



Technical Note 01 (v.04)

Highways Appraisal

Job Name: Land off Pant Celydd, Margam

Job Ref: 20-390-20

Date: 3rd February 2021

Introduction

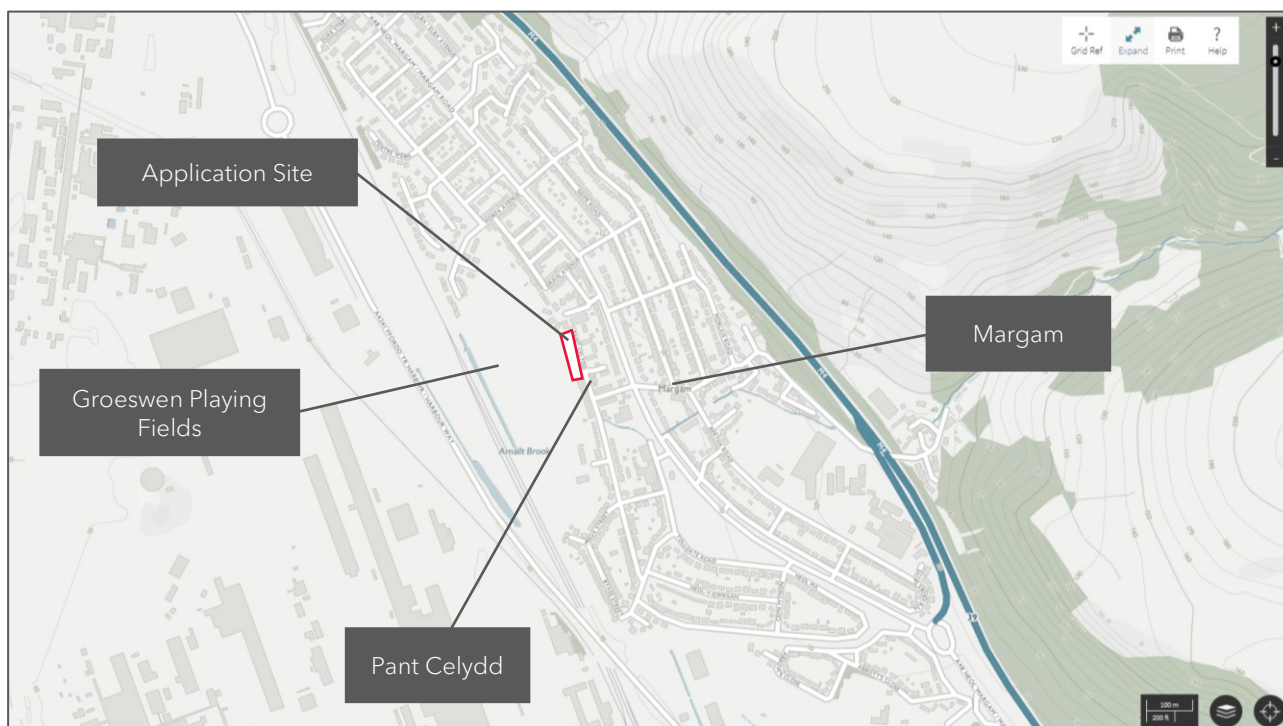
This Technical Note has been prepared by Calibro Consultants Limited on behalf of CJ Construction (Wales) Ltd in consideration of the highway implications of the proposed development of 25 affordable dwellings on Land off Pant Celydd, Margam. Specifically, this note reviews the salient matters as they relate to junction visibility, car parking layout and quantum, refuse collection, together with the magnitude and severity of any changes in traffic demand.

Site Location

The application site lies to the east of the residential area at Margam, approximately 2.7-kilometres south of Port Talbot. In a localised context, the site is bound by the Groeswen Playing Fields to the west, whilst Pant Celydd Road delineates the eastern boundary, with residential dwellings located adjacent. Further residential units comprise both the northern and south boundaries of the site.

The application site is shown within its local context within the figure below.

Figure 1 - Location of Site





The development proposals will widen the existing footway from circa 1.5-metres to 2-metres along the site frontage to enhance connectivity toward the northern extents of Margam for a larger range of users, for example, a 2-metre-wide footway allows two wheelchair users to pass side-by-side.

Refuse Vehicle Arrangement

The proposed development will follow the existing refuse collection arrangements as for the dwellings located along Pant Celydd Road.

Proposed Car Parking Provision

The quantum of car parking proposed has been determined with reference to guidance set out within Neath Port Talbot County Borough Council (NPTCBC) Supplementary Planning Guidance document SP20. In this way, it is noted that site lies within a Zone 3 designation, within which the following maximum standards apply.

