



# **JUPEM TALK**

## **eKADASTER – Get To Know The Basic**

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BAHAGIAN KADASTER  
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5 MAY 2020 (SELASA)**

# OUTLINE



**DISCLAIMER**

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**UNDERSTANDING FIX POINTS SELECTION**

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# BRIEF BIOGRAPHICAL NOTE

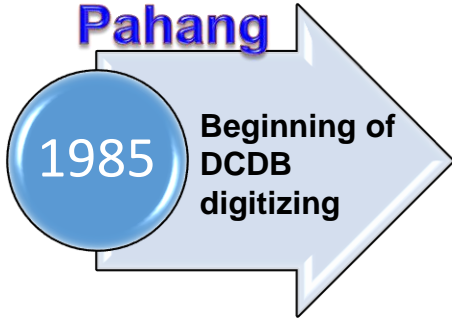
- Attached to Cadastral Legislation Section, Cadastral Division, JUPEM.
- Having more than 22 years in cadastral surveying.
- SME in Cadastral Surveying.
- A Registered Land Surveyor.
- Involved with departmental computerisation projects since 1992:
  - PeGIS
  - MiniCALS
  - SPDK/SAPD
  - SPDK Upgrade/SAPD Upgrade
  - SPTB and eTanah integration.
  - F2F
  - eKadaster etc.



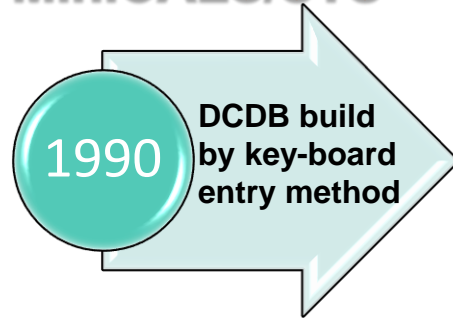
# Modernisation Programmes



## CALS Johor/ Pahang



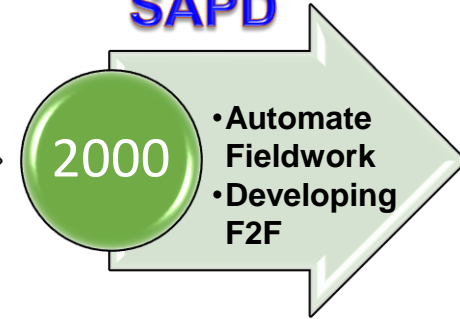
## MiniCALS/STS



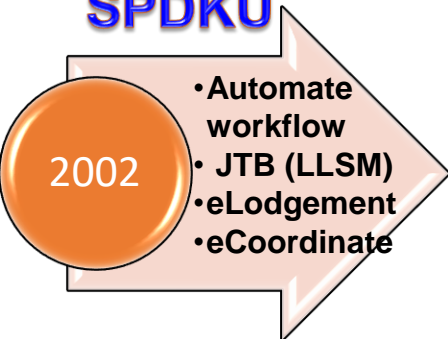
## SPDK



## SAPD



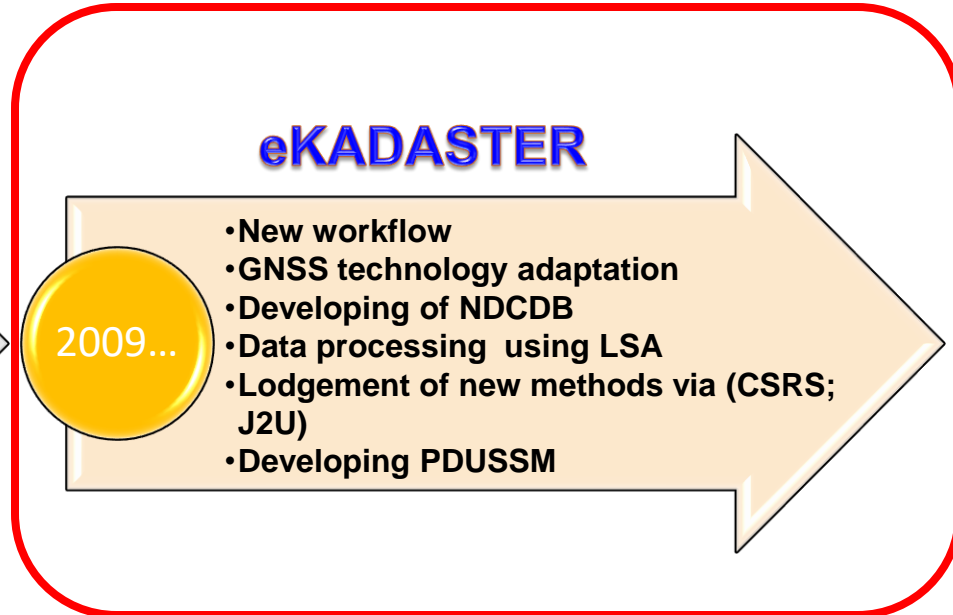
## SPDKU



## SAPDU



## eKADASTER



# OUTLINE



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# SURVEY GENERAL CIRCULARS



- **Pekeliling KPUP 5/2009**
  - Peraturan Ukur Kadaster 2009
- **Pekeliling KPUP 6/2009**
  - Garis panduan amalan kerja ukur kadaster dalam persekitaran eKadaster
- **Pekeliling KPUP 1/2008**
  - Garis panduan mengenai ujian alat sistem penentududukan sejagat (GNSS) yang menggunakan MyRTKnet
  - Jana eVRSCal
- **Surat Pekeliling KPUP 1/2010**
  - Isu-isu pengukuran dalam persekitaran eKadaster dan kaedah penyelesaiannya

# KPUP 5/2009 – Peraturan Ukur Kadaster 2009

PERATURAN UKUR KADASTER 2009



## BAB X

### PENGECUALIAN

#### 67. Pengecualian

- (1) Tiada apa-apa dalam Peraturan ini yang boleh menjejaskan pelaksanaan ukuran sebelumnya atau apa-apa yang dilakukan di bawah mana-mana Peraturan Ukur terdahulu.
- (2) Pekeliling-pekelling sedia ada dan tidak bercanggah dengan Peraturan ini akan terus terpakai sehingga Pekeliling yang lain dikeluarkan untuk menggantikannya.



# KPUP 6/2009 - Datum



- (a) sekurang-kurangnya dua tanda CRM yang berjarak tidak kurang dari 30 meter dibuat cerapan serentak dengan kaedah MyRTKnet bagi tanda pertama dan kaedah statik bagi tanda kedua; atau
- (b) sekurang-kurangnya dua tanda CRM yang berjarak tidak kurang dari 30 meter dibuat cerapan serentak dengan kaedah statik bagi kedua-dua tanda. Penentuan koordinat tanda CRM pertama boleh melalui pasca pemprosesan *Virtual Reference Station* (VRS) atau seperti yang dinyatakan di Pekeliling KPUP Bil. 6 Tahun 1999; atau

# KPUP 6/2009 - Datum



(c) sekurang-kurangnya dua tanda CRM yang berjarak tidak kurang dari 30 meter dibuat cerapan dengan kaedah MyRTKnet bagi kedua-dua tanda dalam satu inialisasi. Proses yang sama perlu diulang dalam inialisasi kedua; atau

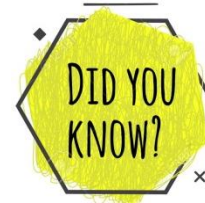
(d) sekurang-kurangnya dua tanda CRM yang berjarak tidak kurang daripada 75 meter dibuat cerapan dengan kaedah MyRTKnet masa hakiki bagi kedua-dua tanda dalam dua inialisasi; atau

# KPUP 6/2009 - Datum



- iv. para (i)(a), (i)(b), (i)(c) dan (i)(d) di atas hanya terpakai untuk tanda CRM yang baru sahaja. Jika tanda CRM lama digunakan maka perlu disahkan dengan tanda ke tiga (3) samada dari NDCDB atau CRM lama yang berhampiran.

# CRM detail in JUPEM2U



The screenshot displays the JUPEM2U software interface. On the left, a sidebar menu lists various GIS layers, with 'Lapisan GIS' selected. A search dialog box titled 'Carian Lapisan GIS' is open, showing the following settings:

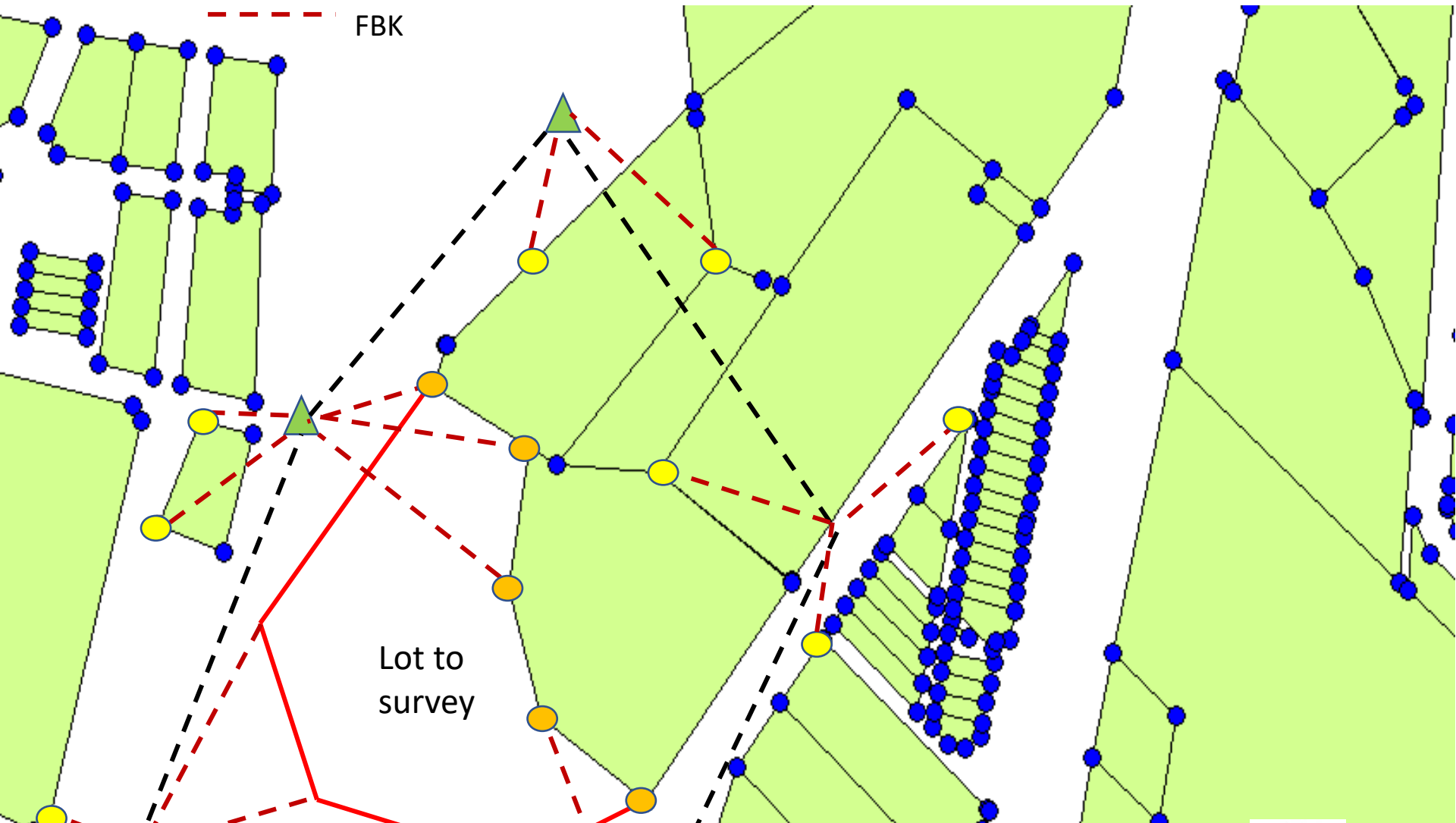
- Layer : Tanda CRM
- Nama Feature / No. Siri : w00205
- Carian Rawak? :
- Carian

The main window shows a map with a red circle highlighting a specific feature. An 'Info Tool' window is open, displaying the following details for the selected CRM (SIAP):

CRM (SIAP)	
File No.	PU3199_2011
Stone Type	C
Stone ID	1
Serial	100958_1
NEGERI	01
DAFRAH	02
MUKIM	02
SUKSYEN	000
Station Type	6
Mark Description	pkB
Date Assign	02/05/2011
Survey Start	12/09/2011
Survey End	12/09/2011
WGS84 (Coord-X)	103.8241335085
WGS84 (Coord-Y)	1.551531
WGS84 (Coord-Z)	36.295
RSO (Coord-X)	647538.939
RSO (Coord-Y)	171572.836
RSO (Coord-Z)	36.295
GDM (Coord-X)	29273.886
GDM (Coord-Y)	-54293.465
GDM (Coord-Z)	36.295
Kerja Siap Standard Error	0.002
Marka Siap Standard Error	0.002

The bottom of the screen shows the Windows taskbar with the date and time: 11:24 AM, 23/4/2020.

--- Traverse code 12 in  
- - - FBK

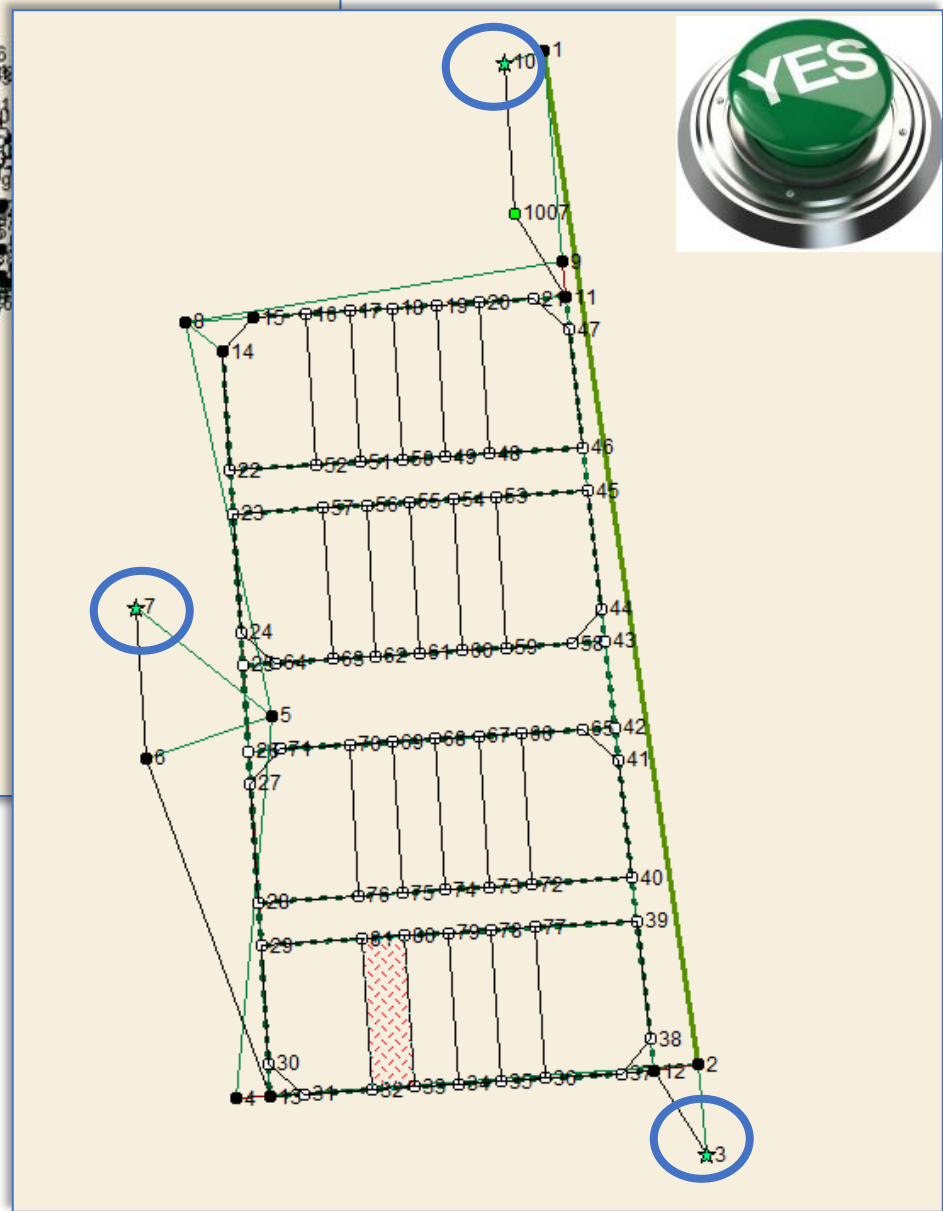
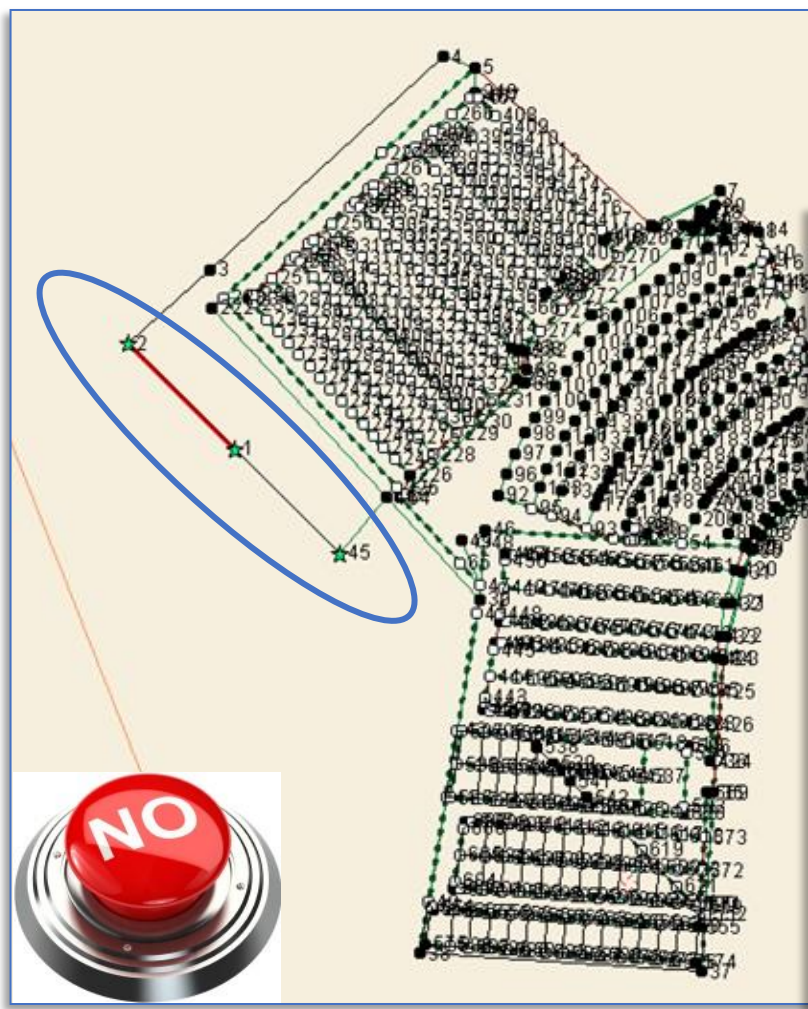


