22
18:00-19:00	22	23	46	22

Table 2.2: Leisure Centre Parking Accumulation

2.22 The TA concludes that a maximum demand of 85 spaces is required following the development which can be comfortably accommodated in the proposed parking areas.

3. Revised Access Proposal

Overview

3.1 The applicant has decided to change the proposed access arrangements to provide improved segregation of pedestrian and cycles when accessing the leisure centre and will serve to provide revised servicing and disabled traffic arrangements.

3.2 As noted earlier, the access proposal has been prepared by Paragon Highways. The layout is described below and the Paragon Highways layouts are attached as Appendix B for completeness.

Revised Vehicle Access Arrangement

3.3 The proposed access will provide a direct vehicle route to the leisure centre from Salthouse Road, for access to the disabled parking spaces adjacent to the building and for service vehicle access. This will replace the existing shared use route on the northern boundary of the school site, which was proposed to be used for these vehicles as part of the approved scheme.

3.4 The introduction of the new access will allow the existing shared use route to be restricted to pedestrians and cyclists only, avoiding the need to mix with any motor vehicles.

3.5 A new vehicle access will be provided via the land to the north of the school site, with a simple priority junction introduced on Salthouse Road and a 5.5m wide access road propose to the leisure centre for service vehicles and access to the disabled parking spaces.

3.6 A gated maintenance access will also be provided to the playing fields.

Revised Pedestrian & Cycle Access Arrangement

3.7 A 3m shared footway/cycleway is proposed on the southern side of the new access route that will connect into the existing shared use route.

3.8 The provision of the new vehicle access from Salthouse Road will mean that the existing shared use route along the northern boundary of the school site can be restricted to pedestrians and cyclists only.

3.9 Crossing points with dropped kerbs and tactile paving are proposed on the access route itself to assist with movement to and from the playing fields.

3.10 The existing access ramp between the playing fields and the school will be regraded to provide a further connection with the new footway/cycleway.

3.11 In line with the consented scheme, appropriate surface treatments and signage will be used within the site to alert drivers to the traffic free route to the north of the Millom Hub building.

3.12 Crossing points are also proposed on Salthouse Road in the form of dropped kerbs and tactile paving.

Road Safety Audit

3.13 A RSA1 has been prepared by Sevenairs Consulting Ltd and is attached as Appendix B. Paragon Highways has prepared a Designers Response to the issues raised and this is shown highlighted in the RSA1 in Appendix B. Paragon Highways state that they have responded to the issues raised.

Other Aspects of the Development

3.14 The proposed revisions to the northern pedestrian and cycle access route and servicing and disabled traffic route do not affect the other consented site transport strategy arrangements and these will remain as described in Section 2 and set out in Appendix A. This includes the proposed parking arrangements for the site whereby the parking area to the west of Millom Hub will be modified to create 67 parking spaces and four disabled parking spaces, and the provision of four disabled parking spaces outside the leisure centre building.

4. Impact Assessment

Development Trip Generation

4.1 The revised access proposal will not have an impact on the total trips generated by the development and these will remain the same as the consented scheme, replicated in Table 4.1.

	Public Transport Trips			Pedestrian Trips			Cycle Trips		
	In	Out	Total	In	Out	Total	In	Out	Total
AM Peak Hour	4	0	4	5	2	7	1	1	2
School Peak Hour	3	7	9	13	10	23	2	1	2
PM Peak Hour	4	3	7	16	15	32	1	1	3
	Vehicle Trips			OGV Trips			Coach Trips		
	In	Out	Total	In	Out	Total	In	Out	Total
AM Peak Hour	9	8	17	0	0	0	0	0	0
School Peak Hour	17	11	28	0	0	0	0	0	0
PM Peak Hour	22	21	43	0	0	0	0	0	0

Table 4.1: Development Trip Forecast

4.2 The modifications to the site access arrangements will mean that a small proportion of the development traffic will use the new site access junction. These vehicles will be associated with servicing and delivery movements and vehicles accessing the four disabled parking bays located next to the leisure centre building. It is reasonable to expect occasional other users for drop-off activity e.g. taxis.

4.3 These movements would still only make up a small proportion of the overall vehicle demand but to allow a robust assessment of the new access arrangement, this has been tested on the basis of 25% of the hourly development traffic using the access. Table 4.2 shows the traffic flows used in the site access assessment.

	Vehicle Trips			OGV Trips		
	In	Out	Total	In	Out	Total
AM Peak Hour	2	2	4	0	0	0
School Peak Hour	4	3	7	0	0	0
PM Peak Hour	5	5	10	0	0	0

Table 4.2: New Access Trip Forecast

Modelling Assessment

4.4 The future year base and development traffic flows from the TA for the consented scheme have been used as the basis for the new access junction modelling. The traffic using the trips set out in Table 4.2 have been added to the flows to form the future year flow scenario based on the distribution in the TA. The traffic flows are attached as Appendix C.

4.5 PICADY has been used to assess the new junction and the output is attached as Appendix D with a summary provided below.

	AM Peak		School PM Peak		PM Peak	
	RFC	Q	RFC	Q	RFC	Q
Site out	0.00	0	.000	0	0.01	0
Right turn in	0.00	0	0.01	0	0.01	0

Table 4.3: New Access PICADY Assessment

4.6 The modelling shows that the junction will provide ample capacity for the expected level of demand.

Road Safety Assessment

4.7 The Crashmap database has been reviewed to examine collision patterns for the most recent five-year period available.