Table 1 - Car Parking Standards

Development Type	Residents	Visitor
Houses	1 space per bedroom (max of 3 spaces)	1 space per 5 units
Flats	1 space per bedroom (max of 3 spaces)	1 space per 5 units

Application of the above standards identifies the maximum number of permissible spaces would be 40 (35 resident spaces and 5 visitor spaces) prior to a reduction from a sustainability assessment, as detailed within Appendix F of the SPG document. The SPG20 document explains that "Sustainability points will be awarded to development that meet the criteria below for their proximity, in terms of walking distance to local facilities, public transport, cycle routes and the frequency of public transport...Award of these sustainability points will result in a reduction in parking requirements as detailed below". The sustainability assessment is set out in the table below.

Table 2 - Sustainability Criteria and Calculation of Points

Sustainability Criteria	Max. Walking Distance			Sustainability Points
Local Facilities	200m	400m	800m	Score
Co-op Tollgate Road		1		4
Tollgate Road- Post Office and Convenience store		1		
Twelve Knights Public House		1		
Express Café		1		
Lee's Takeaway and Delivery		1		
Tollgate Hardware Store		1		
Happy stars Day Nursery			1	3
Primary / Secondary School / College			3	
Public Transport	300m	400m	800m	Score
Bus Stop / Railway Station	1	1	8	3
Cycle Route	200m			Score
Segregated cycle route with access to local services	1			1
Frequency of Public Transport	5mins	20mins	30mins	Score
Service <800m with consistent operation between 7am & 7pm		2	4	2
Deductions		4	4	
Calculated Score		2	0	
TOTAL SCORE				10



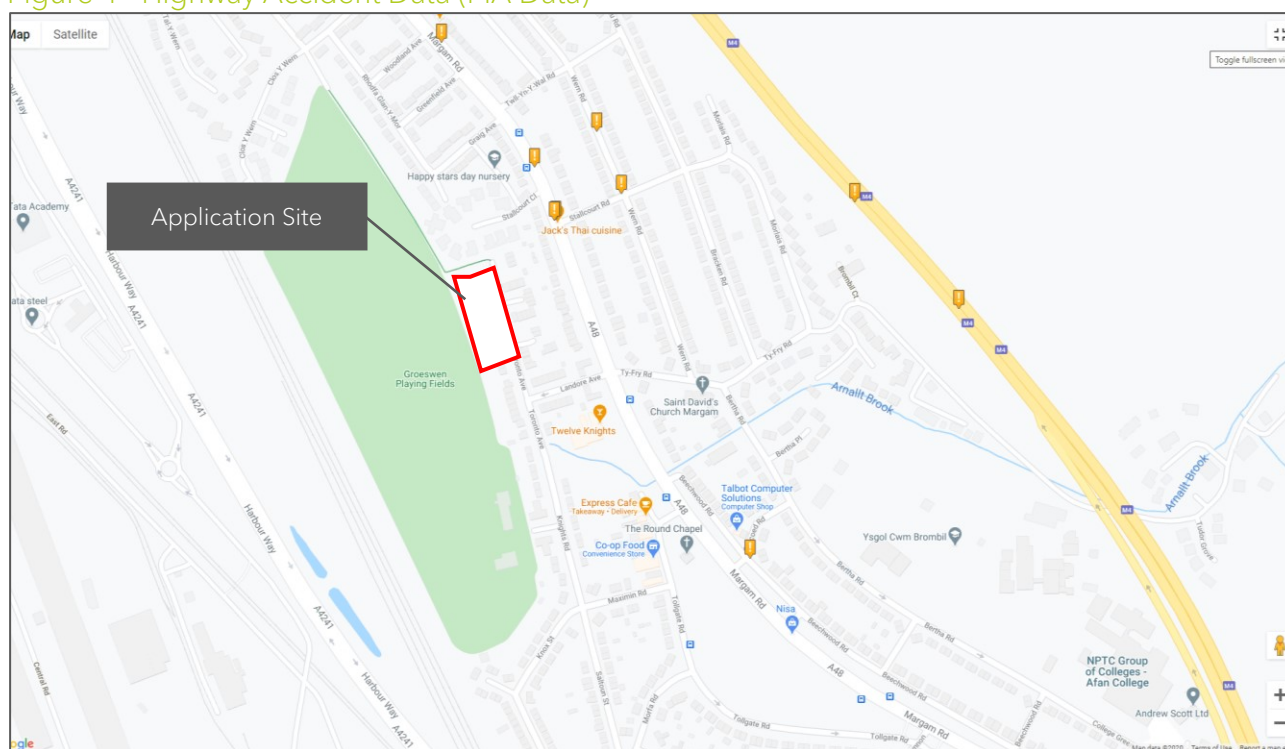
On the basis of the above, it is considered appropriate to apply a parking reduction of 2 spaces per dwelling in line with the SPG as the site accrues 10 sustainability points by virtue of its accessible location, with access to nearby amenities and bus stops and services therein.