Lot to survey

- ▲ CRM as part of the traverse
- Old marks belong to lot to survey
- Old marks may be used for fix points and tie line



Suggestions



# KPUP 6/2009 - Datum

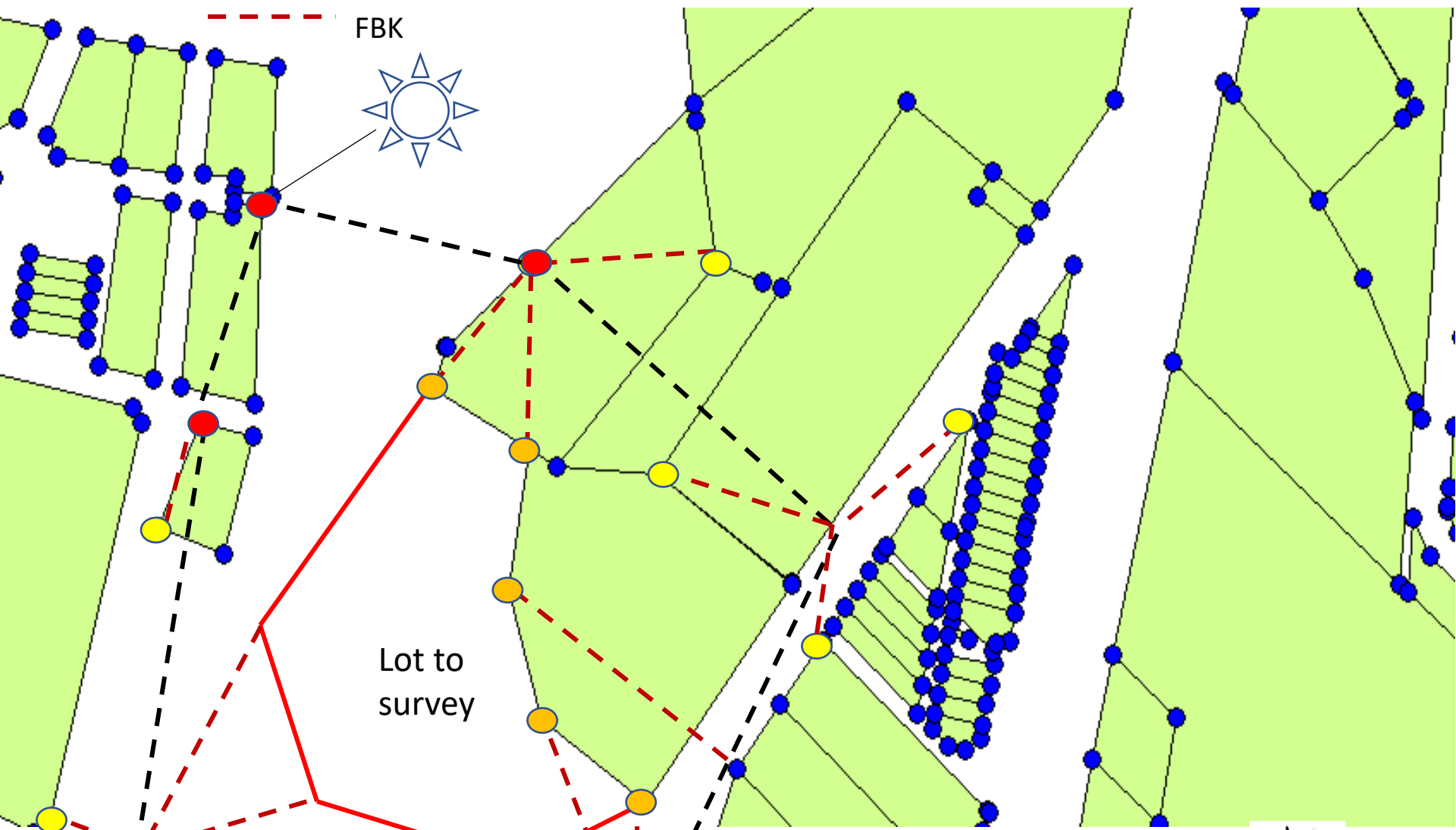
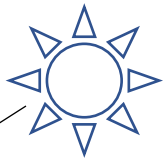


ii. dua tanda ukuran dari NDCDB yang berjarak tidak kurang daripada 40 meter yang mana kedudukan asal tanda-tanda tersebut telah dibuktikan dengan ukuran terus atau terabas dan hitungan, beserta dengan cerapan

astronomi untuk azimuth atau cerapan MyRTKnet (cerapan MyRTKnet hanya untuk membuktikan tanda sempadan berada dalam kedudukan asal seperti yang ditetapkan di para 4.15 tetapi nilai bearing dan jarak yang terhasil tidak digunakan) ; atau

iii. dua tanda ukuran bersebelahan dari NDCDB yang diperakui kedudukannya dan dibuktikan dengan tanda ketiga dengan ukuran sudut dan jarak atau dengan terabas dan berada dalam kedudukan asal.

--- Traverse code 12 in  
- - - FBK



Lot to survey

- Old marks in position or with Sun
- Old marks belong to lot to survey
- Old marks may be used for fix points or tie line



Suggestions





# KPUP 6/2009 – Closed Bearing



4.2.2 Kaedah terabas dengan mencerap bearing dan jarak bagi kedua-dua penyilang kiri dan kanan.

- i. Bagi kawasan bandar, terabas hendaklah ditutup kepada stesen CRM berdekatan atau tanda-tanda lama yang disahkan di dalam kedudukan asal bagi setiap 25 stesen terabas atau 1 km, yang mana lebih dahulu dicapai.

# KPUP 6/2009 – Distance between boundary markers



- If traverse line  $> 300\text{m}$ ; system alerted and won't block.
- If boundary line  $> 300\text{m}$  or  $< 10\text{cm}$ ; system alerted and will block.

v. Jarak antara tanda sempadan

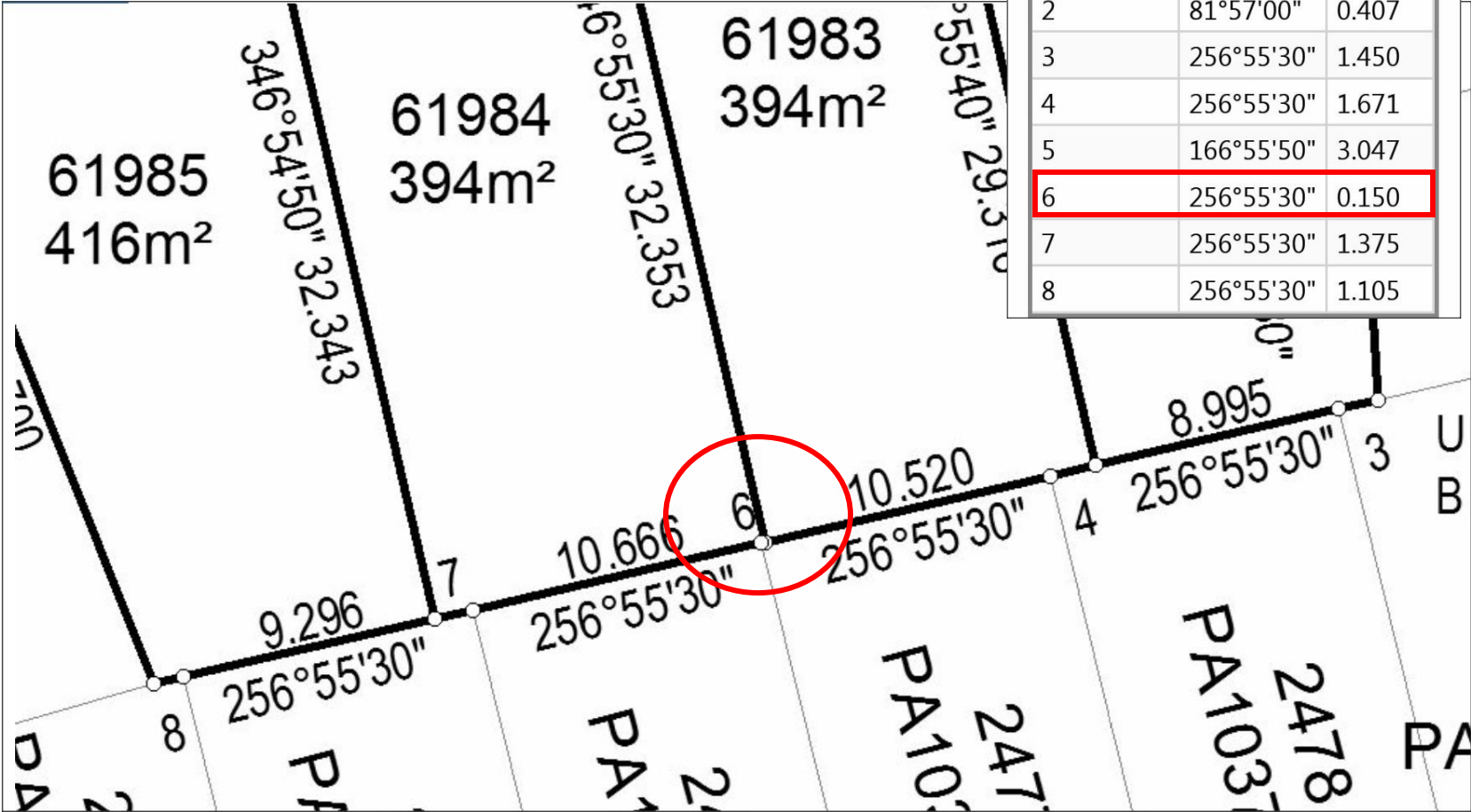


- (a) Tanda-tanda di atas sempadan lurus hendaklah ditanam pada sela yang tidak melebihi 300 meter

# SHORT DISTANCE



RUJUKAN	BEARING	JARAK
1	81°59'10"	2.611
2	81°57'00"	0.407
3	256°55'30"	1.450
4	256°55'30"	1.671
5	166°55'50"	3.047
6	256°55'30"	0.150
7	256°55'30"	1.375
8	256°55'30"	1.105



# KPUP 6/2009 - Radiation

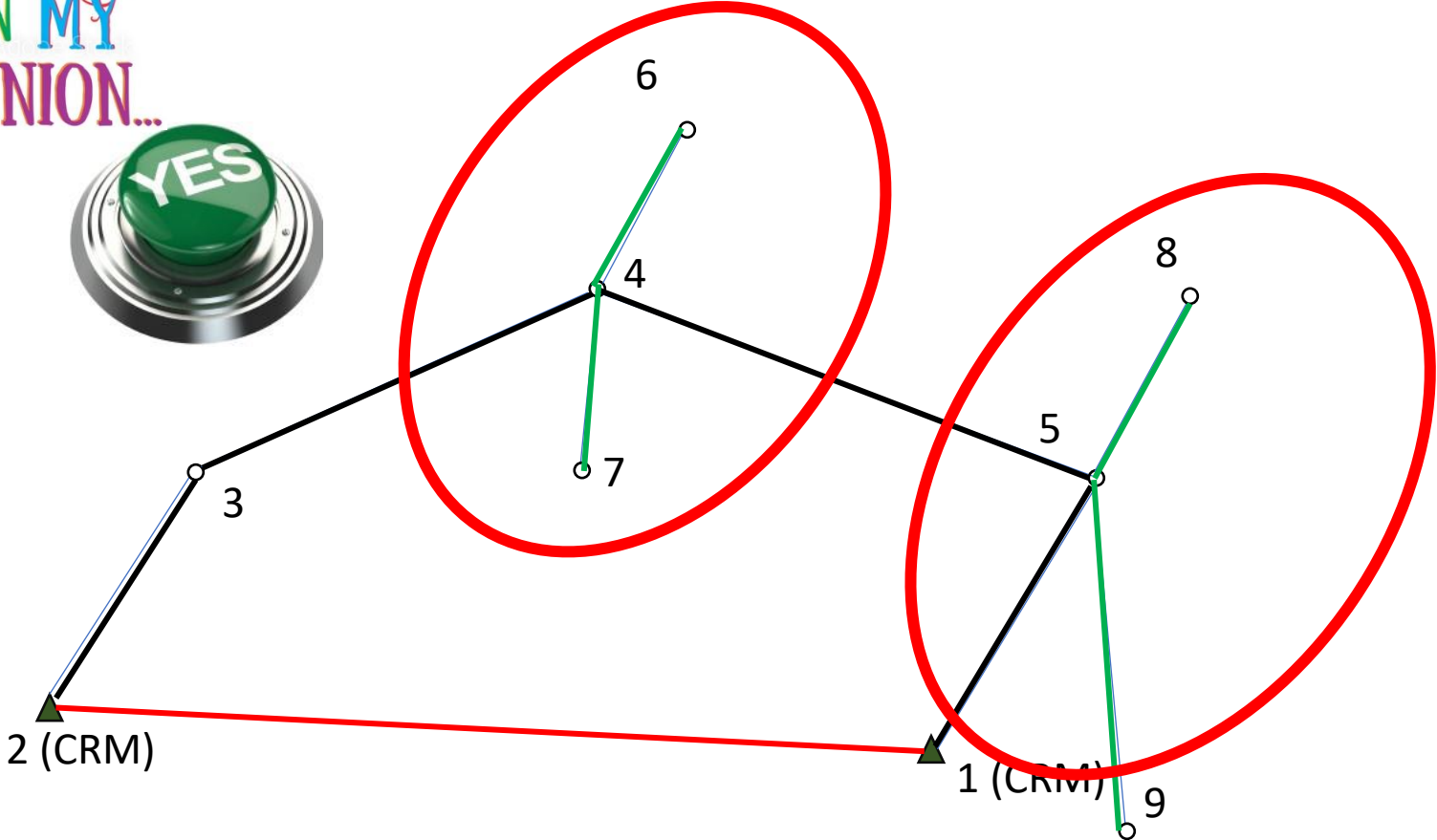


## 4.2.3 Radiasi

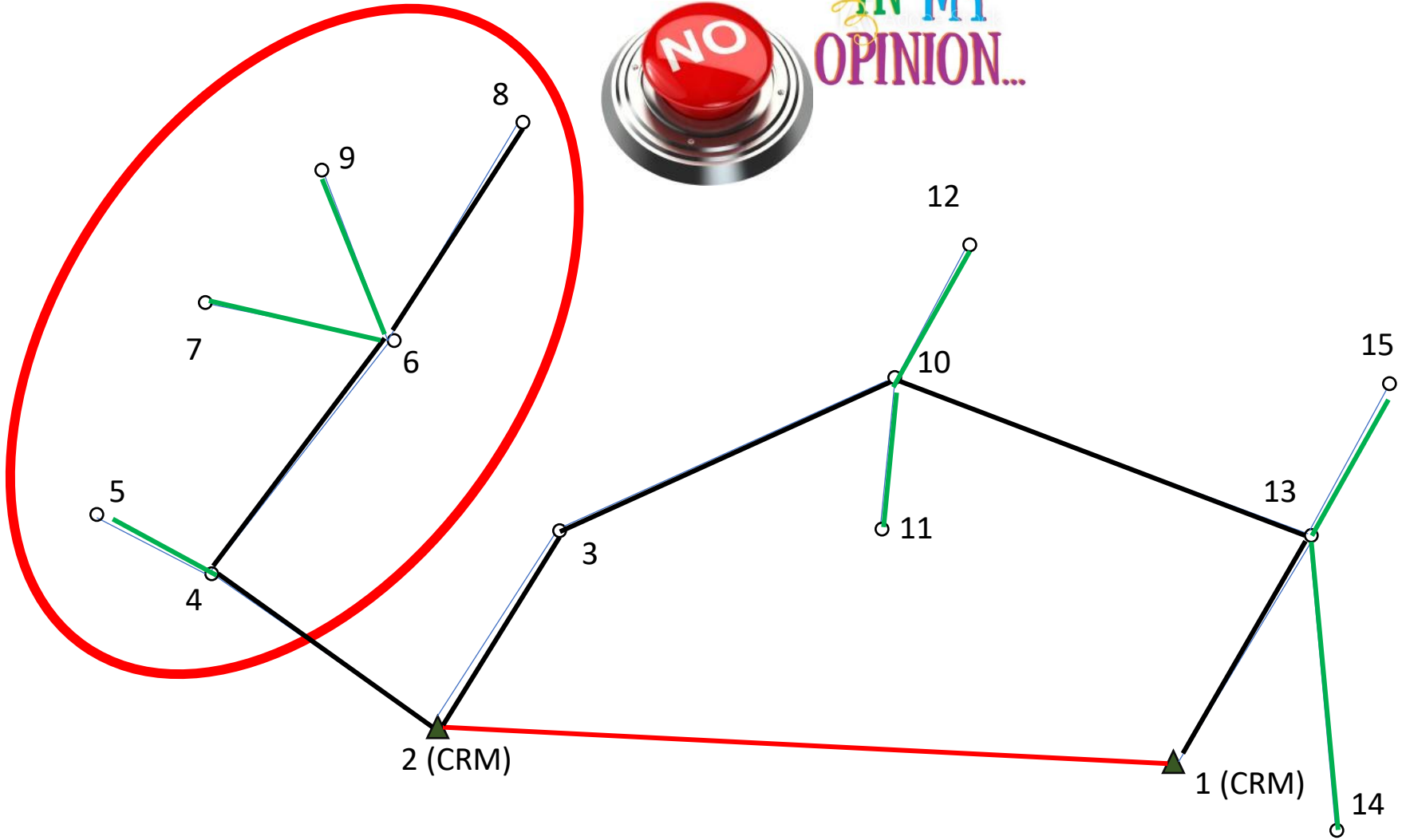
- i. Kutipan data menggunakan kaedah ini perlulah menghadkan cerapan jarak tidak melebihi 300 meter berdasarkan *single-leg* sahaja.
- ii. Sekiranya cerapan dibuat melebihi daripada *single-leg* atau melebihi jarak 300 meter, cerapan perlu ditutup kepada stesen CRM berdekatan atau tanda-tanda lama yang disahkan di dalam kedudukan asal tidak melebihi 25 stesen atau kawalan bearing dilakukan dengan cerapan astronomi. Contoh gambarajah kombinasi kaedah terabas dan kaedah radiasi yang dibenarkan adalah seperti di Lampiran “I1” dan Lampiran “I2”.