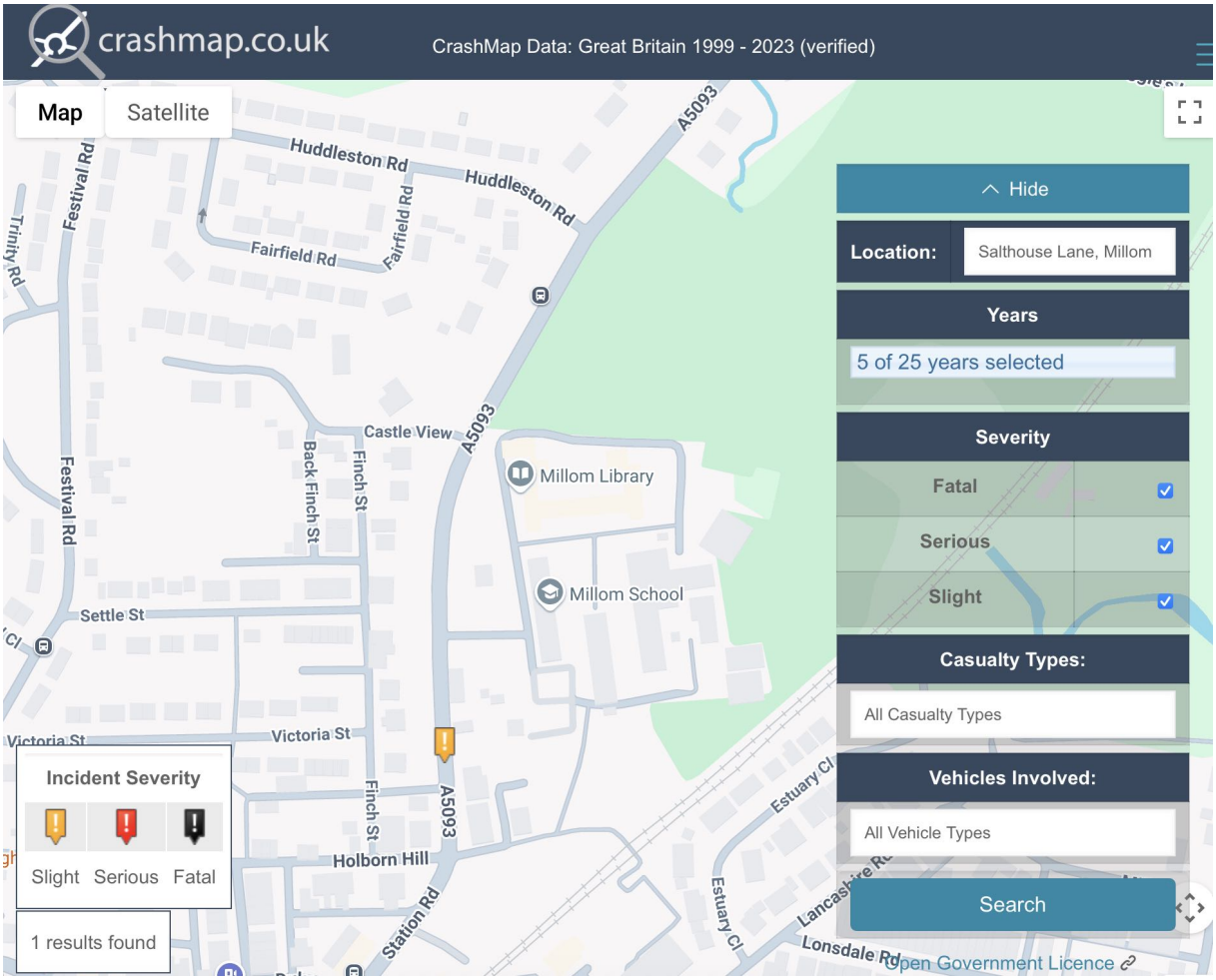

Figure 4.1: Collision Data

4.8 Figure 4.1 shows that there have been no collisions in the vicinity of the new access location during the five year period assessed.

4.9 There has been a single collision to the south of the school during the five year period assessed equating to a collision rate of 0.2 per annum. This is lower than the collision rate at the time of the original planning application. 0.4 per annum.

4.10 The collision data confirms that there are no prevailing road safety issues in the vicinity of the site.

Parking Assessment

4.11 The proposed addition of the new vehicle access will not have any effect on the parking demand associated with the leisure centre and the expected level will be the same as set out in the TA for the consented scheme and replicated in Section 2.

5. Conclusions

5.1 This TA Addendum Report has been prepared to provide an appraisal of a proposed new access arrangement for the Millom Leisure Centre development at Millom School, for which planning permission was granted in 2025 under application reference. 4/24/2355/OF1.

5.2 The proposed new access will provide direct vehicular access from Salthouse Road to the four disabled parking bays provided at the facility and for servicing and drop-off activity. This will be provided in place of the existing shared use access route along the northern boundary of the school site and enable segregation of pedestrians and cyclists from motor vehicles accessing the facility.

5.3 The new junction and access road design has been prepared independently of SK by Paragon Highways and a RSA1 has been prepared by Sevenairs Consulting Limited. Copies of the layouts and the RSA1 are appended to this report for completeness.

5.4 The traffic implications of the proposal are considered by SK in this report, to review the changes in vehicle movements that will arise from the provision of the new access.

5.5 The new access will be used only by a limited proportion of vehicles accessing the Leisure Centre as it will provide access only to the four disabled parking bays and will be used for servicing and drop-off activity. General parking will be as consented, within the main school parking area.

5.6 The change in vehicle movements that may arise as a result of the new access has been evaluated and a forecast has been produced of future traffic movements during peak times at the access. The junction form has been tested for the demand flows and is shown to provide ample capacity.

Appendix A

Proposed Site Plan

Millom Activity & Leisure Centre

0m 10m 20m 30m 40m 50m

VISUAL SCALE 1:500 @ A1

Revision	Description	Drawn	Date
E	Minor amendments to text.	AB	13/01/2025
D	Minor amendments.	AB	10/01/2025
C	Minor amendements following planning consultation.	AB	09/01/2025
B	Red line boundary and service yard updated	IH	28.10.2024
A	Issued for costing / comment	IH	16.10.2024
P01	Planning Application	IH	14.08.2024

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Company Registration
Architects Plus (UK) Limited
Registered in England no. 4221140

Drawing: Proposed Site Plan

Status: C - Costing

Project: Millom Activity & Leisure Centre

Client name: Thomas Armstrong Construction

RIBA stage: 4 - Technical Design

Date	Drawn by	Scale @ A1	Drawing number	Revision
14/08/2024	IH	1 : 500	24015 - 2001E	E

Appendix B

N

General Notes

- This drawing should not be scaled for setting out purposes.
- This drawing shows the provisional design only and is subject to Local Authority approval.
- This drawing is based upon a topographical / ordnance survey provided by others.

No vegetation / construction within visibility splay to be above 1.05m of adjacent channel level in height

Proposed wall to tie into existing

White lining to diag 1009

White lining to diag 1004

White lining to diag 1003

2m x 2m pedestrian intervisibility splay. Walls within splays to be reduced in height to no higher than 600mm.

Pedestrian ramp to be provided to field

Proposed pedestrian tactile crossing

Cycleway crossing to be provided, design of which to be agreed with the LPA

2m x 2m pedestrian intervisibility splays

Proposed pedestrian tactile crossing

Proposed gated vehicular maintenance access to field. Gates to open away from carriageway.