As such, the proposals incorporate a provision for 26 resident spaces alongside 3 visitor spaces across the development, consequently, the proposals are compliant with policy.

Review of Highway Safety

The safety performance of the existing highway network, within vicinity of the site, has been considered by reference to Personal Injury Accident data (PIA) obtained via the publicly accessible database at crashmap.co.uk. PIA data has been extracted from the database for the most recent five-year period available (2015-2019 inclusive) and has been included within the figure below, which indicates the number and severity of accidents recorded.

Figure 4 - Highway Accident Data (PIA Data)



Based on the above the available data identified four accidents have occurred within vicinity of the site along the A48-Margam Road, with a further three accidents being recorded within the residential area to the west. It is also noteworthy that all accidents recorded have been classified as 'slight' and as such, are defined as accidents involving an injury of minor character such as sprain, bruise, or cut which are not judged to be severe. With the definition not requiring medical treatment as per STATS19.



On this basis, it is evident that there is not a clustering or overall frequency of accidents across the study area that might be otherwise suggestive of a deficiency in the layout or geometry of the highway network which would then indicate an unacceptable safety risk. Indeed, it is considered that the traffic generation potential of the proposed development in combination with the likely distribution would not be sufficient as to give rise to a material worsening in the safety performance of the wider highway network.

Calculation of Likely Traffic Effects

The likely trip generation effects of the proposed development have been considered through the determination of trip rates from the industry standard TRICS database (version 7.7.3). The TRICS database calculates an average trip rate from a number of sites similar to the proposed development, which have been selected based on a range of characteristics such as, geography, size, and composition. With regards to the proposed development, the following selection criteria have been used.

Table 3 - TRICS Selection Criteria

Selection Criteria
03 - Residential
B - Affordable/Local Authority Houses & D - Affordable / Local Authority Flats
Excluding Sites from: Greater London, Scotland & Ireland
Edge of Town, Suburban Area, Neighbourhood Centre Locations

Full selection criteria are contained within the TRICS output files at [Appendix B](#).

The resultant peak hour and daily trip generation rates have been summarised in the table below, for both affordable house and flat land-uses.

Table 4 - Proposed Development Trip Rates

Time Range	Arrivals		Departures		Two-Way	
	Houses	Flats	Houses	Flats	Houses	Flats
08:00-09:00	0.187	0.088	0.328	0.137	0.515	0.225
17:00-18:00	0.334	0.157	0.227	0.108	0.561	0.265
Daily Trip Rates:	2.395	1.459	2.372	1.460	4.767	2.919

In the interests of rigour, this note has used the higher trip rates associated with affordable houses to assess the traffic generation potential for the full development. On this basis, the resultant trip rates have been pro-rated in line with the quantum of development to provide an indication of the likely traffic movements associated with the development, as shown below.



Table 5 – Proposed Development Trip Generation Potential

Time Range	Arrivals		Departures		Two-Way	
	Trip Rate	Trips	Trip Rate	Trips	Trip Rate	Trips
07:00-08:00	0.071	2	0.193	5	0.264	7
08:00-09:00	0.187	5	0.328	8	0.515	13
09:00-10:00	0.181	5	0.233	6	0.414	10
10:00-11:00	0.153	4	0.172	4	0.325	8
11:00-12:00	0.129	3	0.15	4	0.279	7
12:00-13:00	0.15	4	0.135	3	0.285	7
13:00-14:00	0.172	4	0.135	3	0.307	8
14:00-15:00	0.202	5	0.206	5	0.408	10
15:00-16:00	0.285	7	0.215	5	0.5	13
16:00-17:00	0.313	8	0.206	5	0.519	13
17:00-18:00	0.334	8	0.227	6	0.561	14
18:00-19:00	0.218	5	0.172	4	0.39	10
Daily Trip Rates:	2.395	60	2.372	59	4.767	119

From the analysis presented above, it is evident that the development proposals would result in nominal increase in peak hour trips. Indeed, the greatest change is calculated to occur in the evening peak, where just 14 two-way movements are calculated, which broadly equates to one vehicle every five minutes.