# KPUP 6/2009 – Single-leg

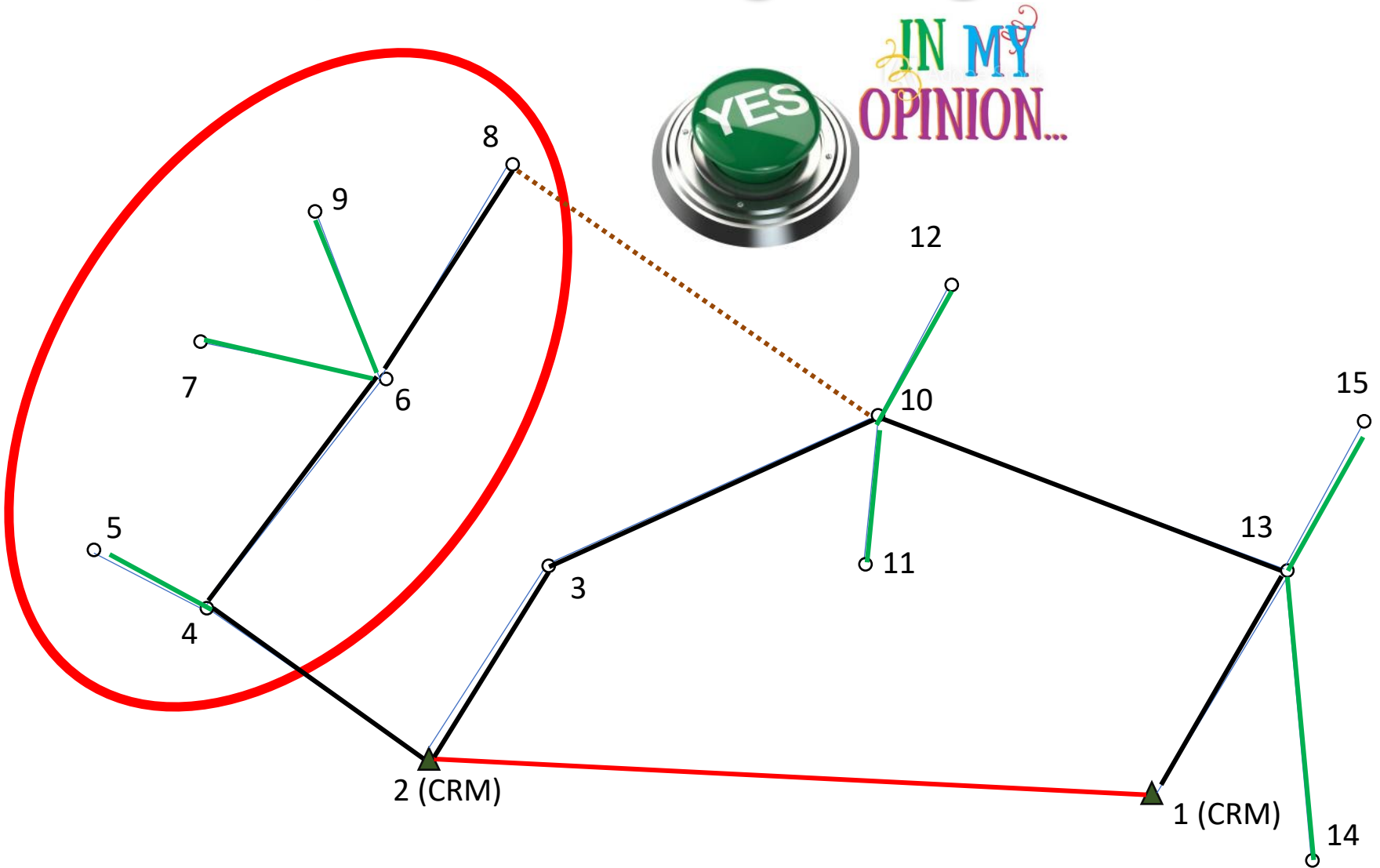
IN MY  
OPINION...



# KPUP 6/2009 – Single-leg

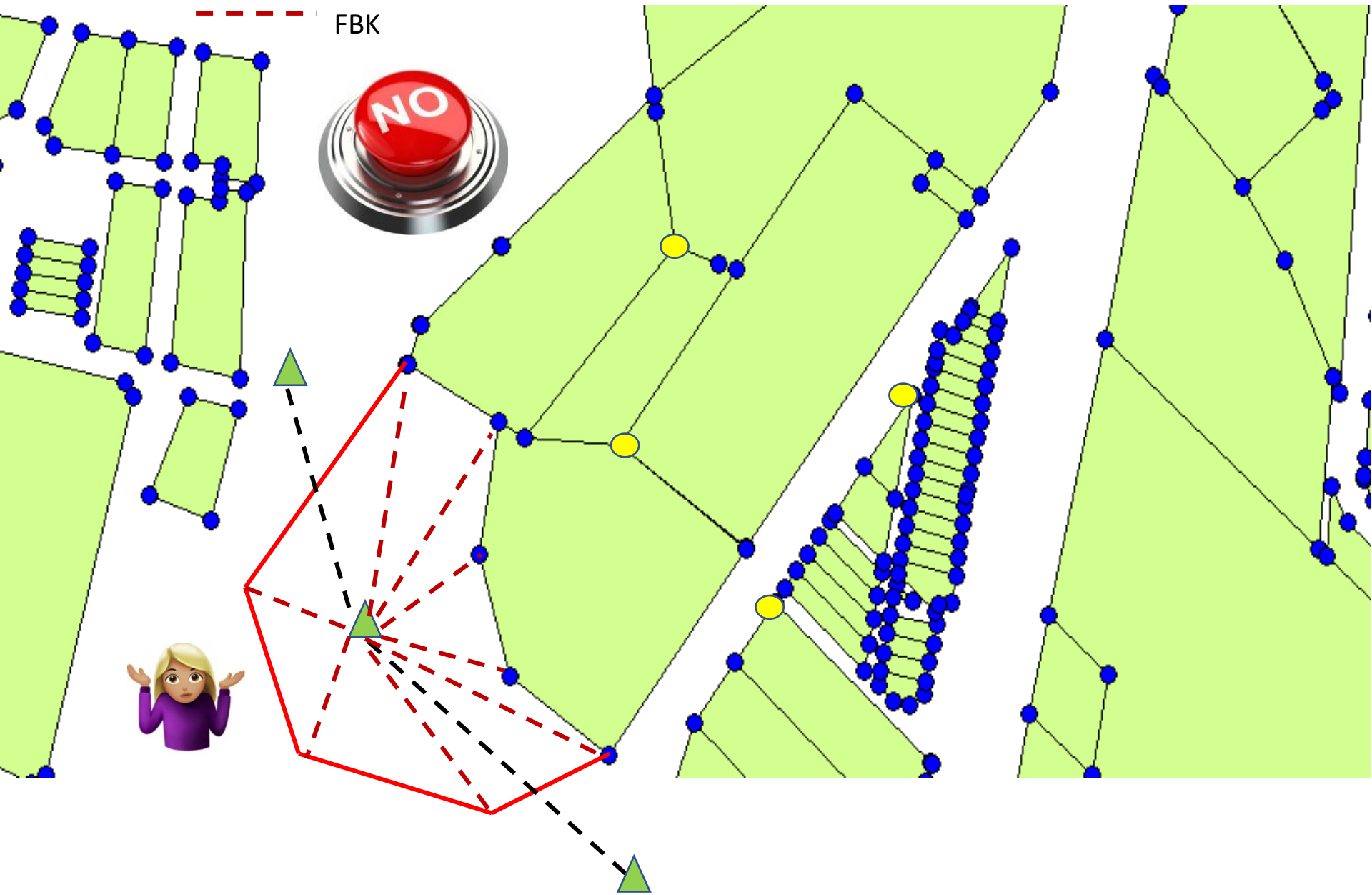


# KPUP 6/2009 – Single-leg





--- Traverse code 12 in  
- - - FBK



# KPUP 6/2009 – On-line marks

Tanda atas garisan (*on-line*)



- (a) Jika tanda sempadan baru perlu ditanam di atas garisan lama, memadai tanda-tanda sempadan tersebut ditanam berdasarkan kepada koordinat yang telah ditetapkan dalam pelan pra hitungan atau dalam pelan surihan kerjaluar atau koordinat asal (NDCDB).
- (b) Bearing dan jarak antara tanda sempadan atas garisan tersebut diperolehi daripada kiraan oleh sistem.

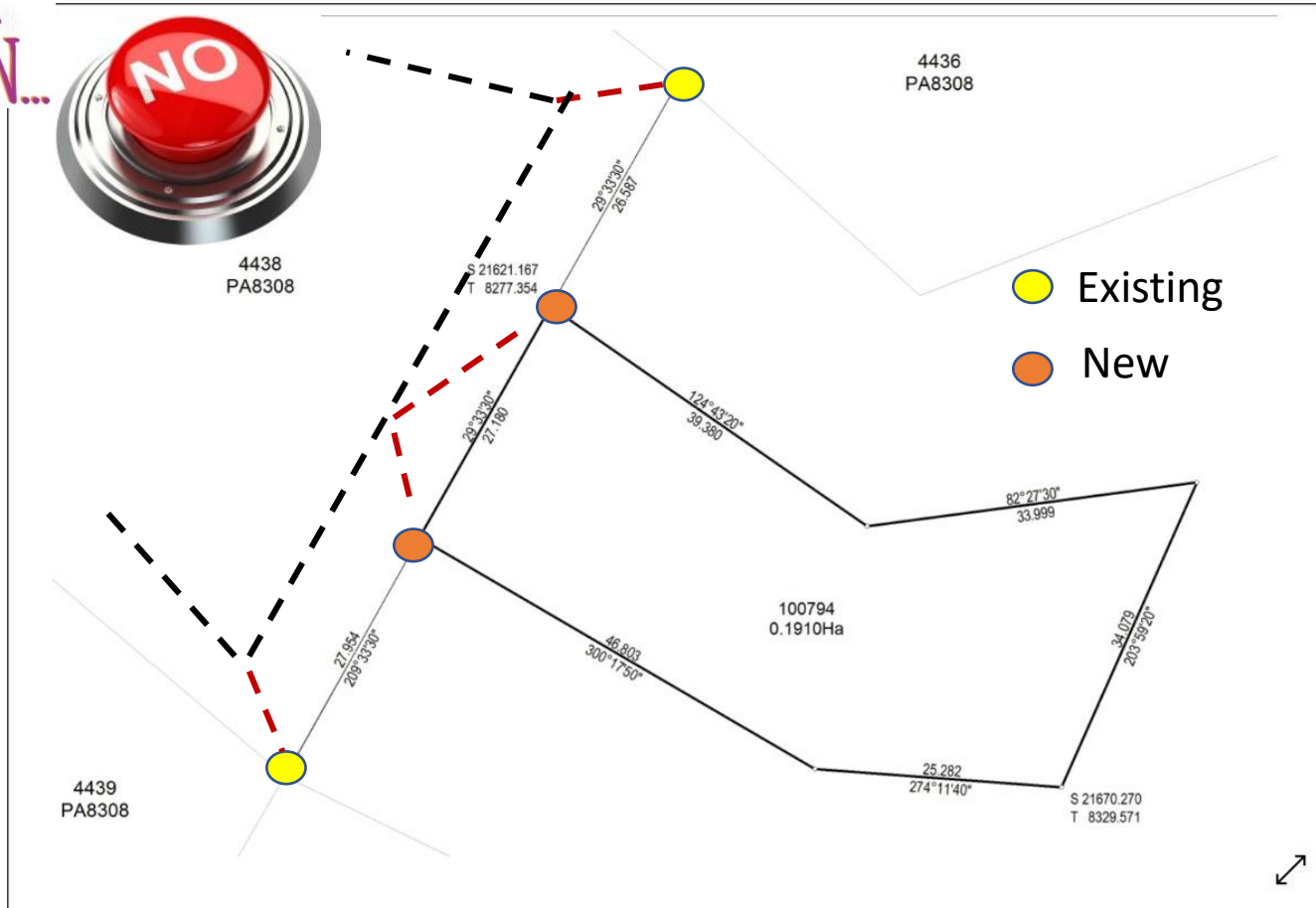
# KPUP 6/2009 – On-line marks

IN MY  
OPINION...



4438  
PA8308

--- Traverse code 12 in  
- - - FBK



# KPUP 6/2009 – On-line marks

IN MY  
OPINION...