Proposed 1m high wall to segregate access from running track

Proposed footway to tie in to existing

Existing ramp to be regraded to meet levels at back of proposed footway. Design to be provided by others

3m wide shared footway / cycleway to tie into existing pedestrian access

No vegetation / construction within visibility splay to be above 1.05m of adjacent channel level in height

Resurfacing works as needed to existing footway area to create 1 in 40 crossfall for initial 3m width

Proposed access to tie into parking area to rear

Boundary treatment (such as retro-reflective bollards at 500mm centres or similar) to be provided to stop cars from overruning parking area into access

Key:

- Asphalt carriageway / footway construction
- Asphalt carriageway / footway resurfacing
- Tactile paved pedestrian crossing construction
- Visibility splay
- HB — Half batter kerb laid with 100mm upstand (subject to adjustment to tie in with existing kerbs)
- DK — Bullnosed dropped kerb laid with 0–6mm upstand
- CB — Channel block laid flush
- E — Edging
- g — Proposed surface water gully

PARAGON HIGHWAYS

PROJECT TITLE
MILLIOM LEISURE CENTRE

DRAWING TITLE
GENERAL ARRANGEMENT

DRAWING NUMBER

ORIGINATOR	PROJECT	VOL.	TYPE	ROLE	NUMBER
PRGN –	2419 –	HGN –	DR –	CH –	0001 E

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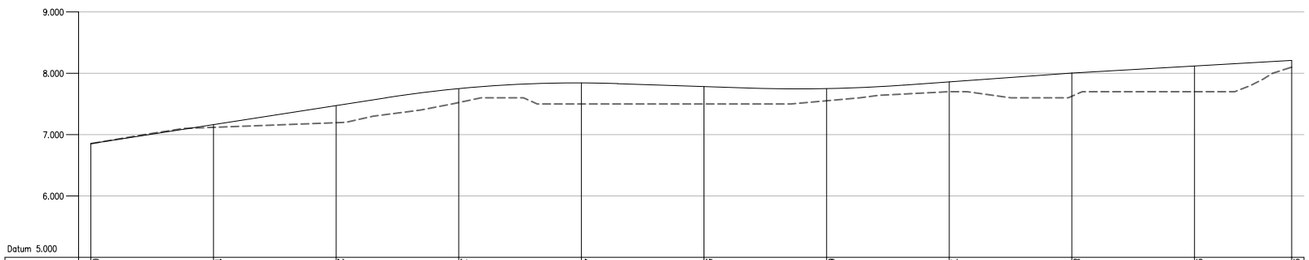

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Existing Levels	6.853	7.119	7.194	7.523	7.500	7.500	7.552	7.700	7.676	7.700	8.100
Proposed Levels	6.853	7.163	7.473	7.749	7.841	7.783	7.750	7.860	8.004	8.119	8.210
Proposed Vertical Alignment	1 in 32.261 3.1%			KF 5		−1 in 150 0.667%	KF 6	1 in 69.674 1.435%	1 in 86.841 1.152%		
Proposed Left Channel		7.095	7.405	7.680	7.772	7.714	7.672	7.791	7.935	8.050	
Proposed Right Channel		7.232	7.542	7.817	7.910	7.852	7.810	7.929	8.072	8.188	

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PROJECT TITLE
MILLOM LEISURE CENTRE

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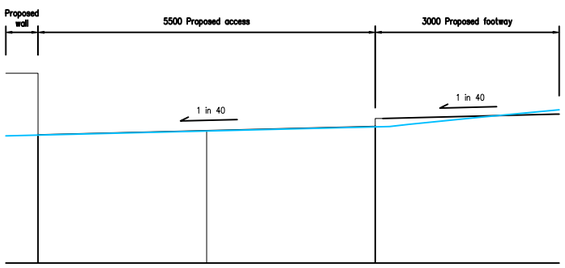

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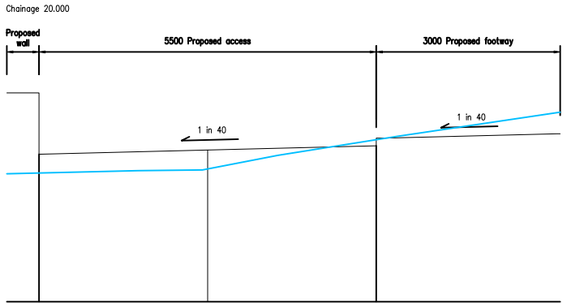

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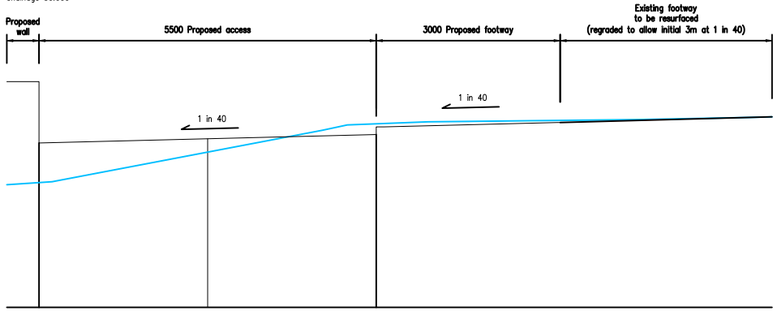

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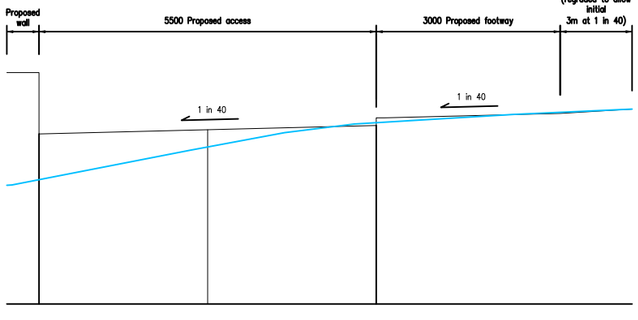

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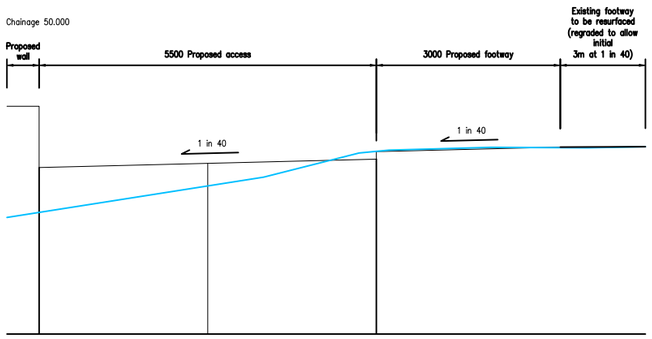

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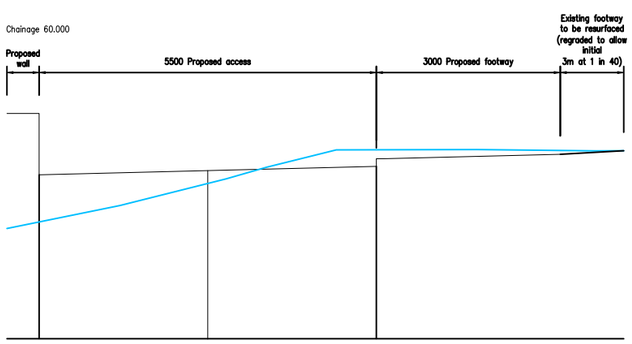