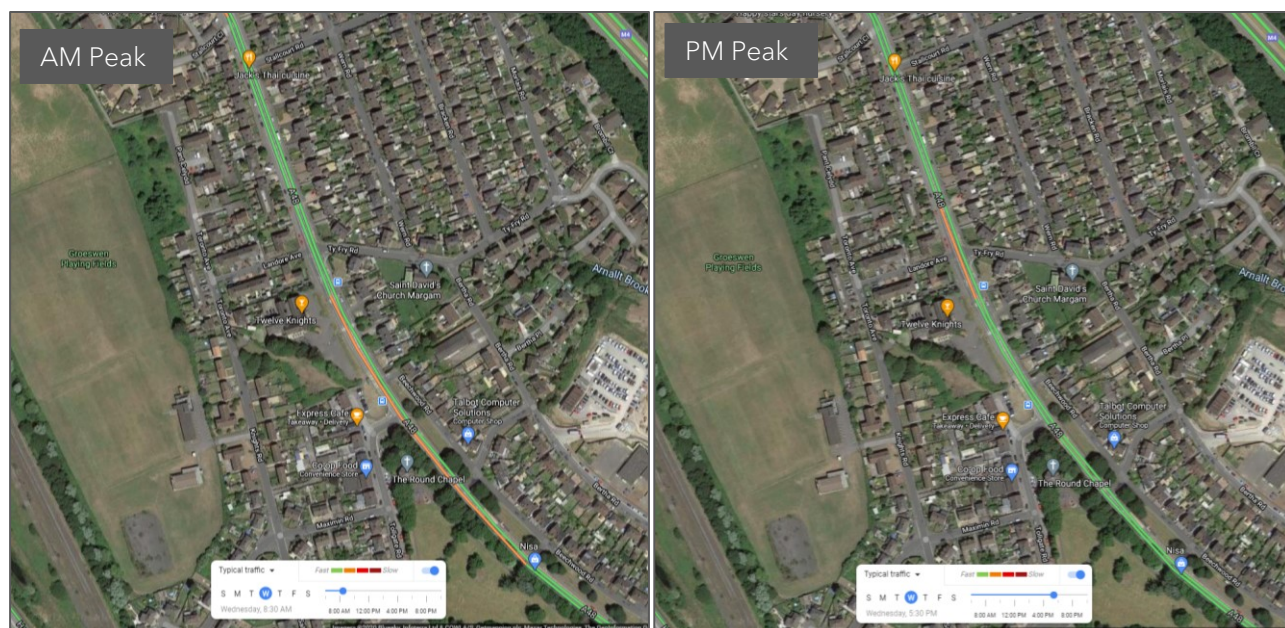
The change in traffic demand cannot therefore be considered to be of sufficient magnitude to result to in a material and discernible change the operation of the highway network, in the context of highway safety and capacity. This is particularly true where the adjoining highway network operates in relative free-flow conditions during the peak hours, as is the case locally and as evidenced in the below figure.

The below images use a broad traffic light system to indicate relative delay on section of the network. In this context, a green band indicates unconstrained movement, amber indicates some minor delay, with red and maroon being indicative of higher rates of delay that may be suggestive of sensitivities in capacity performance.

On this basis, the below figures confirm that the local area highway network is generally in free flow during peak hours, with occasional localised areas of minor delay that would indicate normal levels of junction delay.



Figure 5 – Typical Traffic Delay: Google Maps



Summary and Conclusion

This appraisal has been prepared on behalf of the Applicant to assess the traffic and transport effects of a proposed development of 25 affordable dwellings on land off Pant Celydd Road, Margam. The findings of this appraisal can be summarised as follows: -

- The proposed development seeks permission for the construction of 25 affordable dwellings.
- The proposed development will be served by perpendicular parking along the back edge of the western footway along Pant Celydd Road.
- The existing footway that runs along the western boundary of Pant Celydd Road will be widened as part of the development proposals, enhancing pedestrian connectivity to northern Margam.
- The trip generation potential of the proposed development has been considered using industry standard software, which has shown that the increase in vehicle trips would be immaterial and indiscernible in the context of highway safety and capacity.

Conclusion

The evidence presented within this appraisal demonstrates that the anticipated change in traffic flow as a result of the development proposals would be nominal and immaterial in the context and the safe and efficient operation of the surrounding highway network. In this regard, the proposed development would not result in a cumulative residual impact that could be classified as 'severe'.

Consequently, the overriding conclusion of this appraisal is that there can be no defensible reasons to refuse planning permission of the grounds of highway capacity or highway safety. In this regard the proposed development should be permitted.