4438  
PA8308

S 21621.167  
T 8277.354

4436  
PA8308

● Existing

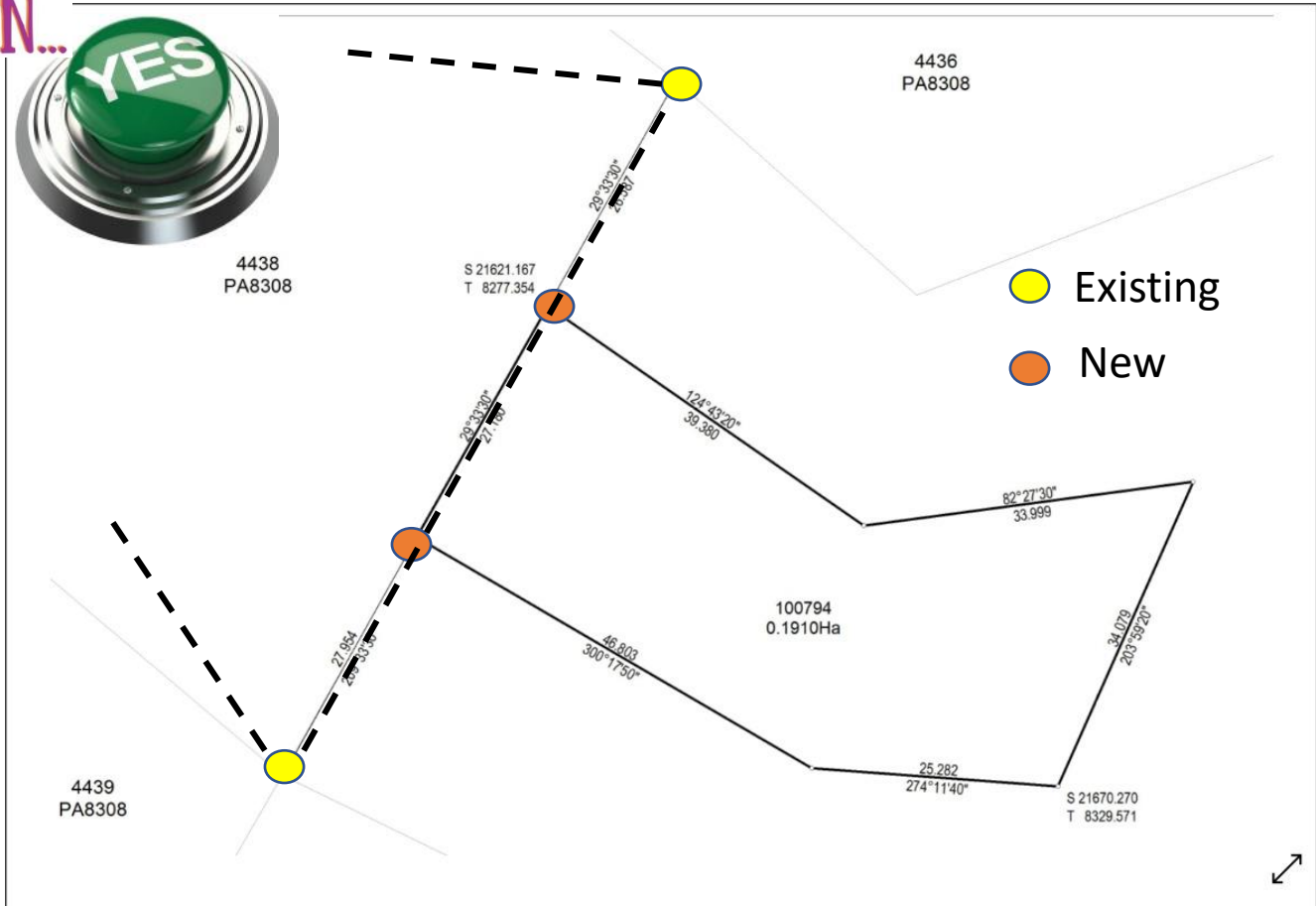
● New

4439  
PA8308

100794  
0.1910Ha

S 21670.270  
T 8329.571

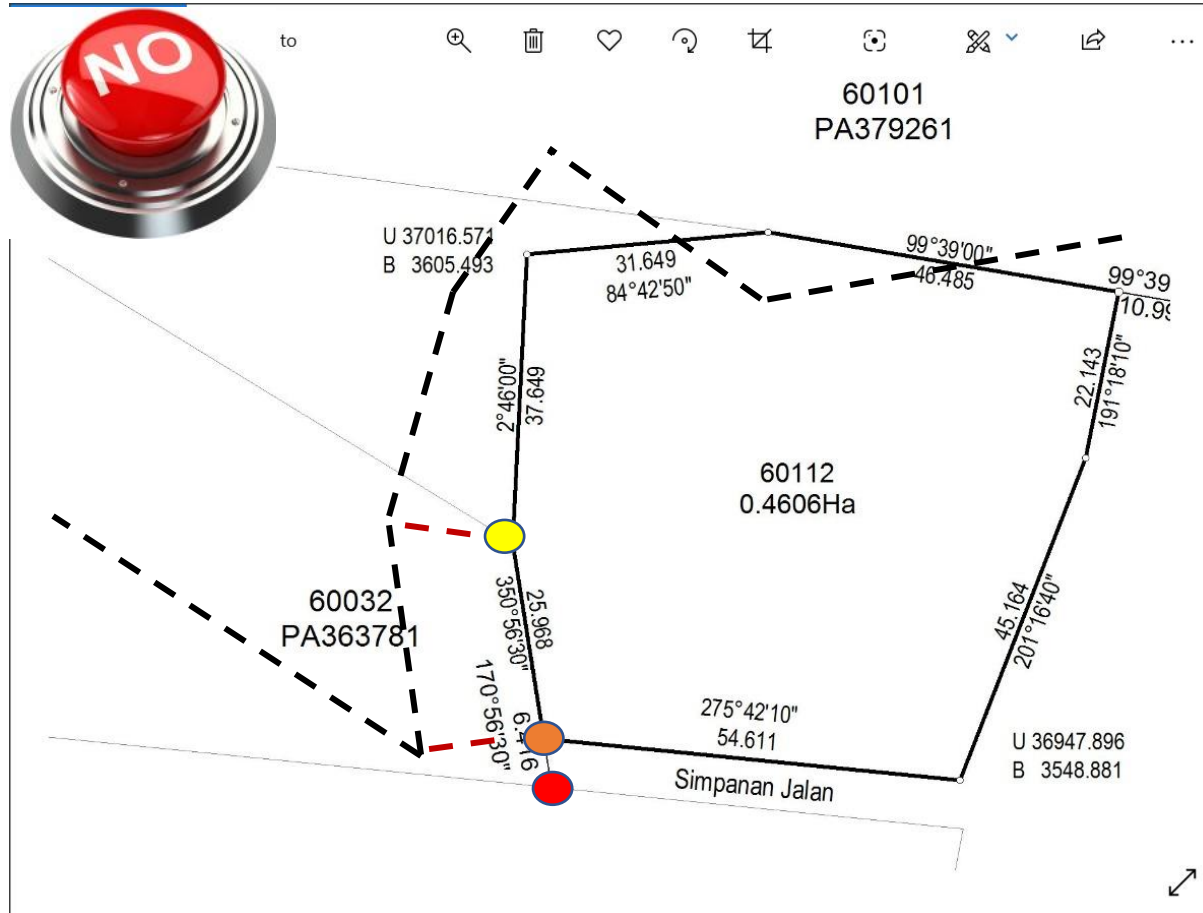
--- Traverse code 12 in  
- - - FBK



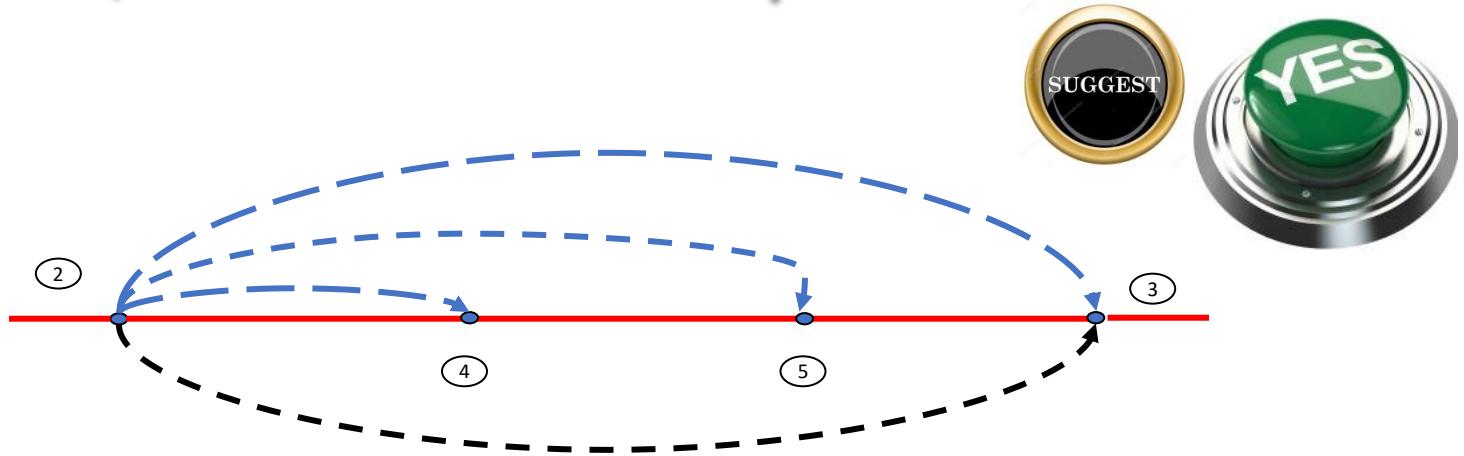
# KPUP 6/2009 – On-line marks

IN MY  
OPINION...

--- Traverse code 12 in  
- - - FBK



# KPUP 6/2009 – On-line procedure



Traverse	Line Code	Line Code Description
2 – 3	12	Traverse
2 – 4	13	On-line
2 – 5	13	On-line
4 – 5	23	On-line Check
2 – 3	13	On-line
5 – 3	23	On-line Check

# KPUP 6/2009 – CRM compulsory



4.3.3 Bagi kerja ukuran di kawasan-kawasan berikut hendaklah bermula dengan sekurang-kurangnya dua (2) tanda CRM serta perlu diikat kepada satu tanda lama atau satu lagi tanda CRM yang merentasi kawasan ukuran:

- i. Kawasan tersebut tidak mempunyai NDCDB;
- ii. Kawasan tersebut terdiri daripada ukuran kelas 3 atau ukuran demarkasi; dan

# KPUP 6/2009 – DFT compulsory

- System will block if no DFT found in FBK



## 4.4.4 *Differential Field Test (DFT)*

- DFT hendaklah dijalankan setiap kali memulakan kerja baru.

PUBLSEL9\_2012 - Notepad

File	Edit	Format	View	Help					
PUBLSEL	9_2012				9000	Pkt		9001	Pkt
PUBLSEL	9_2012				9002	Pkt		9000	Pkt
PUBLSEL	9_2012				9002	Pkt		9001	Pkt
PUBLSEL	9_2012				2	PL		1	PL
PUBLSEL	9_2012	1	PL		2	PL		3	PL
PUBLSEL	9_2012	1	PL		2	PL		4	Pkt
PUBLSEL	9_2012	2	PL		4	Pkt		5	Pkt
PUBLSEL	9_2012	4	Pkt		5	Pkt		6	Pkt
PUBLSEL	9_2012	4	Pkt		5	Pkt		7	PL
PUBLSEL	9_2012	4	Pkt		5	Pkt		8	PL
PUBLSEL	9_2012	4	Pkt		5	Pkt		9	PL
PUBLSEL	9_2012	4	Pkt		5	Pkt		10	PL

Ln 4, Col 1    100%    Windows (CRLE)    UTF-8



# KPUP 6/2009 – Displacement



## 4.14 Had Anjakan Koordinat

- 4.14.1 Had anjakan vektor tanda sempadan yang dibenarkan adalah 0.050 meter bagi kawasan bandar/pekan serta pembangunan baru manakala bagi kawasan lain had anjakan vektor adalah 0.10 meter.

# KPUP 6/2009 – Displacement by 0.05m



	A	B	C	D	E	F	G	H	I	J
2	DISTANCE (D)	Displacement (dx)	ATAN FORMULA					RAD FORMULA		
3		(m)	rad	degree	minutes	M	S	rad	M	S
4	1	0.05	0.049958396	2.862405226	171.7443	171	44	172.4137931	172	24
5	5		0.009999667	0.572938698	34.37632	34	22	34.48275862	34	28
6	10		0.004999958	0.28647651	17.18859	17	11	17.24137931	17	14
7	15		0.003333321	0.190985224	11.45911	11	27	11.49425287	11	29
8	20		0.002499995	0.14323915	8.594349	8	35	8.620689655	8	37
9	25		0.001999997	0.114591406	6.875484	6	52	6.896551724	6	53
10	30		0.001666665	0.095492877	5.729573	5	43	5.747126437	5	44
11	35		0.00142857	0.081851058	4.911063	4	54	4.926108374	4	55
12	40		0.001249999	0.071619687	4.297181	4	17	4.310344828	4	18
13	45		0.001111111	0.063661951	3.819717	3	49	3.831417625	3	49
14	50		0.001	0.05729576	3.437746	3	26	3.448275862	3	26
15	55		0.000909091	0.052087058	3.125223	3	7	3.134796238	3	8
16	60		0.000833333	0.047746472	2.864788	2	51	2.873563218	2	52

# KPUP 6/2009 – Displacement by 0.10 m



2	DISTANCE (D)	Displacement (dx)	ATAN FORMULA					RAD FORMULA		
		(m)	rad	degree	minutes	M	S	rad	M	S
3										
4	1	0.1	0.099668652	5.710593137	342.6356	342	38	344.8275862	344	49
5	5		0.019997334	1.145762838	68.74577	68	44	68.96551724	68	57
6	10		0.009999667	0.572938698	34.37632	34	22	34.48275862	34	28
7	15		0.006666568	0.381966205	22.91797	22	55	22.98850575	22	59
8	20		0.004999958	0.28647651	17.18859	17	11	17.24137931	17	14
9	25		0.003999979	0.229181896	13.75091	13	45	13.79310345	13	47
10	30		0.003333321	0.190985224	11.45911	11	27	11.49425287	11	29
11	35		0.002857135	0.163701782	9.822107	9	49	9.852216749	9	51
12	40		0.002499995	0.14323915	8.594349	8	35	8.620689655	8	37
13	45		0.002222219	0.127323745	7.639425	7	38	7.662835249	7	39
14	50		0.001999997	0.114591406	6.875484	6	52	6.896551724	6	53
15	55		0.00181818	0.10417403	6.250442	6	15	6.269592476	6	16
16	60		0.001666665	0.095492877	5.729573	5	43	5.747126437	5	44

# KPUP 6/2009 – Displacement

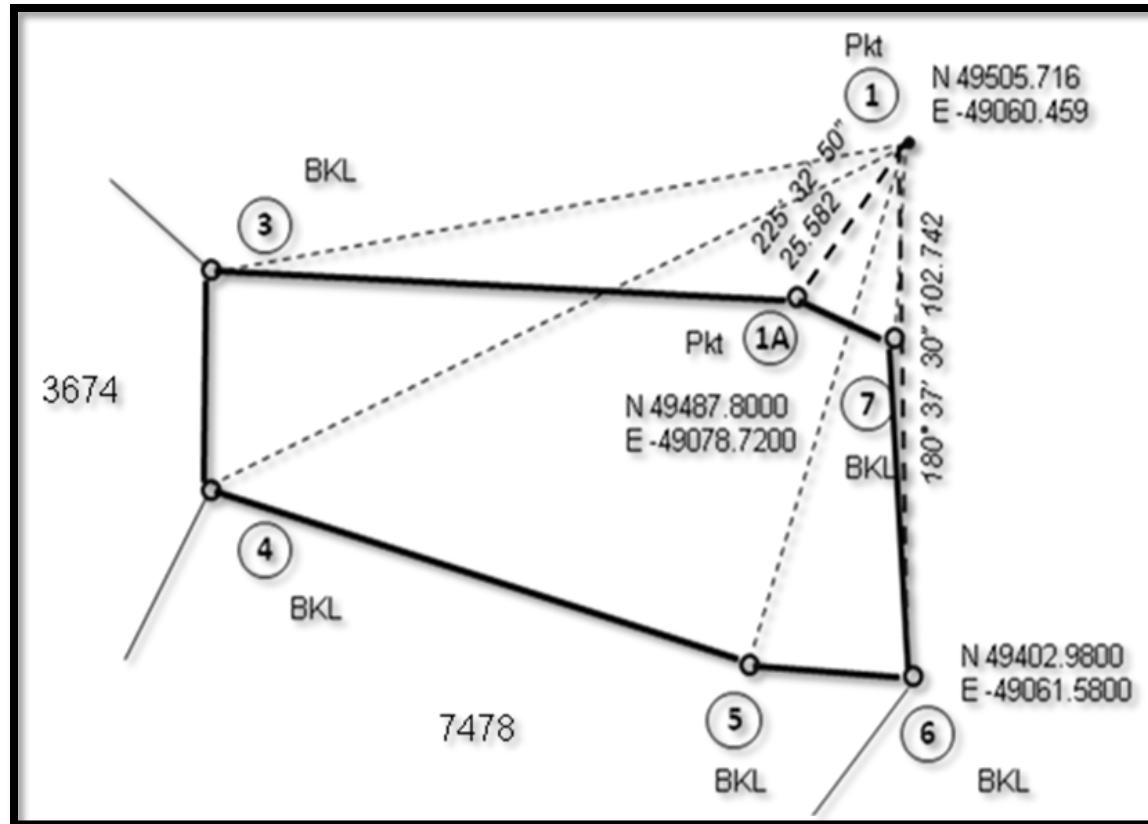


## 4.16 Penandaan Semula Tanda Sempadan Lama

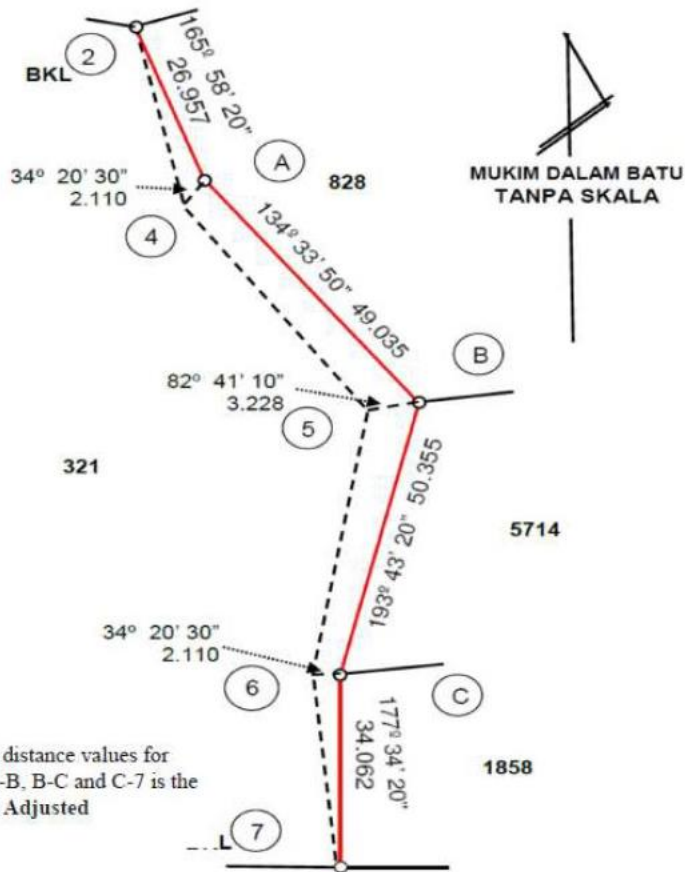
4.16.1 Tanda sempadan lama yang didapati berganjak dari kedudukan asal (melebihi had yang dibenarkan) hendaklah dibuat penandaan semula. Sekiranya didapati hilang, ia hendaklah diganti dengan tanda sempadan baru.

# KPUP 6/2009 – Refix

IN MY  
OPINION...