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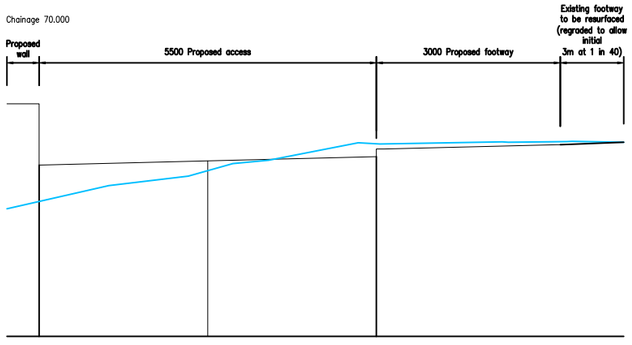

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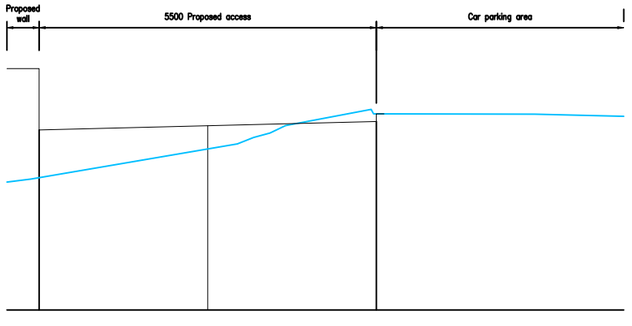

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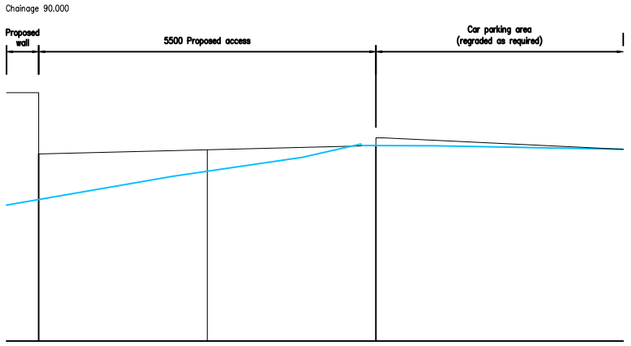

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PRGN -	2419 -	HGN -	DR -	CH -	0003

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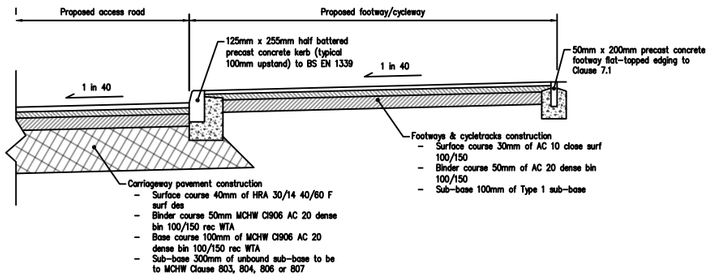
Section A – A



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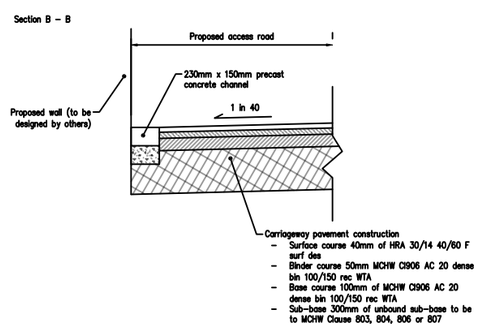

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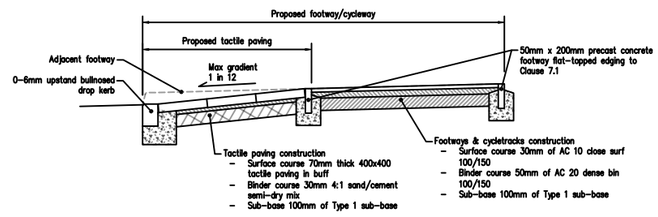

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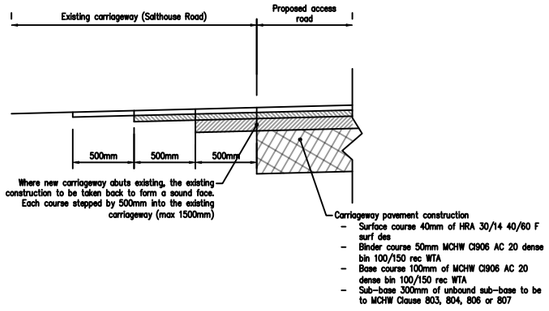

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Sevenairs Consulting Ltd

Salthouse Road, Millom, Cumberland

Road Safety Audit Stage 1/2

July 2025

Document Control

Report Title:

Salthouse Road, Millom, Cumberland – Road Safety Audit Stage 1/2

Date of Site Visit

21st July 2025

Document Reference

2025-07 Millom RSA1/2 – Revision 0

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On behalf of

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Highway Authority / Overseeing Organisation

Cumberland Council

Document History:

Revision	Date	Description	By
0	27.07.2025	For Issue	HV

Introduction

Commissioning and Scope

This report results from a Stage 1/2 Road Safety Audit carried out at the site of a leisure development off Salthouse Road in Millom, Cumberland. The audit was carried out at the request of Ash Howarth, Director, Paragon Highways on behalf of the developer of the site.

The Road Safety Audit team membership was as follows:

The Audit Team	Haydn Vernals FCIHT FIHE CMILT MSoRSA Directive 2008/96/EC (Certificate of Competency), Road Safety Team Leader in accordance with GG119 Sarah Vernals BAHonsQTS NPQH, Road Safety Team Member in accordance with GG119
Audit Observers	None

The main project comprises of a leisure development providing a new building with swimming pool, sports hall and fitness studios. Highway works include a development access, revised footway arrangements and a dropped crossing across both the access and Salthouse Road. Also proposed are amendments to the wall and vegetation to the northern side of the access to improve junction visibility. The scope of this Road Safety Audit is to review the proposed highway works.

The audit has been carried out in accordance with the principles of the National Highways document GG 119 Road Safety Audit. A formal Road Safety Audit Brief was not provided to the Audit Team. However, information regarding the site was provided via email alongside the relevant scheme documents and drawings. This was considered by the Audit Team to provide sufficient detail to undertake the appropriate stage of audit.

The audit also comprised of a desk-top study where all documents and plans provided by the Design Team were reviewed. No departures from standard have been brought to the attention of the RSA team with regard to the scheme as designed.

Site Visit Attendance

A site visit took place comprising of the RSA team on Monday 21st July 2025 between 11:45 and 12:15 hours during which the weather was sunny and the road surface dry. Traffic conditions were light and free flowing with a small number of pedestrians observed and no cyclists observed.

Documents Supplied

- Email proposal background
- PRGN-2419-HGN-DR-CH-0001 D – General Arrangement

Terms of Reference

The terms of reference of this Road Safety Audit are as described in the National Highways document GG119 Revision 2 Road Safety Audit. The Audit Team has examined and reported only on the road safety implications of the scheme as presented and has not examined or verified the compliance of

the designs to any other criteria. However, to clearly explain a safety problem or the recommendation to resolve a problem, the Audit Team may on occasion have referred to a design standard for information only. No member of the Audit Team has been directly linked to the scheme design.