Appendix A

SITE LAYOUT
Scale 1:250

SITE AREAS:

DEVELOPABLE SITE AREA: 0.94ACRES



- DENOTES SITE APPLICATION BOUNDARY
- DENOTES 1800MM HIGH TREATED CLOSE BOARDED FENCE.
- DENOTES 1800MM HIGH GALVANISED FLAT TOP RAILINGS.
- DENOTES FACING BRICK RETAINING BOUNDARY WALLS - REFER TO ENGINEERS DRAWINGS FOR R.WALL DETAILS. - REFER TO SECTION Q40 OF ERS
- [Pattern] DENOTES AREA IN 'TOBERMORE' PERMEABLE PAVING SYSTEM TO PRIVATE DRIVES AND PARKING COURTS - COLOUR: GREY
- [Pattern] DENOTES 2.6M X 4.8M 'TOBERMORE' PERMEABLE PAVING SYSTEM PARKING BAYS WITH 50MM X 100MM P.C CONCRETE PATH EDGING TO DELINEATE BAYS.
- [Pattern] DENOTES AREA OF NEW 2M WIDE TARMACADAM FOOTWAYS TO PERIMETER OF SITE - TO ADOPTABLE STANDARDS
- [Pattern] DENOTES AREAS OF 450 X 450MM P.C CONC. PAVING SLABS TO FORM PATIO AREAS AND 900MM MIN FOOTPATHS TO TO CURTLAGE OF HOUSES AND 1200MM WIDE TO TO CURTLAGE OF FLATS.
- [Pattern] DENOTES AREAS OF INFORMAL PLANTING / LANDSCAPING AREAS, AS PER TREE / SPECIES MIX IN LANDSCAPING SCHEDULE.
- [Pattern] DENOTES AREAS OF TURFED GRASS TO REAR GARDENS.
- [Pattern] DENOTES AREAS OF RAIN GARDENS TO ASSIST SUDDS DRAINAGE DESIGN & BIODIVERSITY AS PER TREE / SPECIES MIX IN LANDSCAPING SCHEDULE.
- [Symbol] DENOTES 1.8M HIGH - 900MM WIDE TIMBER GATE WITH A SECURITY LOCK, IN COMPLIANCE WITH BS5500 - NOTE GATE TO BE SIMILAR HEIGHT TO ADJACENT WALL/GATE IF APPLICABLE.
- [Symbol] DENOTES NEW TREE PLANTING (REFER TO LANDSCAPE DRAWING FOR TYPES AND SCHEDULES)
- [Symbol] DENOTES 2200 X 1500MM ROBUST TREATED TIMBER FRAMED SHED WITH 1NO./2NO. SHEETPILE OR SIMILAR TYPE STEEL FRAMED BKE BACK, BOTH BOLTED TO 150MM THICK CONCRETE BASE - PROVIDING SPACE FOR 2NO BICYCLES AND 1M² GARDEN STORE SPACE. PERMANENT LOCK TO BE PROVIDED TO SHED DOOR, CONFORMING TO BS 3621:2004.
- [Symbol] DENOTES 2.9M DIAMETER ROTARY DRYER SET IN CONCRETE - PROVIDING 4M MIN. OF LINE FOR 2 BED DWELLINGS, 6M MIN. FOR 3 BED DWELLINGS.
- [Symbol] DENOTES PAVED CONCRETE HARDSTANDING FOR COMMUNAL BIN STORE HOSTING REFUSE BINS TO SUIT LA REQUIREMENTS
- [Symbol] DENOTES POSITION OF IBSTOCK OR SIMILAR SWIFT BOX IN SMOOTH RED - TO BE INSTALLED AT MIN. 5M FROM EXTERNAL GROUND LEVEL - TO BE APPROVED BY LOCAL AUTHORITY.
- [Symbol] DENOTES POSITION OF IBSTOCK BAT BRICK (TYPE A) OR SIMILAR - REFER TO INDIVIDUAL ELEVATIONS FOR EXACT LOCATION - TO BE APPROVED BY LOCAL AUTHORITY