# KPUP 6/2009 – Refix



Note:  
 Bearing and distance values for lines 2-A, A-B, B-C and C-7 is the value of PO Adjusted

Adjust the original value (SA). Where the bearing and original distance are adjusted to its value aligned with new values:

### Bearing Adjustment

Bearing New Base line (New) =  $167^{\circ} 49' 20''$

Bearing Original Base line (PO) =  $167^{\circ} 49' 00''$

Correction =  $+ 20''$

Line	Original Bearing	Correction	PO Adjusted Bearing
2 - A	$165^{\circ} 58' 00''$	$+ 20''$	$165^{\circ} 58' 20''$
A - B	$134^{\circ} 33' 30''$	$+ 20''$	$134^{\circ} 33' 50''$
B - C	$193^{\circ} 43' 00''$	$+ 20''$	$193^{\circ} 43' 20''$
C - 7	$177^{\circ} 34' 00''$	$+ 20''$	$177^{\circ} 34' 20''$

### Distance Adjustment

It is the ratio of New Base Distance and Original Base (SA) x Original Distances. PO Adjusted Distance.

$$= \text{Original distance} \times \frac{\text{New Base Distance}}{\text{Original Base Distance}}$$

Line	Original Distance	Calculation	PO Adjusted Distance
2 - A	26.950	$26.950 \times (146.813/146.776)$	26.957
A - B	49.023	$49.023 \times (146.813/146.776)$	49.035
B - C	50.342	$50.342 \times (146.813/146.776)$	50.355
C - 7	34.053	$34.053 \times (146.813/146.776)$	34.062

# KPUP 1/2008 – GNSS CALIBRATION



- To generate eVRSCAL file
- Use this circular instead of KPUP 6/1999 for GNSS calibration EDM Baseline Test.
- Different (3,3,6) cm.



## eVRS Calibration Certificate

Receiver Serial No 5633R08771

Thursday, 03 January 2019

03:49 PM

780730-14-5245

TAMANTASIKUTAMAGNSS

Pillar	Reference Coordinates			Observed Coordinates			Differences		
	Latitude	Longitude	Ellipsoidal Height(m)	Latitude	Longitude	Ellipsoidal Height(m)	Northing(m)	Easting(m)	Ellipsoidal Height(m)
P001	2° 16' 29.21376"	102° 17' 11.95045"	19.7292	2° 16' 29.21424"	102° 17' 11.95067"	19.74047	0.01442	0.00673	0.01127
				2° 16' 29.21384"	102° 17' 11.95087"	19.75041	0.00234	0.01290	0.02121
				2° 16' 29.21371"	102° 17' 11.95099"	19.73193	0.00186	0.01659	0.00273
P002	2° 16' 29.06084"	102° 17' 11.32075"	19.2117	2° 16' 29.06033"	102° 17' 11.32104"	19.19722	0.01585	0.00871	0.01448
				2° 16' 29.06054"	102° 17' 11.32088"	19.21793	0.00939	0.00385	0.00623
				2° 16' 29.06035"	102° 17' 11.32079"	19.22346	0.01526	0.00105	0.01176
P004	2° 16' 27.68729"	102° 17' 5.65720"	16.3436	2° 16' 27.68701"	102° 17' 5.65694"	16.32967	0.00892	0.00835	0.01393
				2° 16' 27.68676"	102° 17' 5.65700"	16.29013	0.01649	0.00633	0.05347
				2° 16' 27.68758"	102° 17' 5.65701"	16.31118	0.00861	0.00605	0.03242


# eVRSCAL in SPAKLS



**SISTEM PENGURUSAN ASET KADASTER LS (SPAKLS)**  
JUPEM JABATAN UKUR DAN PEMETAAN MALAYSIA

20 APRIL 2020 | 4:48:07 PM NIK AFINDE

Menu Utama > Pendaftaran >



NURHAFIZUL BIN DIN  
JURUUKUR DAERAH  
PEJABAT UKUR DAERAH PULAU PINANG  
Tarikh Disahkan : 03/04/2020

Tutup Muat Turun

http://ekadaster.jupem.gov.my/SPAKLS/Default3.aspx

20 items

File Home Share View Compressed Folder Tools Extract eVRSCAL\_PG\_16\_2020\_2531.zip

Extract To

Name	Type	Compressed size	Password ...	Size
eVRSCAL_PG_16_2020_2531.html	Microsoft Edge HTML Do...	3 KB	No	
eVRSCAL_PG_16_2020_2531.json	JSON File	1 KB	No	

6 JTB NIK AFINDE BIN NIK  
7 NIK AFINDE BIN NIK YAAKUB D40566Z D40566Z EDM 05/03/2020 LULUS



# Surat Pekeliling KPUP 1/2010



- **To have at least 3 CRM (mostly ignored).**
  - CRM as part of the traverse.
  - If use NDCDB (code “1=NDCDB”, “4=Traverse” or “9=Known Point” in COO as fix points defined in TPS, then CRM code “6=GPS” in COO need to change to code “4”).
  - If Code “6=GPS”, system will held fixed automatically.
- To survey by conventional method (3 good marks).
- To tie to existing old marks.

4. Isu-isu pengukuran yang dimaksudkan adalah seperti berikut:
  - 4.1 Kawasan ukuran tiada NDCDB dan PDUK.
  - 4.2 Kawasan ukuran tiada NDCDB tetapi ada PDUK.
  - 4.3 Tanda lama telah dibuktikan berbeza dengan NDCDB melebihi 0.1 m.
  - 4.4 Kawasan ukuran ada NDCDB dan ada PDUK.
  - 4.5 Kawasan ukuran kelas tiga (3) dan demarkasi.

# OUTLINE



DISCLAIMER

1

BRIEF BIOGRAPHICAL NOTE

2

SURVEY GENERAL CIRCULARS

3

**UNDERSTANDING NDCDB LOT STATUS**

4

**UNDERSTANDING FIX POINTS SELECTION**

5

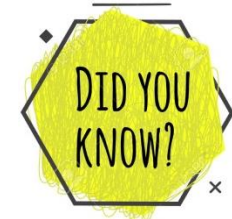
**SOME EXPLANATION**

6

**CONCLUSION & ACKNOWLEDGMENT**

7

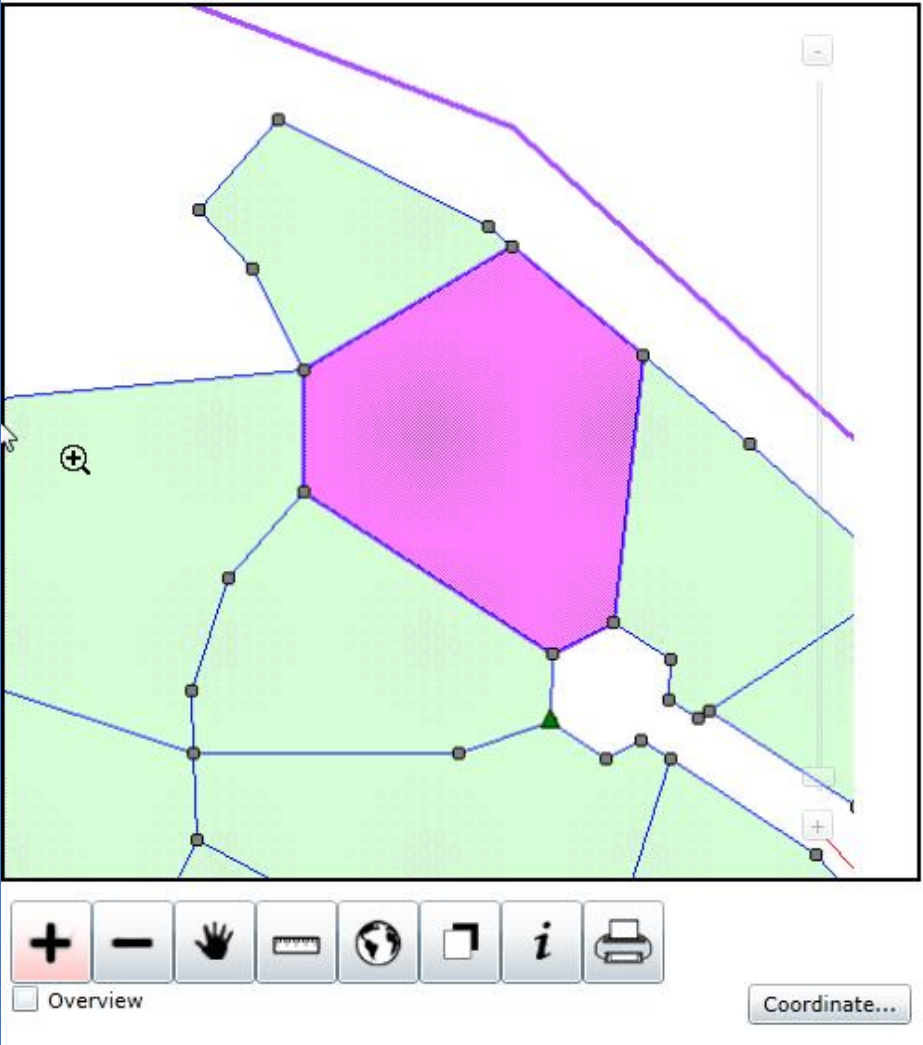
# UNDERSTAND NDCDB LOT STATUS



No	Status	Code		Map Object
1.	PU	10	Jabatan File	Hardcopy : Register File Digital PU: Receive and auto register file
2.			JTB File	Precomp : Receive and auto register file
3.	Survey	20		Job Ready for Survey
4.	Surveyed	30		Job has been Process eQC Absolute
5.	Surveyed (Relative )	35		Job has been Process eQC Relative
6.	Generated PA	40		PA generated
7.	Generated PA (Relative)	45		PA generated Relative
8.	Approve	50		PA Approved by CS
9.	Approved (Relative)	55		Relative PA Approved by CS
10.	NDCDB	65		Lot append into NDCDB
11.	NDCDB (Relative)	75		Lot append into Relative NDCDB
12.	Inactive	99		Archive Lot
13.	History Lot	98		History Lot
14.	Transition	60		
15.	Strata Main Lot	81		Lot with Strata Job
16.	B1 Disediakan (Hakmilik Gantian)	41		Lot Record Register for Hakmilik Gantian Preparation
17.	New PDUK Lot	9950		New PDUK Lot Record
18.	3 <sup>rd</sup> Class ( Store as Different Layer ) - eGLMS.C3Lot, - eGLMS.C3Bdy, and - eGLMS.C3Stn	No Special Status		

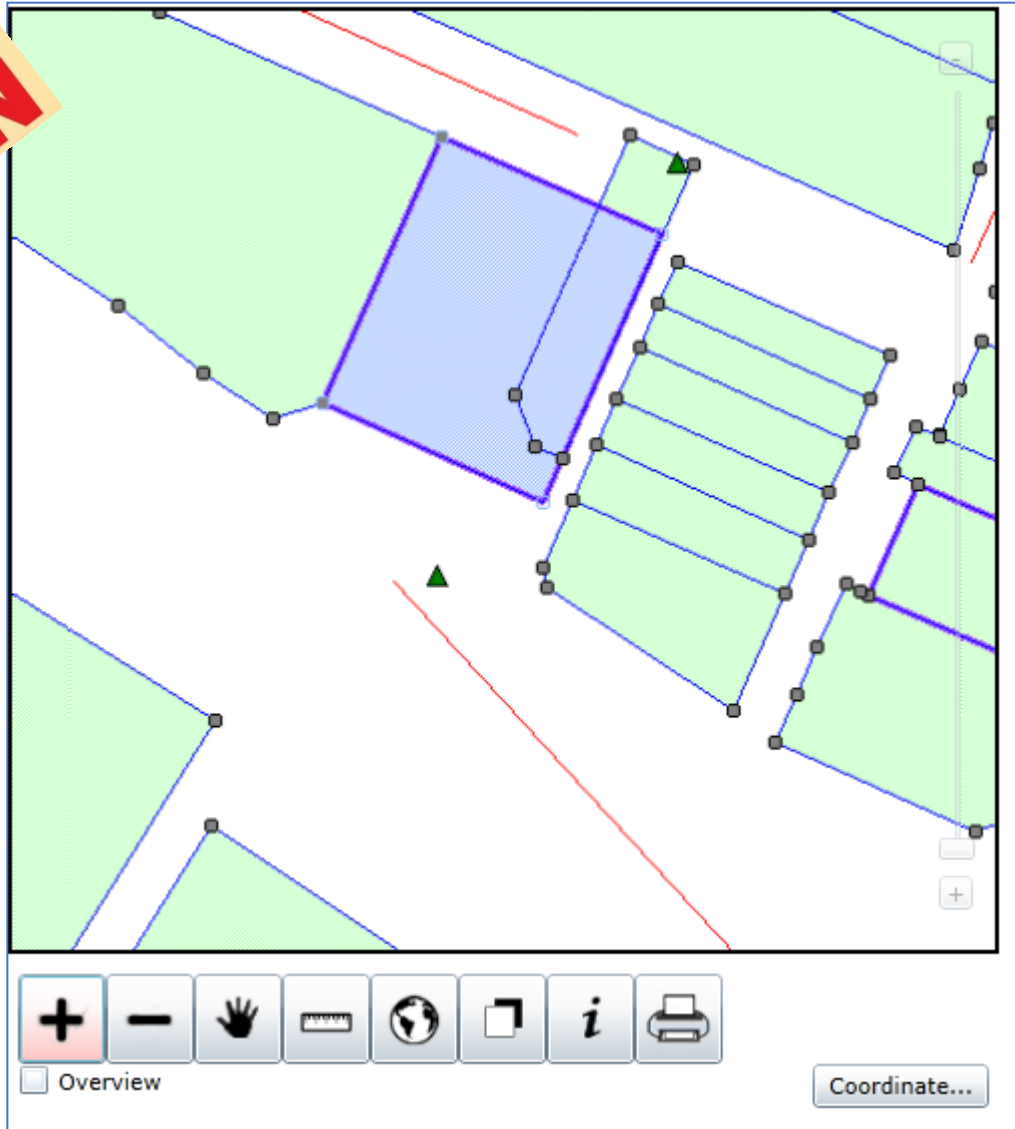
# PRE-COMP STAGE (STATUS = 10 AND 20)

HAVE YOU SEEN



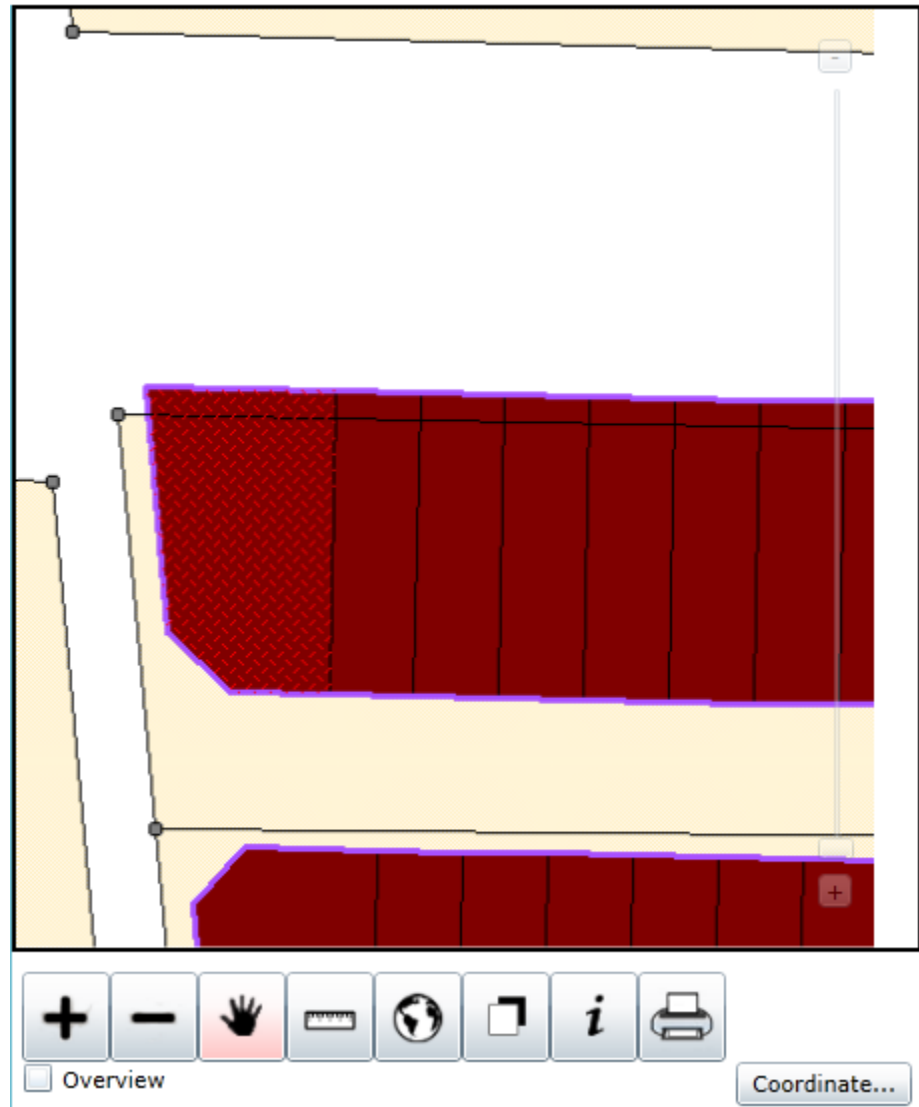
# WAITING APPROVAL (STATUS = 30, 40,50 )