Each of the auditors' responses is classified as a 'Problem' that is likely to result in a significant road safety hazard. All comments and recommendations are referenced to the detailed design drawings and the locations have been indicated on the plan at the end of the report.

Where recommendations are made, these do not comprise design decisions, and it remains the responsibility of the Design Team to incorporate any changes into the scheme and consider any interactions between design elements.

Previous Road Safety Audits

The audit team have not been made aware of any previous Road Safety Audits.

Problems Raised at this Stage 1/2 RSA

PROBLEM – B-01

Location: Salthouse Road – To the south of the development access.

Summary: Pedestrians – Insufficient crossing inter-visibility may increase the risk of collisions involving pedestrians.

An uncontrolled pedestrian crossing point is indicated to the south of the development access across Salthouse Road. Whilst visibility is shown for the development access, none is shown for the pedestrian crossing. The audit team note that the main carriageway curves at this point, reducing crossing inter-visibility at the eastern side of the crossing due to an existing wall to the back of the footway and a crest in the main carriageway. Insufficient crossing inter-visibility may increase the risk of collisions involving pedestrians, especially younger children who may experience masking by the wall at the back of the footway.

RECOMMENDATION

It is recommended that sufficient crossing inter-visibility is provided for the pedestrian crossing point.

DESIGNERS RESPONSE

Standard 2m x 2m pedestrian intervisibility splays shown at proposed pedestrian crossing locations.

PROBLEM – B-02

Location: Development Access – Eastern interface with the proposed car park

Summary: Traffic Signs – Lack of conspicuity may increase the risk of collision with bollards to the eastern end of the development access.

A line of bollards is indicated on the drawings to the eastern end of the development access. It is unclear if these will be provided or what type is proposed. Should bollards be provided here that lack conspicuity, there may be a risk that drivers on the development access come into collision with the bollards, especially during the hours of darkness.

RECOMMENDATION

It is recommended that the bollards are conspicuous and are provided with a retro-reflective strip.

DESIGNERS RESPONSE

Note added.

PROBLEM – B-03

Location: Salthouse Road – At the development access.

Summary: Carriageway Markings – Lack of priority indication may increase the risk of junction related collisions.

No junction priority carriageway markings have been provided to highlight the priority at the junction of the development access and the main carriageway. Lack of junction priority carriageway markings may increase the risk of junction related collisions.

RECOMMENDATION

It is recommended that junction priority carriageway markings (give way) are provided.

DESIGNERS RESPONSE

Junction markings added.

Audit Team Statement

We certify that the Road Safety Audit Team have carried out their duties as far as practicable in accordance with GG119 Revision 2.

Road Safety Audit Team Leader

Haydn Vernals FCIHT FIHE CMILT MSoRSA
Directive 2008/96/EC (Certificate of Competency)

Director – Sevenairs Consulting Ltd.
20 High Bank, Thurlstone, Sheffield,
South Yorkshire, S36 9QH

Signed:

Date: 27th July 2025

Road Safety Audit Team Member

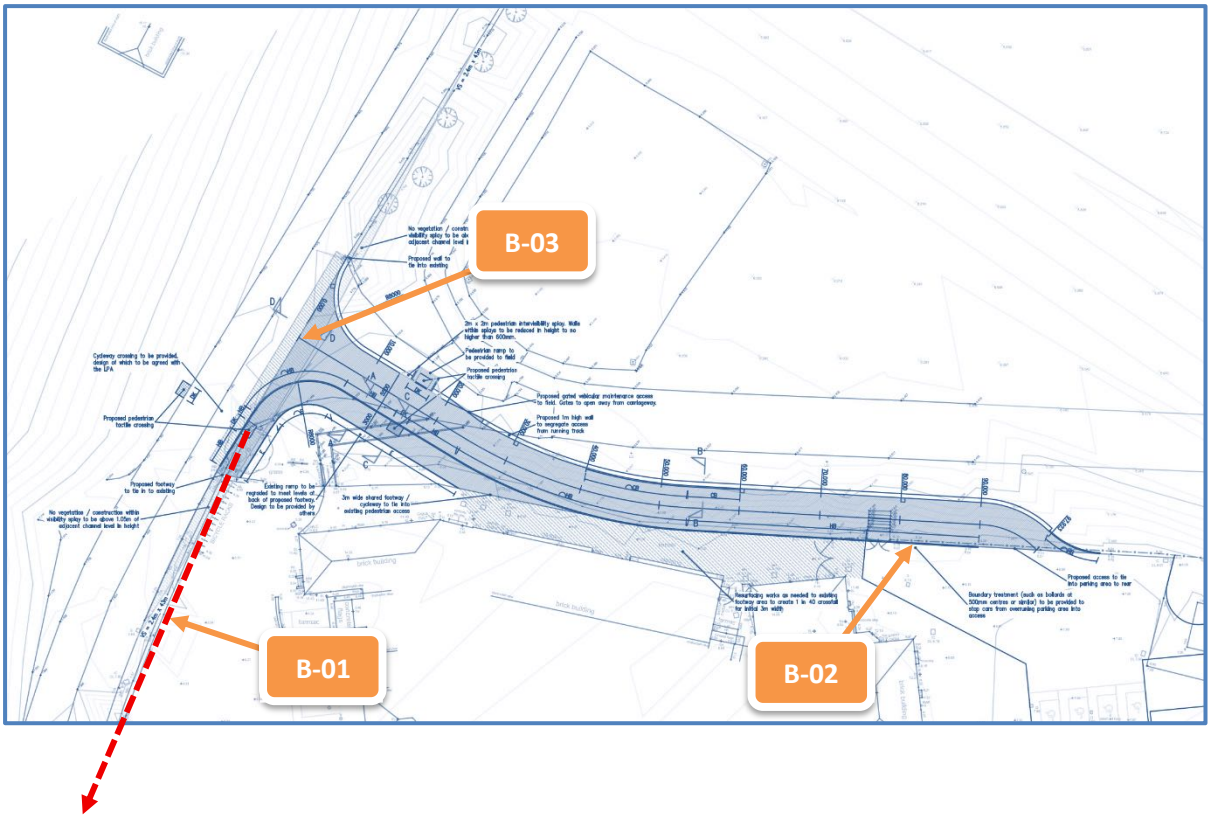
Sarah Vernals BAHonsQTS NPQH

Director – Sevenairs Consulting Ltd.
20 High Bank, Thurlstone, Sheffield,
South Yorkshire, S36 9QH

Signed:

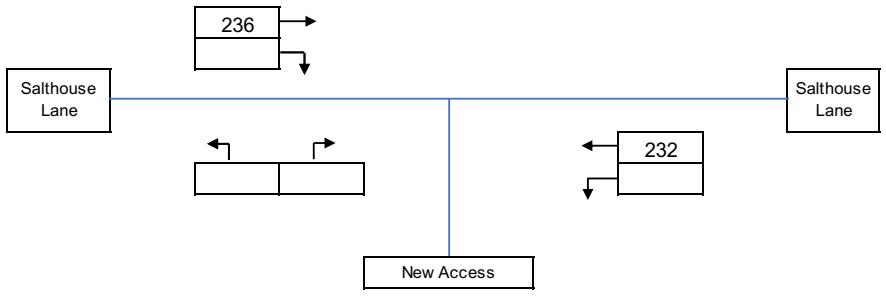
Date: 27th July 2025

Problem Location Plan

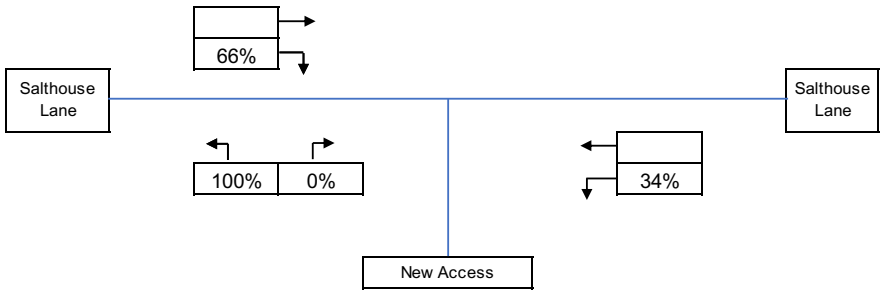


Appendix C

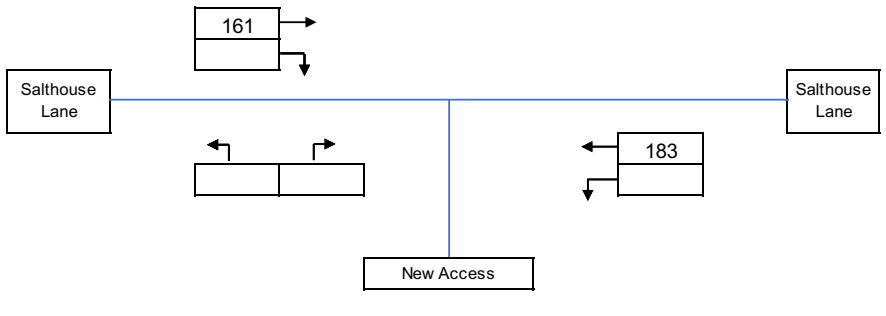
Millom Leisure Centre
AM Peak Base + Leisure Centre Development Flows



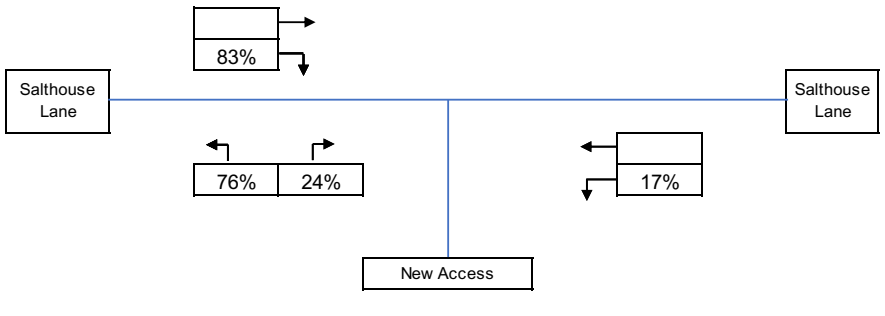
Millom Leisure Centre
AM Peak Distribution



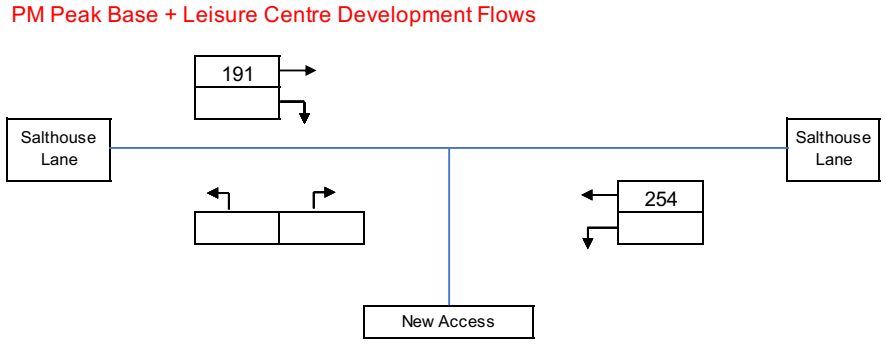
Millom Leisure Centre
School PM Peak Base + Leisure Centre Development Flows



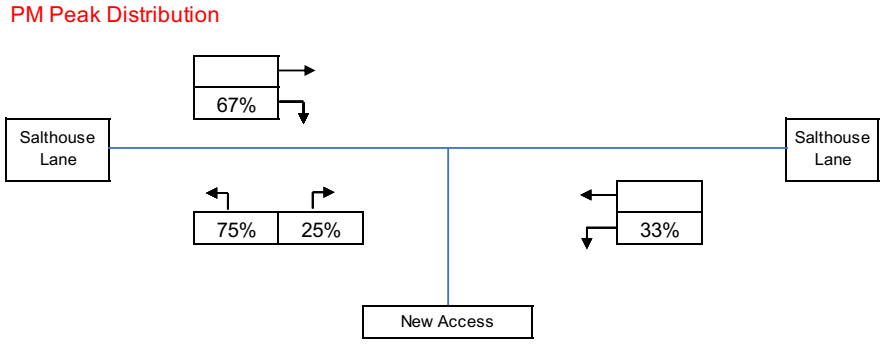
Millom Leisure Centre
School Peak Distribution