Plot No.	Dwelling Type	GIA (M²)	GIA (FT²)	Garden Area (M²)
Block 1				
1	4P 2B HOUSE TYPE	83	893.4	55.8
2	4P 2B HOUSE TYPE	83	893.4	46
3	5P 3B HOUSE TYPE	94	1001	45.6
Block 2				
4	2P 1B FLAT TYPE	50	579.4	466 [SHARED]
5	2P 1B FLAT TYPE	54	667.3	
6	2P 1B FLAT TYPE	54	579.4	
7	2P 1B FLAT TYPE	58	624.3	
8	2P 1B FLAT TYPE [ADAPTED]	61	656.6	
9	3P 2B FLAT TYPE	65	699.66	
10	2P 1B FLAT TYPE [ADAPTED]	61	656.6	
11	3P 2B FLAT TYPE	65	699.66	
12	2P 1B FLAT TYPE	54	579.4	
13	2P 1B FLAT TYPE	58	624.3	
14	2P 1B FLAT TYPE	50	579.4	
15	2P 1B FLAT TYPE	54	667.3	
Block 3				
16	4P 2B HOUSE TYPE	83	893.4	57.4
17	2P 1B FLAT TYPE [ADAPTED]	61	656.6	232 [SHARED]
18	3P 2B FLAT TYPE	65	699.66	
19	2P 1B FLAT TYPE [ADAPTED]	61	656.6	
20	3P 2B FLAT TYPE	65	699.66	
21	2P 1B FLAT TYPE	50	538	
22	2P 1B FLAT TYPE	60	688	
23	2P 1B FLAT TYPE	50	538	
24	2P 1B FLAT TYPE	60	688	
25	4P 2B HOUSE TYPE	83	893.4	51.9

PLOT SCHEDULE		
[Pattern]	2P 1B FLAT TYPE	16
[Pattern]	3P 2B FLAT TYPE	4
[Pattern]	4P 2B HOUSE TYPE	4
[Pattern]	5P 3B HOUSE TYPE	1
TOTAL NUMBER OF UNITS		25
REFER TO CONSULTING ENGINEERING DRAWINGS FOR PLOT FINISHED FLOOR LEVELS AND DRAINAGE DETAILS. REFER TO LANDSCAPE ARCHITECT'S DRAWINGS FOR DETAILS OF LANDSCAPING PROPOSALS.		
[Symbol]	DENOTES 2.6M X 4.8M PARKING BAY. LTH DENOTES 'LIFE TIME HOME' COMPLIANT PARKING SPACE.	

PARKING SCHEDULE		
PARKING REDUCTION BASED ON SUSTAINABILITY MATRIX PREPARED AND SUPPORTED BY CALIBRI TRAFFIC ASSESSMENT		
UNIT TYPE	No.s	PARKING SPACES
4 PERSON 2 BEDROOM HOUSE TYPE	4	4
5 PERSON 3 BEDROOM HOUSE TYPE	1	2
3 PERSON 2 BEDROOM FLAT TYPE	4	4
2 PERSON 1 BEDROOM FLAT TYPE	16	16
Sub Total		26
VISITORS		3
TOTAL		29

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PANT CELYDD ROAD, MARGAM

Drawing Purpose
PLANNING

Client	Drawing No	Scale	Revision
C J Construction	LT2013.04.01	1:250 @ A1	C
Job Title	Drawing Title	Date	Checked
Pant Celydd Road, Margam	Proposed Site Layout	Nov 20	kml

Revisions	
REV.A - JAN/21	REVISIONS REVIEWED TO ACCORD WITH PAC RESPONSE
REV.B - JAN/21	FLOOR AREAS UPDATED
REV.C - JAN/21	LAYOUT UPDATED TO SUIT 3P 3N PLANS.

A1 DRAWING SHEET

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Appendix B

Calculation Reference: AUDIT-861401-201117-1138

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 03 - RESIDENTIAL
 Category : B - AFFORDABLE/LOCAL AUTHORITY HOUSES
 TOTAL VEHICLES

Selected regions and areas:

03	SOUTH WEST	
	WL WILTSHIRE	1 days
06	WEST MIDLANDS	
	WO WORCESTERSHIRE	1 days
07	YORKSHIRE & NORTH LINCOLNSHIRE	
	WY WEST YORKSHIRE	3 days
08	NORTH WEST	
	GM GREATER MANCHESTER	1 days
	MS MERSEYSIDE	1 days
09	NORTH	
	NB NORTHUMBERLAND	1 days

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

Primary 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: No of Dwellings
 Actual Range: 16 to 97 (units:)
 Range Selected by User: 14 to 100 (units:)

Parking Spaces Range: All Surveys Included

Parking Spaces per Dwelling Range: All Surveys Included

Bedrooms per Dwelling Range: All Surveys Included

Percentage of dwellings privately owned: All Surveys Included

Public Transport Provision:

Selection by: Include all surveys

Date Range: 01/01/12 to 19/10/18

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

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

Selected survey types:

Manual count	8 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 undertaken using machines.