**HAVE YOU SEEN**



# WAITING APPROVAL (STATUS = 35, 45,55 ) Relative

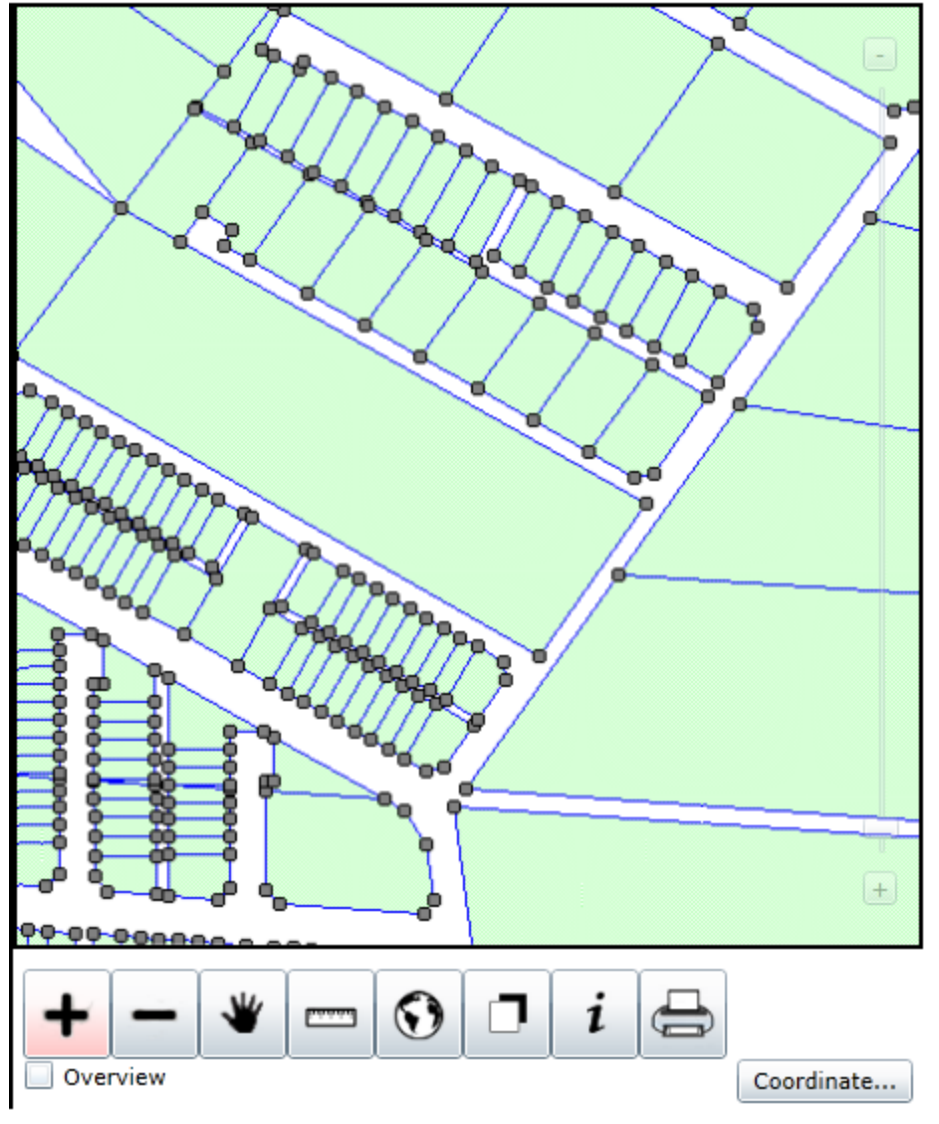
HAVE YOU  
SEEN



# NDCDB (STATUS = 65 )

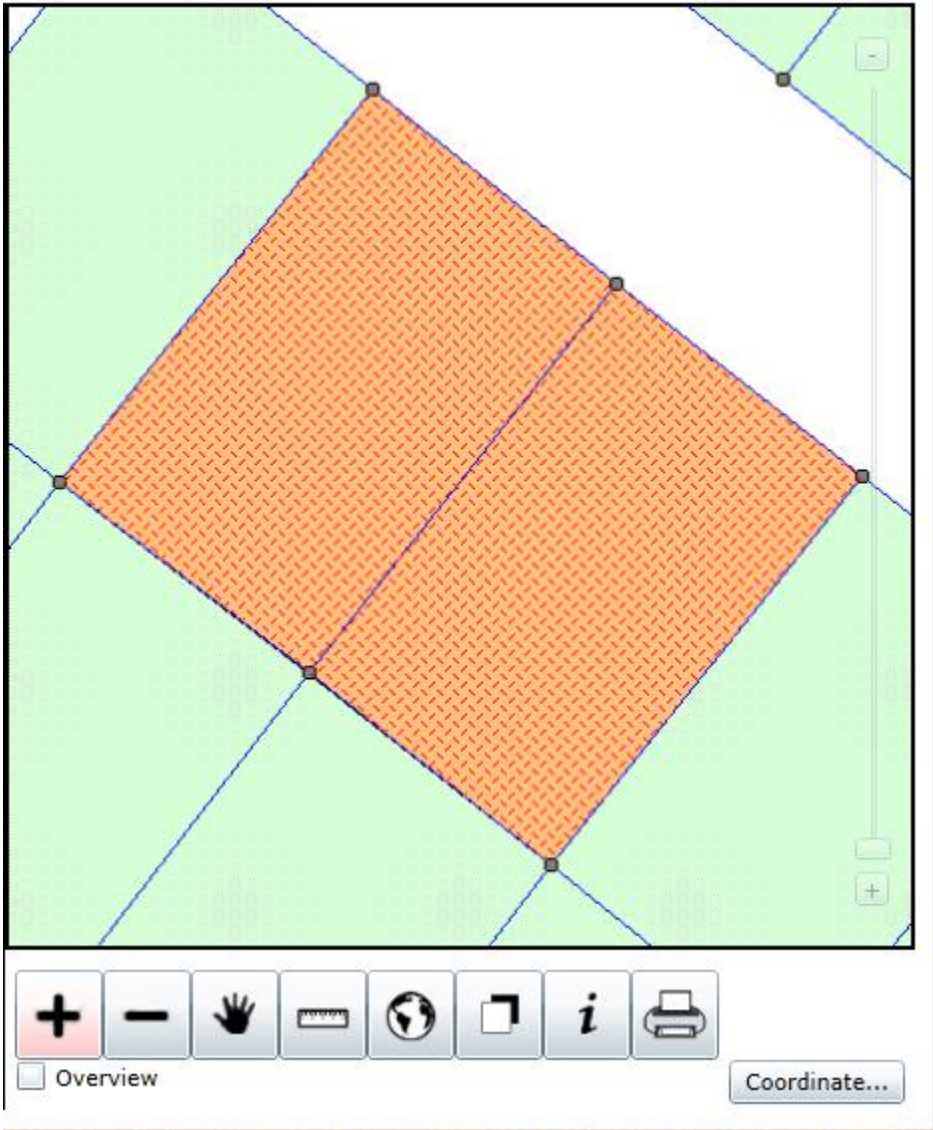


**ONLY THESE  
BOUNDARY MARKERS  
CAN BE FIX POINTS**



# RELATIVE NDCDB (STATUS = 75 )

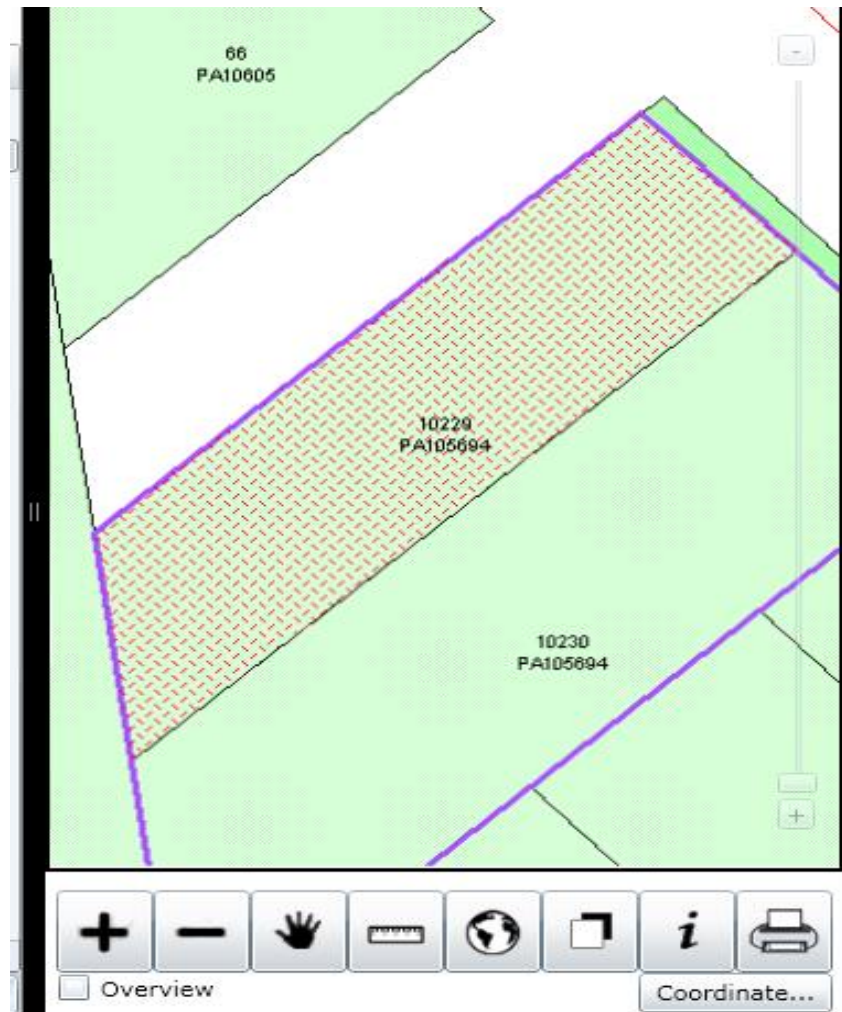
HAVE YOU SEEN





# TRANSITION LOT (STATUS = 60)

**HAVE YOU  
SEEN**



# OUTLINE



DISCLAIMER

1

BRIEF BIOGRAPHICAL NOTE

2

SURVEY GENERAL CIRCULARS

3

UNDERSTANDING NDCDB LOT STATUS

4

UNDERSTANDING FIX POINTS SELECTION

5

SOME EXPLANATION

6

CONCLUSION & ACKNOWLEDGMENT

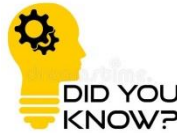
7

# KPUP 6/2009 – FIX POINTS



- iii. Bagi membolehkan data cerapan dilaraskan oleh sistem, pengguna hendaklah menetapkan *fix point* dan ditunjukkan di dalam fail \*.tps.

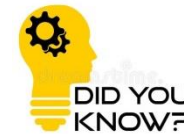
# KPUP 6/2009 – FIX POINTS (TPS and COO)



```
PUBLK388_2012 - Notepad
File Edit Format View Help
L,60176,02,03,71,000,325971.000
58,59,1066,280,281,279,278,277,276,:
264,263,262,261,260,259,258,257,256.
1146,1145,1144,1143,1142,1141,1140,:
END
K,28,P|
54276.354,9111.529,BKL,,M
END
K,91,P
56367.014,8320.823,BKL,,M
END
Ln 196, Col 7 100% Windows (CRLF) UTF-8
```

PUBLK	388_2012		BKL	56199.487	10164.566	4
PUBLK	388_2012	1034	BKL	55366.328	10333.413	4
PUBLK	388_2012	1045	BKL	54813.558	10276.842	4
PUBLK	388_2012	1078	BKL	54744.943	7867.088	4
PUBLK	388_2012	1056	BKL	54119.650	9833.630	4
PUBLK	388_2012	44	Pkt	55053.449	8860.340	4
PUBLK	388_2012	77	Pkt	56171.816	7649.389	4
PUBLK	388_2012	344	PB	56333.230	8281.381	4
PUBLK	388_2012	267	PB	55366.899	8902.218	4
PUBLK	388_2012	1111	BKL	56170.441	6910.367	4
PUBLK	388_2012	1100	BKL	56112.645	6488.723	4
PUBLK	388_2012	234	PB	54680.206	8924.820	4

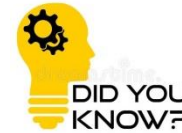
# How to Determine Fix Points



- ▶ Current Code and Mark Description defined in Pekeliling

Code		MarkDescription	
NDCDB	1	Batu Konkrit Lama	BKL
Traverse	4	Batu Lama	BL
GPS	6	Pepaku Besi Lama	PpBL
KnownPoint	9	Tiang Konkrit Lama	TKL
...		Paku Lama Berkonkrit	pkL
...		Paip Terabas Paiwai Lama	PTL
...		GPS (monument)	GPS

# Fix Points Criteria



- ▶ TPS ASCII: “K” must be added.
- ▶ COO ASCII: Attribute must match either criteria as below:
  - If Stn is NDCDB Old Marks:
    - Must exist in Cadastral NDCDB Station layer with buffer 0.10m
    - Code = Follow defined code (1,4 or 9)
    - MarkDesc = All batu tanda (BKL, BL, pBKL...)
  - If Stn is CRM
    - Must exist in Cadastral CRM layer with buffer 0.10m
    - Code = 6
    - MarkDesc = Follow defined Markdesc

# Scenario I : NDCDB Station

- ▶ **TPS ASCII** : “K” must be added
  - Sample

```
K.2.P  
-44846.259.16028.820,BKL.,M  
END
```

- ▶ **COO ASCII** : Attribute must match criteria as below:
  - Code = 1,4 or 9
  - MarkDesc = All batu tanda (BKL, BL, pBKL...)
  - Sample

```
PUSEL      XXXX_2010      2      BKL      -44846.259 16028.820 4
```

- Code = 4
- MarkDesc = BKL (Match)



- ▶ TPS and COO ASCII is valid, and stn 2 match the LSA fix point criteria. Thus, stn 2 will be used as Fix Station in LSA computation

# Scenario II : NDCDB Station

## ▶ TPS ASCII

```
K.85.P  
-44993.405, 15605.298, pkB, M  
END
```

## ▶ COO ASCII Sample

```
PUBLSEL XXXX_2010 85 pkB -44993.405 15605.298 9
```

- Code = 9 (not match)
- MarkDesc = pkB/pkt (not match)



- ▶ TPS and COO ASCII is valid, but did not match the LSA fix point criteria. Thus, stn 85 will not be used as Fix station in LSA computation



# Scenario III : CRM Station

- ▶ TPS ASCII : “K” must be added
  - Sample

```
K, 2, P  
-44846.259, 16028.820, PB, ... M  
END
```

- ▶ COO ASCII : Attribute must match criteria as below:
  - Code = 1,4,9, or 6
  - MarkDesc = All batu tanda (BKL, BL, pBKL...)
  - Sample

```
PUSEL XXXX_2010 2 PB -44846.259 16028.820 6
```

- Code = 6 (Match)
- MarkDesc = PB



- ▶ TPS and COO ASCII is valid, and stn 2 match the LSA fix point criteria. Thus, stn 2 will be used as Fix Station in LSA computation

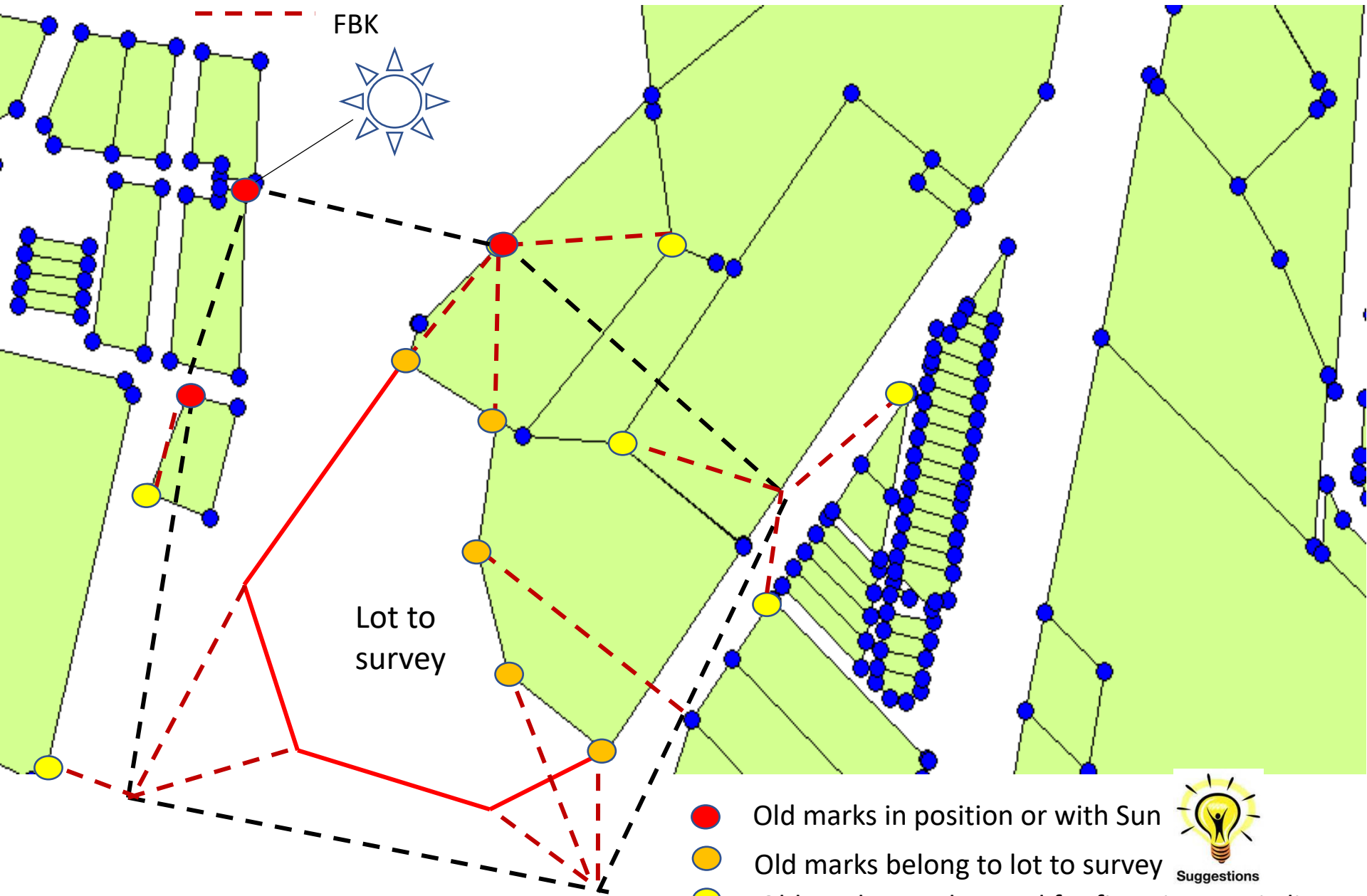
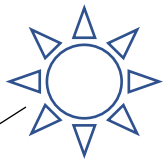
# FIX POINTS ANALYSIS



- Due to uncertainty displacement of NDCDB, its displacement magnitude need to be analysed to select those in common.