Millom Leisure Centre
PM Peak Base + Leisure Centre Development Flows

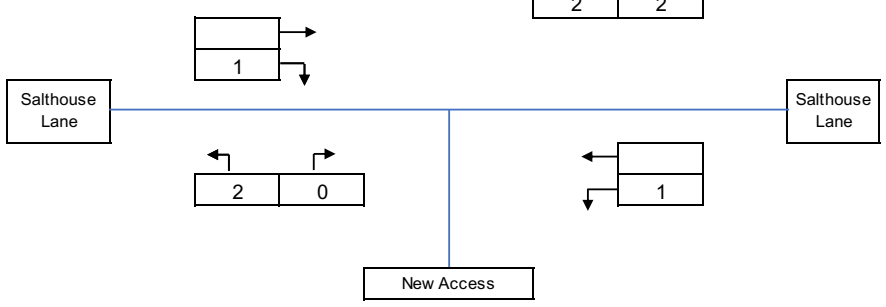


Millom Leisure Centre
PM Peak Distribution

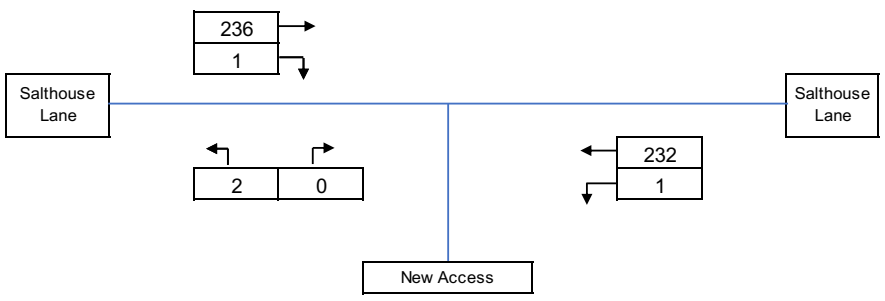


Millom Leisure Centre
AM Peak New Access Development Flows

In	Out
2	2

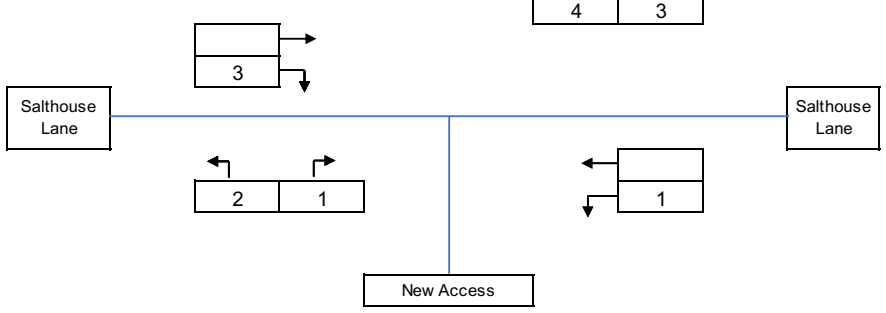


Millom Leisure Centre
AM Peak Base + Leisure Centre Development + New Access Development Flows

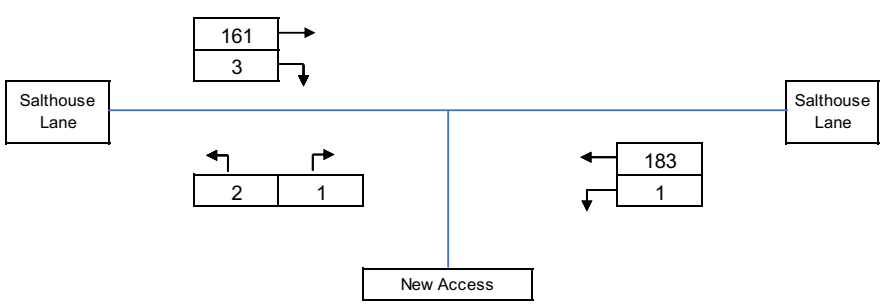


Millom Leisure Centre
School Peak New Access Development Flows

In	Out
4	3

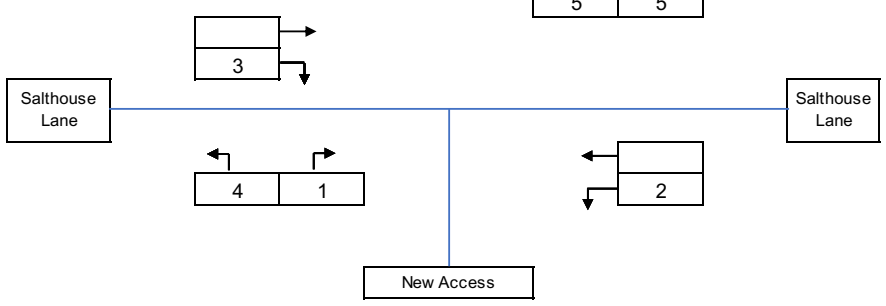


Millom Leisure Centre
School Peak Base + Leisure Centre Development + New Access Development Flows

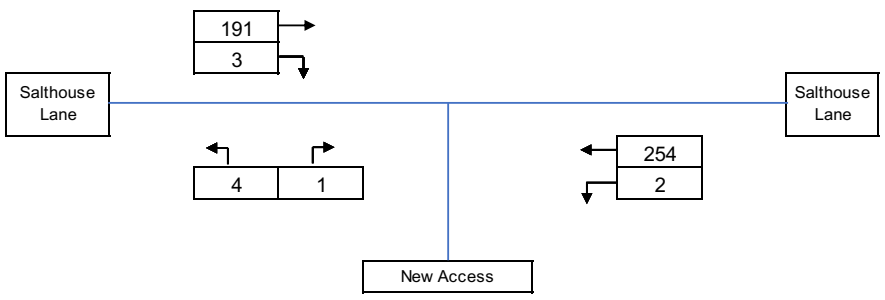


Millom Leisure Centre
PM Peak New Access Development Flows

In	Out
5	5



Millom Leisure Centre
PM Peak Base + Leisure Centre Development + New Access Development Flows



Appendix D

Junctions 9

PICADY 9 - Priority Intersection Module

Version: 9.5.1.7462

Filename: Salthouse Road Access.j9
Path: C:\Users\JohnThompson\CloudStation\SK22543 Millom\Junction Assessments
Report generation date: 20/06/2025 09:55:42

Summary of junction performance

	AM Peak					School Peak					PM Peak				
	Set ID	Queue (PCU)	Delay (s)	RFC	LOS	Set ID	Queue (PCU)	Delay (s)	RFC	LOS	Set ID	Queue (PCU)	Delay (s)	RFC	LOS
	Proposed Access - 2030														
Stream B-AC	D1	0.0	0.00	0.00	A	D2	0.0	0.00	0.00	A	D3	0.0	6.93	0.01	A
Stream C-B		0.0	6.89	0.00	A		0.0	6.78	0.01	A		0.0	6.99	0.01	A

There are warnings associated with one or more model runs - see the 'Data Errors and Warnings' tables for each Analysis or Demand Set.