Selected Locations:

Suburban Area (PPS6 Out of Centre)	3
Edge of Town	4
Neighbourhood Centre (PPS6 Local Centre)	1

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	6
Built-Up Zone	1
No Sub Category	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:

C3

8 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 500m Range:

All Surveys Included

Population within 1 mile:

1,001 to 5,000	1 days
5,001 to 10,000	3 days
10,001 to 15,000	1 days
25,001 to 50,000	3 days

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

Population within 5 miles:

5,001 to 25,000	1 days
25,001 to 50,000	1 days
75,001 to 100,000	2 days
125,001 to 250,000	3 days
250,001 to 500,000	1 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	6 days
1.1 to 1.5	2 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

8 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

8 days

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

LIST OF SITES relevant to selection parameters

1	GM-03-B-01	TERRACED HOUSES	GREATER MANCHESTER
	NEWBOLD		
	ROCHDALE		
	Suburban Area (PPS6 Out of Centre)		
	No Sub Category		
	Total No of Dwellings:	43	
	Survey date: WEDNESDAY	21/10/15	Survey Type: MANUAL
2	MS-03-B-01	TERRACED	MERSEYSIDE
	TARBOCK ROAD		
	LIVERPOOL		
	SPEKE		
	Edge of Town		
	Residential Zone		
	Total No of Dwellings:	16	
	Survey date: TUESDAY	18/06/13	Survey Type: MANUAL
3	NB-03-B-01	SEMI DET. & TERRACED	NORTHUMBERLAND
	WESTLEA		
	BEDLINGTON		
	Edge of Town		
	Residential Zone		
	Total No of Dwellings:	97	
	Survey date: MONDAY	19/11/12	Survey Type: MANUAL
4	WL-03-B-01	TERRACED HOUSES	WILTSHIRE
	BUTTERFIELD DRIVE		
	AMESBURY		
	Suburban Area (PPS6 Out of Centre)		
	Residential Zone		
	Total No of Dwellings:	54	
	Survey date: TUESDAY	18/09/18	Survey Type: MANUAL
5	WO-03-B-02	TERRACED HOUSES	WORCESTERSHIRE
	GOODREST WALK		
	WORCESTER		
	MERRIMANS HILL		
	Neighbourhood Centre (PPS6 Local Centre)		
	Residential Zone		
	Total No of Dwellings:	16	
	Survey date: MONDAY	14/11/16	Survey Type: MANUAL
6	WY-03-B-02	MIXED HOUSES	WEST YORKSHIRE
	WHITEACRE STREET		
	HUDDERSFIELD		
	DEIGHTON		
	Edge of Town		
	Residential Zone		
	Total No of Dwellings:	54	
	Survey date: TUESDAY	17/09/13	Survey Type: MANUAL
7	WY-03-B-03	TERRACED HOUSES	WEST YORKSHIRE
	LINCOLN GREEN ROAD		
	LEEDS		
	Suburban Area (PPS6 Out of Centre)		
	Built-Up Zone		
	Total No of Dwellings:	29	
	Survey date: THURSDAY	19/09/13	Survey Type: MANUAL
8	WY-03-B-04	TERRACED HOUSES	WEST YORKSHIRE
	SYKES CLOSE		
	BATLEY		
	Edge of Town		
	Residential Zone		
	Total No of Dwellings:	17	
	Survey date: FRIDAY	19/10/18	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.

MANUALLY DESELECTED SITES

Site Ref	Reason for Deselection
CH-03-B-01	Higher Parking Rate

TRIP RATE for Land Use 03 - RESIDENTIAL/B - AFFORDABLE/LOCAL AUTHORITY HOUSES

TOTAL 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	8	41	0.071	8	41	0.193	8	41	0.264
08:00 - 09:00	8	41	0.187	8	41	0.328	8	41	0.515
09:00 - 10:00	8	41	0.181	8	41	0.233	8	41	0.414
10:00 - 11:00	8	41	0.153	8	41	0.172	8	41	0.325
11:00 - 12:00	8	41	0.129	8	41	0.150	8	41	0.279
12:00 - 13:00	8	41	0.150	8	41	0.135	8	41	0.285
13:00 - 14:00	8	41	0.172	8	41	0.135	8	41	0.307
14:00 - 15:00	8	41	0.202	8	41	0.206	8	41	0.408
15:00 - 16:00	8	41	0.285	8	41	0.215	8	41	0.500
16:00 - 17:00	8	41	0.313	8	41	0.206	8	41	0.519
17:00 - 18:00	8	41	0.334	8	41	0.227	8	41	0.561
18:00 - 19:00	8	41	0.218	8	41	0.172	8	41	0.390
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			2.395			2.372			4.767

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:	16 - 97 (units:)
Survey date range:	01/01/12 - 19/10/18
Number of weekdays (Monday-Friday):	8
Number of Saturdays:	0
Number of Sundays:	0
Surveys automatically removed from selection:	0
Surveys manually removed from selection:	1