SURVEYED / ADJUSTED				NDCDB				Differnet (m)	Bearing (DMS)
Station No	MarkDesc	North	East	Stone ID	MarkDesc	North	East		
46	BKL	84976.577	-34610.987	4609249745	BKB	84976.573	-34611.072	0.085	267.1821
44	BKL	85007.923	-34593.293	4591550059	BKL	85007.925	-34593.374	0.081	271.2452
48	BKL	84998.327	-34615.351	4613549963	BKB	84998.326	-34615.345	0.006	99.2744
47	BKL	84980.759	-34622.585	4620849787	BKB	84980.769	-34622.666	0.082	277.0217
54	BKL	84947.474	-34761.673	4759949455	BKL	84947.522	-34761.700	0.055	330.3832
41	BKL	85011.311	-34648.992	4647150093	BKB	85011.377	-34649.000	0.066	353.0520
39	BKL	85033.577	-34706.338	4704550316	BKB	85033.638	-34706.349	0.062	349.4640
36	BKL	85062.013	-34709.595	4707850600	BKB	85062.071	-34709.603	0.059	352.0848
50	BKL	85010.750	-34731.216	4729450088	BKB	85010.804	-34731.241	0.054	335.0927
51	BKL	85011.987	-34734.390	4732650101	BKB	85012.056	-34734.467	0.103	311.5149
31	BKL	85090.185	-34743.184	4741450884	BKB	85090.259	-34743.289	0.128	305.1029
57	BKL	84978.897	-34814.453	4812649769	BKB	84978.936	-34814.481	0.048	324.1925
55	BKL	84968.887	-34751.308	4751449689	BKB	84968.905	-34751.408	0.102	280.1214
22	BKL	85110.903	-34936.078	4934351089	BKL	85110.903	-34936.078	0.000	0.0000
71	BKL	85064.518	-34931.088	4929250625	BKL	85064.484	-34931.066	0.040	147.0541
61	BKL	85008.870	-34883.172	4881350069	BKB	85008.882	-34883.188	0.020	306.5212
63	BKL	85009.939	-34905.647	4903850080	BKL	85009.962	-34905.657	0.025	336.3005
64	BKL	85034.249	-34905.799	4904050323	BKL	85034.272	-34905.807	0.024	340.4916
25	BKL	85104.367	-34915.201	4913451024	BKL	85104.367	-34915.201	0.000	0.0000
65	BKB	85029.783	-34924.782	4922950278	BKB	85029.804	-34924.783	0.021	357.1625
66	BKL	85030.601	-34936.252	4934450286	BKB	85030.624	-34936.249	0.023	7.2553
68	BKL	85047.159	-34945.403	4943650452	BKB	85047.171	-34945.409	0.013	333.2606
70	BKL	85071.414	-34950.223	4948550694	BKL	85071.414	-34950.223	0.000	0.0000
67	TT	85032.146	-34957.848	4956050302	BKB	85032.169	-34957.838	0.025	23.2955
69	BKL	85073.620	-34963.687	4961950716	BKL	85073.627	-34963.660	0.028	75.2756
16	BKL	85075.180	-34985.425	4983850732	BKL	85075.266	-34985.522	0.130	311.3336
59	BKL	85006.080	-34827.647	4825850041	BKB	85006.101	-34827.667	0.020	246.2250
7	BKL	85114.668	-35066.046	5064451127	BKL	85115.169	-35066.591	0.740	312.3529
12	BKL	85136.463	-35013.195	5011651345	BKL	85136.960	-35013.740	0.738	312.2145
13	BKL	85109.296	-35024.280	5022751074	BKL	85109.866	-35024.804	0.774	317.2428
10	BKL	85140.728	-35037.568	5036051388	BKL	85141.223	-35038.115	0.738	312.0835

--- Traverse code 12 in  
- - - FBK



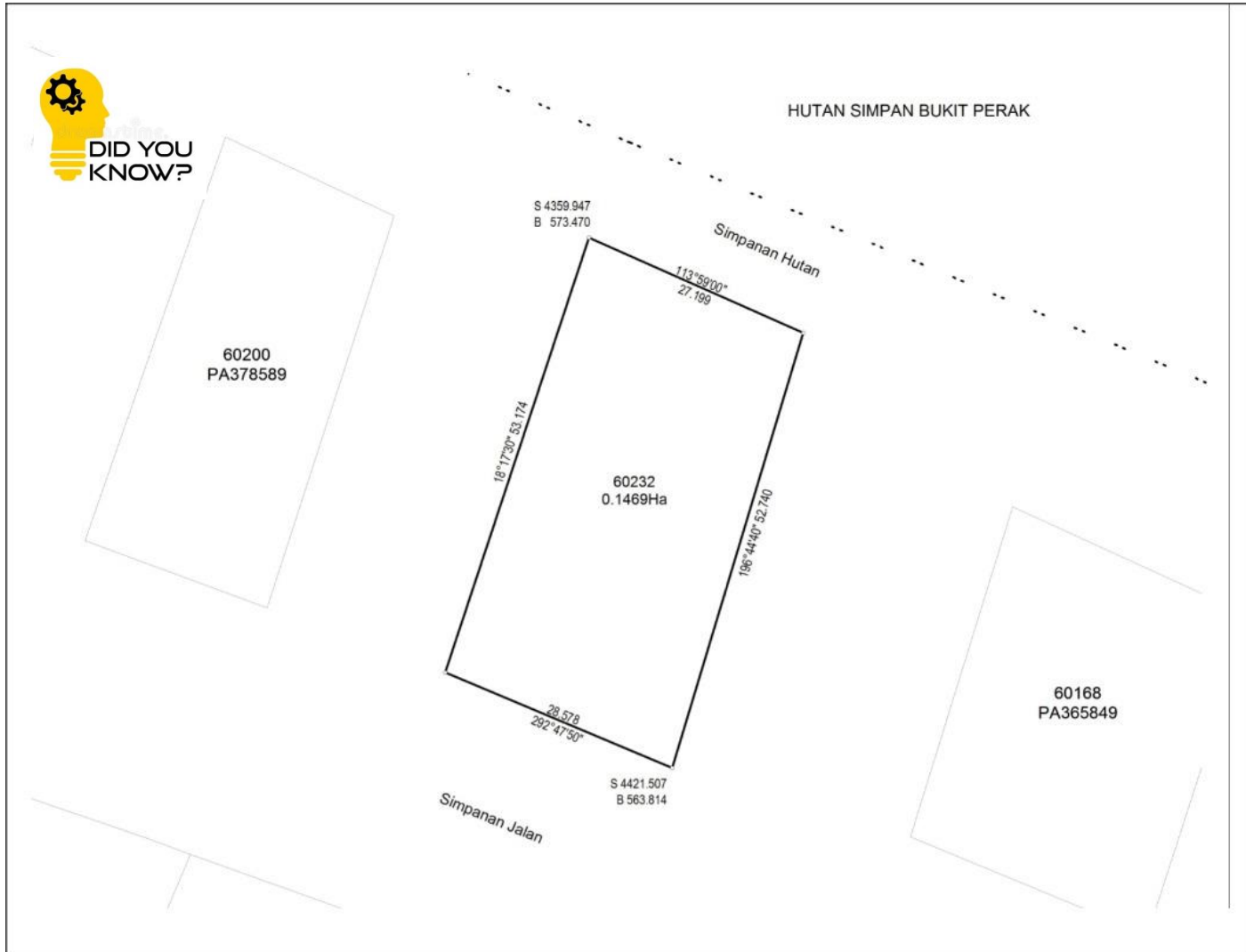
Lot to survey

- Old marks in position or with Sun
- Old marks belong to lot to survey
- Old marks may be used for fix points or tie line

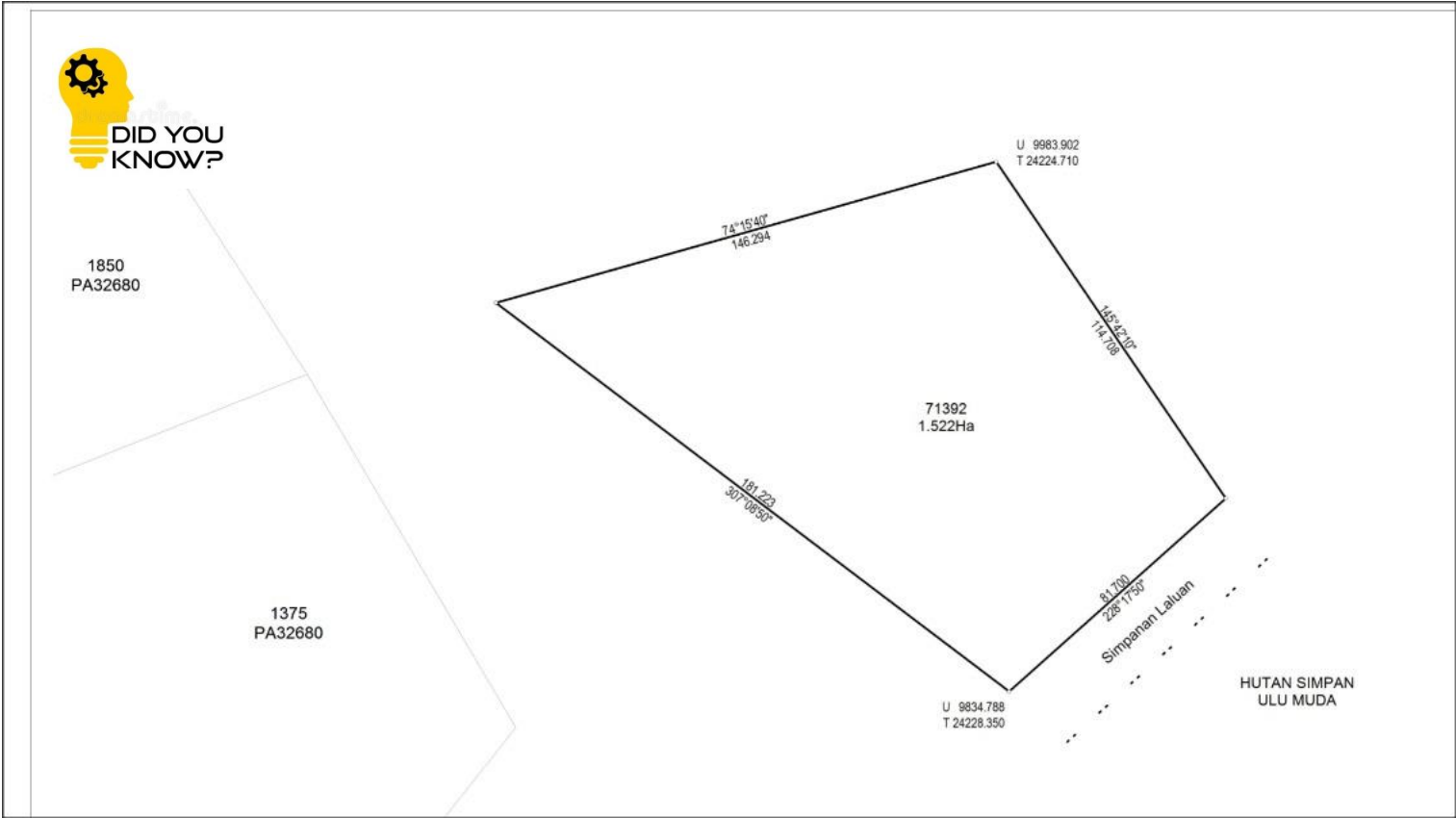


Suggestions

# PELAN AKUI (PA) NO CONNECTION LINE



# PELAN AKUI (PA) NO CONNECTION LINE



# SUBMISSION – MY OWN SUGGESTION

- Write in detail in JUPEM2U before SEND to JUPEM.

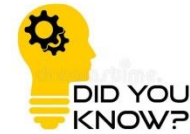
- 
2. Tiada CRM dibekalkan untuk fail ini. (nyatakan stesen apabila ada CRM)
  3. DFT telah dijalankan pada Stn 1, 2, 3. (nyatakan stesen yang diambil)
  4. Kalibrasi EDM disertakan di mana tarikh sah adalah sehingga 26hb Jun 2013. (nyatakan tarikh sah EDM Test)
  5. Az. ak. drp Mh di atas garisan 11-10. (nyatakan stesen yang diambil matahari)
  6. Tanda lama dibuktikan seperti asal adalah Stn 2, 3, 26, 37, 42, 44 & 49, perbandingan dengan PA 141323 dan PA 141324. Sila rujuk kepada Laporan PO & New yang disertakan. (PO & New berdasarkan PA apa? nyatakan Nombor PA)
  7. Tikaian lurus teras utama 1:83522 dan sub-blok 1:39861, 1:66904, 1:13501.
  8. NDCDB baik adalah Stn 2, 3, 26, 37 & 49 (lower bound). Stn 42 & 44 (upper bound). (nyatakan sama ada Stn 42 & 44 adalah dalam lot atau luar daripada lot)
  9. Ukuran mematu hiperaturan ukur semasadan bezalua didalam had. (sekiranya melebihi had, sila nyatakan lot-lot yang terlibat dan sebabnya. Sertakan Borang Pengakuan Keluasan yang berkenaan atau apa-apa tindakan yang telah diambil)
  10. Fix Stone yang diambil adalah Stn 2, 3, 26, 37 & 49. (nyatakan fix stone yang diambil semasa hantar kerjaya SUM. Sebenarnya perlukan tiga point sahaja walaupun sudah pick up banyak BKL. Kriteria pemilihan fix stone adalah berdasarkan Geometri Lot, seboleh-bolehnya merentas trabas / lot)



**Suggestions**

# UPLOAD FOR SUM PROCESSING

- Use only **1 fix point** for SUM LSA checking.
- Upload the 16ASCII in zip format.
- No need to digital signed the zipfile.
- Multiple uploading allowed.



```
Processing Summary
Checking Network Data ...

Performing Network Adjustment ...
Iteration # 1
Iteration # 2
Iteration # 3
Solution Has Converged in 3 Iterations

Statistical Summary
Observation    Count    Error Factor
Distances      104      0.152
Az/Bearings    103      0.050
Total          207      0.113

Warning: Chi-Square Exceeded Lower Bound
Lower/Upper Bounds (0.873/1.127)

Performing Error Propagation ...
Writing Output Files ...

Network Processing Completed
Elapsed Time = 00:00:01
```

# FIX POINTS – MY OWN SUGGESTION

- Currently to upload 16ASCII need at least 3 fix points.
- Hard to get 3 fix points due to NDCDB displacement uncertainty.
- Suggested use only 1 fix point:
  - Geodetic specialists not agreed with this minimum constrain as they claimed the network might swing.
  - Suggest we use SUN to control the swing.
  - PO/NEW to confirm the good old marks.





# OUTLINE



DISCLAIMER

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BRIEF BIOGRAPHICAL NOTE

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SURVEY GENERAL CIRCULARS

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UNDERSTANDING NDCDB LOT STATUS

4

UNDERSTANDING FIX POINTS SELECTION

5

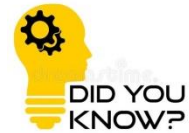
SOME EXPLANATION

6

CONCLUSION & ACKNOWLEDGMENT

7

JENIS KERJA = TRAVERSE  
(HUTAN SIMPAN)



# JENIS KERJA=TRAVERSE (HUTAN SIMPAN)

- **Need pre-comp ASCII for new file.**
- Previously no need pre-comp ASCII.
- The boundary defined in TPS as “B”.
- 3 fix points to upload.