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

File summary

File Description

Title	Salthouse Road Access
Location	Millom
Site number	
Date	20/06/2025
Version	
Status	
Identifier	
Client	
Jobnumber	SK22543
Enumerator	
Description	

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

Analysis Options

Vehicle length (m)	Calculate Queue Percentiles	Calculate detailed queueing delay	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
5.75				0.85	36.00	20.00

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2030	AM Peak	ONE HOUR	07:45	09:15	15	✓
D2	2030	School Peak	ONE HOUR	14:15	15:45	15	✓
D3	2030	PM Peak	ONE HOUR	16:15	17:45	15	✓

Analysis Set Details

ID	Name	Include in report	Network flow scaling factor (%)	Network capacity scaling factor (%)
A1	Proposed Access	✓	100.000	100.000

Proposed Access - 2030, AM Peak

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way		0.01	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	Has right turn bay	Visibility for right turn (m)	Blocks?	Blocking queue (PCU)
C	8.50			0.0		-

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)	Visibility to left (m)	Visibility to right (m)
B	One lane	2.75	30	30

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
B-A	489	0.079	0.201	0.126	0.287
B-C	627	0.086	0.216	-	-
C-B	574	0.198	0.198	-	-

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 Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2030	AM Peak	ONE HOUR	07:45	09:15	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		ONE HOUR	✓	233	100.000
B		ONE HOUR	✓	2	100.000
C		ONE HOUR	✓	237	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A	B	C
From	A	0	1	232
	B	0	0	2
	C	236	1	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	0	0	0
	B	0	0	0
	C	0	0	0

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)
B-AC	0.00	0.00	0.0	A	0	0
C-A					217	325
C-B	0.00	6.89	0.0	A	0.92	1
A-B					0.92	1
A-C					213	319

Main Results for each time segment

07:45 - 08:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	0	0	498	0.000	0	0.0	0.0	0.000	A
C-A	178	44			178				
C-B	0.75	0.19	539	0.001	0.75	0.0	0.0	6.685	A
A-B	0.75	0.19			0.75				
A-C	175	44			175				

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	0	0	488	0.000	0	0.0	0.0	0.000	A
C-A	212	53			212				
C-B	0.90	0.22	532	0.002	0.90	0.0	0.0	6.771	A
A-B	0.90	0.22			0.90				
A-C	209	52			209				

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	0	0	474	0.000	0	0.0	0.0	0.000	A
C-A	260	65			260				
C-B	1	0.28	523	0.002	1	0.0	0.0	6.895	A
A-B	1	0.28			1				
A-C	255	64			255				

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	0	0	474	0.000	0	0.0	0.0	0.000	A
C-A	260	65			260				
C-B	1	0.28	523	0.002	1	0.0	0.0	6.895	A
A-B	1	0.28			1				
A-C	255	64			255				

08:45 - 09:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	0	0	488	0.000	0	0.0	0.0	0.000	A
C-A	212	53			212				
C-B	0.90	0.22	532	0.002	0.90	0.0	0.0	6.774	A
A-B	0.90	0.22			0.90				
A-C	209	52			209				

09:00 - 09:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	0	0	498	0.000	0	0.0	0.0	0.000	A
C-A	178	44			178				
C-B	0.75	0.19	539	0.001	0.75	0.0	0.0	6.687	A
A-B	0.75	0.19			0.75				
A-C	175	44			175				

Proposed Access - 2030, School Peak

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way		0.06	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D2	2030	School Peak	ONE HOUR	14:15	15:45	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		ONE HOUR	✓	184	100.000
B		ONE HOUR	✓	3	100.000
C		ONE HOUR	✓	164	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A	B	C
From	A	0	1	183
	B	1	0	2
	C	161	3	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	0	0	0
	B	0	0	0
	C	0	0	0

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)
B-AC	0.00	0.00	0.0	A	0	0
C-A					148	222
C-B	0.01	6.78	0.0	A	3	4
A-B					0.92	1
A-C					168	252

Main Results for each time segment

14:15 - 14:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	0	0	510	0.000	0	0.0	0.0	0.000	A
C-A	121	30			121				
C-B	2	0.56	547	0.004	2	0.0	0.0	6.613	A
A-B	0.75	0.19			0.75				
A-C	138	34			138				

14:30 - 14:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	0	0	503	0.000	0	0.0	0.0	0.000	A
C-A	145	36			145				
C-B	3	0.67	541	0.005	3	0.0	0.0	6.684	A
A-B	0.90	0.22			0.90				
A-C	165	41			165				

14:45 - 15:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	0	0	492	0.000	0	0.0	0.0	0.000	A
C-A	177	44			177				
C-B	3	0.83	534	0.006	3	0.0	0.0	6.785	A
A-B	1	0.28			1				
A-C	201	50			201				

15:00 - 15:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	0	0	492	0.000	0	0.0	0.0	0.000	A
C-A	177	44			177				
C-B	3	0.83	534	0.006	3	0.0	0.0	6.785	A
A-B	1	0.28			1				
A-C	201	50			201				

15:15 - 15:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	0	0	503	0.000	0	0.0	0.0	0.000	A
C-A	145	36			145				
C-B	3	0.67	541	0.005	3	0.0	0.0	6.684	A
A-B	0.90	0.22			0.90				
A-C	165	41			165				

15:30 - 15:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	0	0	510	0.000	0	0.0	0.0	0.000	A
C-A	121	30			121				
C-B	2	0.56	547	0.004	2	0.0	0.0	6.613	A
A-B	0.75	0.19			0.75				
A-C	138	34			138				

Proposed Access - 2030, PM Peak

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way		0.12	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D3	2030	PM Peak	ONE HOUR	16:15	17:45	15	✓

Vehicle mix varies over turn	Vehicle mix varies over entry	Vehicle mix source	PCU Factor for a HV (PCU)
✓	✓	HV Percentages	2.00

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		ONE HOUR	✓	256	100.000
B		ONE HOUR	✓	5	100.000
C		ONE HOUR	✓	194	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A	B	C
From	A	0	2	254
	B	1	0	4
	C	191	3	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A	B	C
From	A	0	0	0
	B	0	0	0
	C	0	0	0

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)
B-AC	0.01	6.93	0.0	A	5	7
C-A					175	263
C-B	0.01	6.99	0.0	A	3	4
A-B					2	3
A-C					233	350

Main Results for each time segment

16:15 - 16:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	4	0.94	547	0.007	4	0.0	0.0	6.632	A
C-A	144	36			144				
C-B	2	0.56	536	0.004	2	0.0	0.0	6.746	A
A-B	2	0.38			2				
A-C	191	48			191				

16:30 - 16:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	4	1	537	0.008	4	0.0	0.0	6.755	A
C-A	172	43			172				
C-B	3	0.67	528	0.005	3	0.0	0.0	6.847	A
A-B	2	0.45			2				
A-C	228	57			228				

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	6	1	525	0.011	5	0.0	0.0	6.935	A
C-A	210	53			210				
C-B	3	0.83	518	0.006	3	0.0	0.0	6.992	A
A-B	2	0.55			2				
A-C	280	70			280				

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	6	1	525	0.011	6	0.0	0.0	6.935	A
C-A	210	53			210				
C-B	3	0.83	518	0.006	3	0.0	0.0	6.992	A
A-B	2	0.55			2				
A-C	280	70			280				

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	4	1	537	0.008	5	0.0	0.0	6.758	A
C-A	172	43			172				
C-B	3	0.67	528	0.005	3	0.0	0.0	6.850	A
A-B	2	0.45			2				
A-C	228	57			228				

17:30 - 17:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	4	0.94	547	0.007	4	0.0	0.0	6.632	A
C-A	144	36			144				
C-B	2	0.56	536	0.004	2	0.0	0.0	6.747	A
A-B	2	0.38			2				
A-C	191	48			191				