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 shown. 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-861401-201117-1123

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 03 - RESIDENTIAL
 Category : D - AFFORDABLE/LOCAL AUTHORITY FLATS
 TOTAL VEHICLES

Selected regions and areas:

05	EAST MIDLANDS	
	LN LINCOLNSHIRE	1 days
07	YORKSHIRE & NORTH LINCOLNSHIRE	
	WY WEST YORKSHIRE	1 days
10	WALES	
	CF CARDIFF	1 days

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

Primary 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: No of Dwellings
 Actual Range: 22 to 56 (units:)
 Range Selected by User: 15 to 100 (units:)

Parking Spaces Range: All Surveys Included

Parking Spaces per Dwelling Range: All Surveys Included

Bedrooms per Dwelling Range: All Surveys Included

Percentage of dwellings privately owned: All Surveys Included

Public Transport Provision:

Selection by: Include all surveys

Date Range: 01/01/12 to 07/10/16

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:

Wednesday	1 days
Thursday	1 days
Friday	1 days

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

Selected survey types:

Manual count	3 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 undertaken using machines.

Selected Locations:

Suburban Area (PPS6 Out of Centre)	1
Edge of Town	1
Neighbourhood Centre (PPS6 Local Centre)	1

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	3
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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

3 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 500m Range:

All Surveys Included

Population within 1 mile:

1,001 to 5,000

1 days

15,001 to 20,000

1 days

25,001 to 50,000

1 days

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

Population within 5 miles:

5,001 to 25,000

1 days

125,001 to 250,000

1 days

250,001 to 500,000

1 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

3 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

3 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

3 days

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

LIST OF SITES relevant to selection parameters

1	CF-03-D-01	BLOCKS OF FLATS	CARDIFF
	TYN-Y-PARC ROAD		
	CARDIFF		
	WHITCHURCH		
	Neighbourhood Centre (PPS6 Local Centre)		
	Residential Zone		
	Total No of Dwellings:	24	
	Survey date: FRIDAY	07/10/16	Survey Type: MANUAL
2	LN-03-D-02	FLATS	LINCOLNSHIRE
	ADDISON DRIVE		
	LINCOLN		
	Suburban Area (PPS6 Out of Centre)		
	Residential Zone		
	Total No of Dwellings:	22	
	Survey date: WEDNESDAY	01/07/15	Survey Type: MANUAL
3	WY-03-D-03	BLOCK OF FLATS	WEST YORKSHIRE
	CARR STREET		
	HECKMONDWIKE		
	LIVERSEDGE		
	Edge of Town		
	Residential Zone		
	Total No of Dwellings:	56	
	Survey date: THURSDAY	01/05/14	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.

MANUALLY DESELECTED SITES

Site Ref	Reason for Deselection
CH-03-D-01	Lower Parking Rate
NT-03-D-02	Lower Parking Rate
WM-03-D-02	Lower Parking Rate
WO-03-D-02	Lower Parking Rate

TRIP RATE for Land Use 03 - RESIDENTIAL/D - AFFORDABLE/LOCAL AUTHORITY FLATS

TOTAL 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	3	34	0.029	3	34	0.127	3	34	0.156
08:00 - 09:00	3	34	0.088	3	34	0.137	3	34	0.225
09:00 - 10:00	3	34	0.088	3	34	0.167	3	34	0.255
10:00 - 11:00	3	34	0.137	3	34	0.098	3	34	0.235
11:00 - 12:00	3	34	0.088	3	34	0.098	3	34	0.186
12:00 - 13:00	3	34	0.137	3	34	0.108	3	34	0.245
13:00 - 14:00	3	34	0.147	3	34	0.127	3	34	0.274
14:00 - 15:00	3	34	0.176	3	34	0.176	3	34	0.352
15:00 - 16:00	3	34	0.118	3	34	0.108	3	34	0.226
16:00 - 17:00	3	34	0.118	3	34	0.069	3	34	0.187
17:00 - 18:00	3	34	0.157	3	34	0.108	3	34	0.265
18:00 - 19:00	3	34	0.176	3	34	0.137	3	34	0.313
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:		1.459			1.460			2.919	

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:	22 - 56 (units:)
Survey date range:	01/01/12 - 07/10/16
Number of weekdays (Monday-Friday):	3
Number of Saturdays:	0
Number of Sundays:	0
Surveys automatically removed from selection:	0
Surveys manually removed from selection:	4

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 shown. Finally, the number of survey days that have been manually removed from the selected set outside of the standard filtering procedure are displayed.