Home [View Attachment PUBLPHGT7\\_2019.TPS](#) x

```
T, 1
2, 3, 4, 5, 1, 2
END
T, 2
1, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 19, 21, 22, 23, 24, 25, 26
27, 28, 29, 31, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48
49, 50, 51, 52, 53, 54, 56, 57, 58, 59, 60, 61, 62, 63, 64, 66, 67, 68, 70, 71
72, 73, 74, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92
93, 94, 95, 96, 97, 98, 99, 100, 101, 102, 2, 1
END
B, 1, 06, 02, 01, 000, 1269004.599
84, 86, 88, 91, 95, 98, 99, 100, 101, 104, 106, 107, 6, 9, 11, 13, 14, 18, 20, 21
23, 25, 26, 30, 32, 34, 37, 39, 42, 44, 45, 48, 49, 50, 52, 55, 59, 62, 65, 69
72, 75
END
K, 2, P
89410.746, -102785.177, PL, C06780_1, , M
END
K, 1, P
89471.143, -102656.451, PL, C06780_2, , M
END
K, 5, P
89557.423, -102806.847, PL, C06780_3, , M
END
```

# LODGMET PAGE

Home

Daftar masuk pada 21 Jun 2019, 02:16 PTG

Nama : ROSLI BIN AHMAD

Role : LJT(463)-LS



Folder Kerja

Pendaftaran

LS Lodgement

CRM Lodgement

Carian

Utiliti

Keluar

Select LS Lodgment

## LS Lodgment

Jenis Kerja :

Traverse \*

2

Select 'Traverse'

Negeri :

14 - Wilayah Persekutuan Kuala Lumpur \*

No. Fail :

|

Tujuan Ukur :

23 - TRABAS PIAWAI \*

Daripada Role :

PTG(14)-DPTG \*

Daripada :

PEJABAT TANAH DAN GALIAN WILAYAH KUALA LUMPUR \*

No. Ruj LJT :

|

\*Nota: Sebarang perubahan akan disemak semula dengan eLJT.

Dokumen Wajib :

	Dokumen	Jenis Dokumen	DMS
▶ 1.	... ❌	ASCII files (*.pub) ▼	
2.	... ❌	ASCII files (*.pud) ▼	
3.	... ❌	ASCII files (*.pul) ▼	
4.	... ❌	Surat Kelulusan ▼	
5.	... ❌	Sijil Akuan LJT ▼	
6.	... ❌	Pelan PU ▼	

3

Compulsory Attachment Listing

Dokumen :

Dokumen	Jenis Dokumen	DMS
---------	---------------	-----



Upload

# TRAVERSE ASCII FORMAT (ADOPT THE EXISTING PRECOMP ASCII FORMAT)

## Pre-Comp ASCII FORMAT

No	LOT			BOUNDARY			PU DETAILS		
	Field Desc.	Type (Char)	Null	Field Desc.	Type (Char)	Null	Field Desc.	Type (Char)	Null
1.	Negeri <sup>1,2</sup>	2	N	Negeri <sup>1,2</sup>	2	N	Negeri <sup>1</sup>	2	N
2.	Daerah <sup>2</sup>	2	N	Daerah <sup>2</sup>	2	N	Daerah	2	N
3.	Mukim <sup>2</sup>	2	N	Mukim <sup>2</sup>	2	N	Mukim	2	N
4.	Seksyen <sup>2</sup>	3	N	Seksyen <sup>2</sup>	3	N	Seksyen	3	N
5.	PUNo <sup>3,2</sup>	15	Y	PUNo <sup>2,3</sup>	15	Y	PUNo	15	Y
6.	PTNo <sup>4,2</sup>	8	N	PTNo <sup>2,4</sup>	8	N	LoNo	30	N
7.	Lot	7	Y	Lot	7	Y	FileNo	30	Y
8.	QTNo	16	Y	QTNo	16	Y	Area	16	Y
9.	UPI <sup>5</sup>	16	Y	UPI <sup>5</sup>	16	Y	Unit	2	Y
10.	PUQTKey <sup>6</sup>	35	N	PUQTKey <sup>6</sup>	35	N	SvyFees	10	Y
11.	Unit <sup>7,8</sup>	2	N	MarkDescFrom <sup>9</sup>	13	Y	LandUseCode <sup>10</sup>	2	N
12.	ApArea <sup>11</sup>	16	Y	SerialFrom	10	Y	LandTitleCode <sup>12</sup>	2	N
13.	AreaCal <sup>10,13</sup>	16	Y	NorthFrom	12	N	SijilAkuanNo	15	N
14.				EastFrom	12	N	Remarks	12	Y
15.				Bearing <sup>14,15</sup>	9 (deg.mmss)	Y			
16.				Distance <sup>12</sup>	10	Y			
17.				Unit <sup>16</sup>	2	N			
18.				MarkDescTo <sup>9</sup>	13	Y			
19.				SerialTo	10	Y			
20.				NorthTo	12	N			
21.				EastTo	12	N			
22.				BearingCal <sup>13,17</sup>	9 (deg.mmss)	Y			
23.				DistanceCal <sup>15</sup>	10	Y			
24.				Class <sup>18</sup>	2	Y			
25.				LineCode <sup>19</sup>	2	N			
26.				LineType <sup>20</sup>	2	N			
Name	xxx.pul			xxx.pub			xxx.pud		

Only Boundary and PU Details ASCII shall contain value.

Lot ASCII shall be left empty

15745.PUL

E.g PUL FILE- 0 BYTE (No Content)

15745.PUB

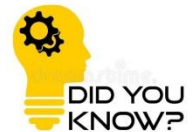
E.g. PUB FILE- 4KB (with Content)

15745.PUB

E.g. PUD FILE- 2KB (with Content)

---

# HOW TO HANDLE OLD TRAVERSE TEMP FILES BEFORE NOV 2019?



# INITIAL TRAVERSE FILE APPLICATION SUBMIT BEFORE NOV 2019, NO PRECOMP ASCII REQUIRED

## Scenario I (JU – Temp File)

- i. JTB Create Temp File , Send to JUPEM before Nov 2019.
- ii. Temp File RETURN to JTB , Query from JUPEM
- iii. JTB upload New Document, **must Include Precomp ASCII** to continue (Error Message as above will be display if Precomp ASCII Not included)



Kemaskini Fail JTB (JUWPT580\_2019)

Jenis Kerja : Traverse

Negeri : 14 - Wilayah Persekutuan Kuala Lumpur

No. Fail : JUWPT580\_2019

Tujuan Ukur : 23 - TRABAS PIAWAI \*

Daripada : FAUZIAH BINTI RAMLI

No. Ruj LJT : 013612345 Validate \*Nota: Sebarang perubahan akan disemak semula dengan eLJT.

Dokumen Wajib :

	Dokumen	Jenis Dokumen	DMS
1.	...	ASCII files (*.pub) ▾	
2.	...	ASCII files (*.pud) ▾	
3.	...	ASCII files (*.pul) ▾	
4.	...	Surat Kelulusan ▾	
5.	...	Sijil Akuan LJT ▾	
6.	...	Pelan PU ▾	

Dokumen :

	Dokumen	Jenis Dokumen	DMS
1.	...	HAKMILIK SEMENTARA-1.PDF Lain-Lain ▾	ATTACHMENT/LAIN-LAIN/LAIN-LAIN-1.PDF

Upload

ServerThread Information

Please upload Traverse ASCII.

Show Details OK

# INITIAL TRAVERSE FILE APPLICATION SUBMIT BEFORE NOV 2019, NO PRECOMP ASCI REQUIRED

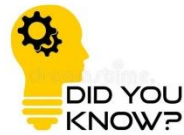
## ■ Scenario II (PUBL – Permanent File)

- i. JTB Create Temp File , Send to JUPEM before Nov 2019.
- ii. JUPEM Approve the File , RETURN File to JTB , Query from JUPEM
- iii. JTB Jawab Query by activating the Q Button , then Send File To JUPEM
  - i. No Editing Attachment button, therefore Will not Trigger the checking process.
  - ii. System will not mandatory the Precomp ascii to be submitted.





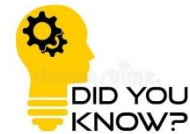
# EDM CALIBRATION FILE NOT IN EKADASTER





---

# UKURAN SEMULA CODE “12” FOR STRATA AND ALIENATION



# UKURAN SEMULA CODE “12”

## STRATA

1. Precomp ASCII File is Not necessary
  - No UPI checking (regardless where the lot is in DB).



2. SUM Checking (Normal SUM Checking)
3. Prepare PA & Append NDCDB

## ALIENATION

1. Precomp ASCII Compulsory

- UPI In Precomp ASCII need to exist in
  - Pre-NDCDB / Rel PreNDCdB
  - NDCDB / Relative NDCDB
  - Transition ( $30 \leq \text{STATUS} \leq 75$ )
  - System prompt lot not exist, but user still able to continue.
- Lot No with '-' / empty is not acceptable in Precomp ASCII
  - Other TUJUAN Ukur, JTB allow to insert negative Lot Number in Precomp ASCII to obtain new Lot Number



2. SUM Checking (Normal SUM Checking)
3. Prepare PA & Append NDCDB

# UKURAN SEMULA CODE "12" FOR STRATA

## LS Lodgment

Jenis Kerja :  \*

Negeri :  +

No. Fail :

Tujuan Ukur :  \*

Daripada Role :  +

Daripada :

No. Ruj LJT :  \*Nota: Sebarang perubahan akan disemak semula dengan eLJT.

Daerah :

Mukim/Bandar :

Seksyen :

No. Lot :  \*

Uji :

### Dokumen Wajib :

	Dokumen	Jenis Dokumen	DMS
1.	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Borang LJT700	
2.	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Sijil Akuan LJT	

# UKURAN SEMULA CODE "12" FOR STRATA

**LS Lodgment**

Daripada Role :  \*

Daripada :  \*

No. Ruj LJT :

Daerah :

Mukim/Bandar :

Seksyen :  \*

No. Lot :  \*

Upi :

Dokumen Wajib :

	Dokumen
1.	<input type="text" value="..."/> <input type="text" value="Y3 30-4"/>
2.	<input type="text" value="..."/> <input type="text" value="Y3 30-4"/>

Dokumen :

Dokumen	Jenis Dokumen	DMS

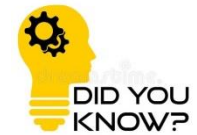
**LS Lodgment**

Checking NDCDB Lot..

**Informasi**

NDCDB Lot (10020700056786) not found in database.  
Do you wish to continue?

# PO LINES IN SUM CHECKING



## Sample Error 1

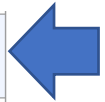
23.	FULFILL MINIMUM CONSTRAINTS	<input checked="" type="checkbox"/>	Count of Old Mark - 4 Count of CRM Point - 0
24.	PO LINE(s) VALIDATION	<input checked="" type="checkbox"/>	List of Invalid PO Line(s) :-  1. 1022-1023 2. 1023-7 3. 7-1023 4. 1023-1018



PO Lines in **FBK** must co-exist in **PO** file. **PO/FBK co-exist.**  
(System **Will BLOCK** if Error)

## Sample Error 2

24.	PO LINE(s) VALIDATION	<input checked="" type="checkbox"/>	PO Station not within 10cm Tolerance of NDCDB Station
25.	GOOD MARK(s) VALIDATION	<input checked="" type="checkbox"/>	Set 1: NEW 136, 134, 133, 132, 131, 130, 129, 128, 127, 126, 125, 124, 38, 39, 41 PO 136, 168, 169, 170, 171, 172, 41  Set 2: NEW 41, 39, 40, 42, 43, 45 PO 41, 173, 45  Set 3: NEW 45, 43, 44, 46, 47, 49 PO 45, 174, 175, 49  Set 4: NEW 49, 47, 48, 50, 52 PO 49, 176, 52  Set 5: NEW 52, 50, 51, 54 PO 52, 54  Set 6: NEW 54, 51, 53, 55, 7, 2, 6 PO 54, 177, 178, 179, 6  Set 7: NEW 6, 2, 7, 8, 9, 58, 59 PO 6, 59  Set 8: NEW 59, 58, 60 PO 59, 60  Set 9: NEW 60, 58, 9, 11



PO Station : check Overlap 10cm Tolerance with NDCDB station, Only Alert Message, System **Will NOT BLOCK.**  
**eQC acceptance rely on PO/NEW. PO/FBK/BLN must co-exist.**

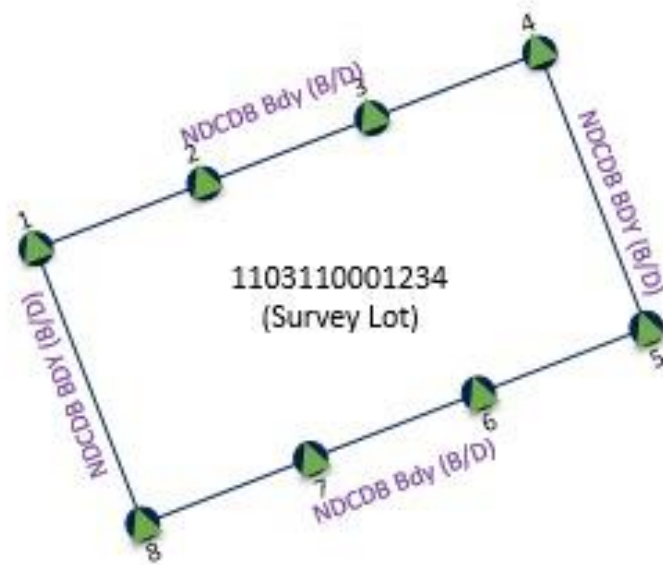


System will display Good Mark Validation Result from **BLN** file.  
**PO/BLN shall co-exist.**



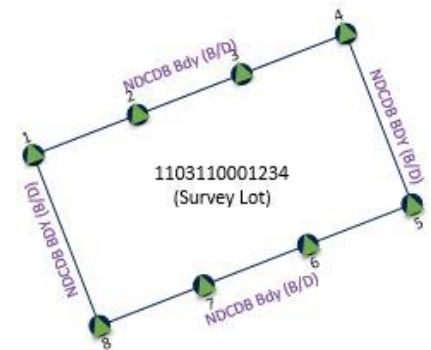
# AMALGAMATION/FULLY COMPILED

- Previously lots to be amalgamated shall be in NDCDB.
- And all stations shall be overlapping with NDCDB in tolerance of 10cm.
- If not then system will block.



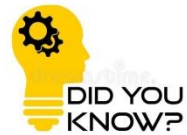
# AMALGAMATION/FULLY COMPILED (with PO from PA)

- Can compile from old PA or NDCDB.
- All PO.
- PO/FBK/BLN shall co-exist.
- COO shall be all old marks.
- System shall give alert PO station not within 10cm with NDCDB but can proceed.
- eQC acceptance rely on PO/NEW.
- If not all PO, then normal LSA is applied.
- Applied also to fully compiled job.



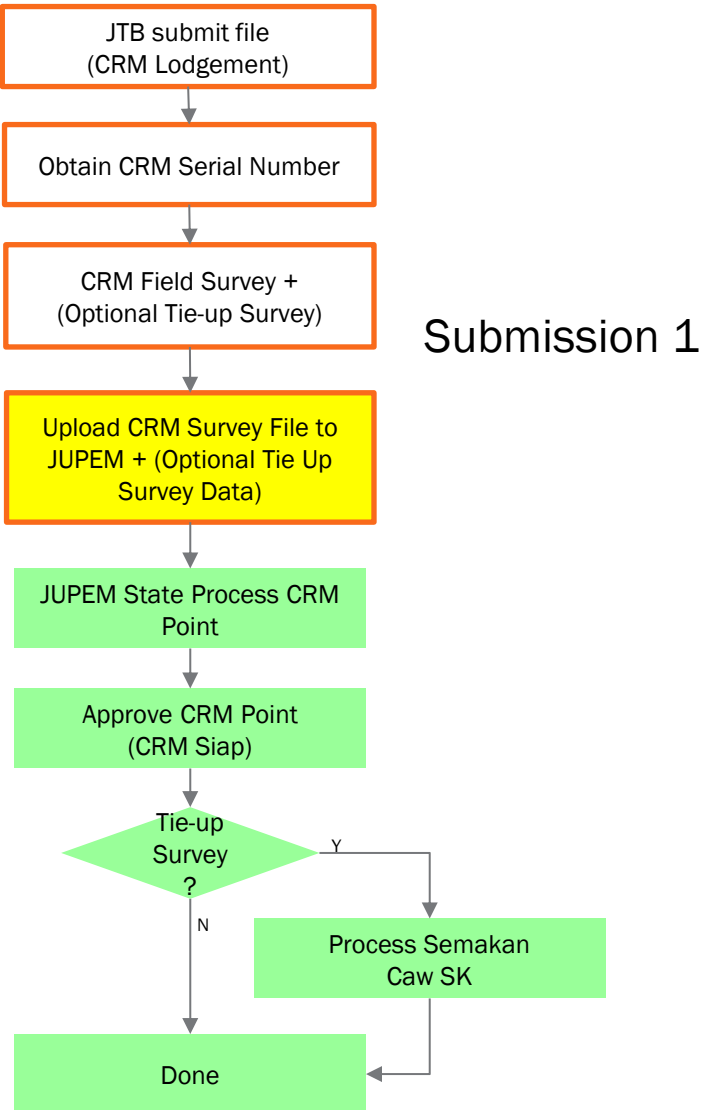
24.	PO LINE(s) VALIDATION	<input checked="" type="checkbox"/>	PO Station not within 10cm Tolerance of NDCDB Station
-----	-----------------------	-------------------------------------	---

# FULLY GNSS FILE

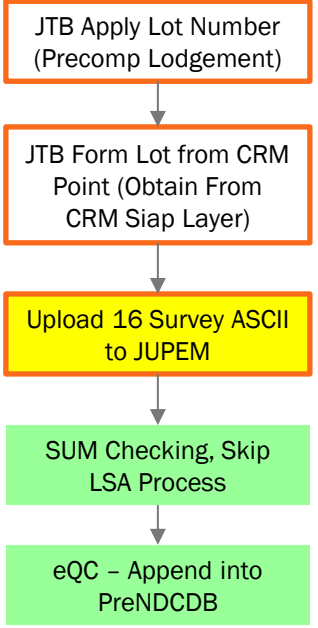


# SUGGESTED PROCESS FLOW

## Register CRM File



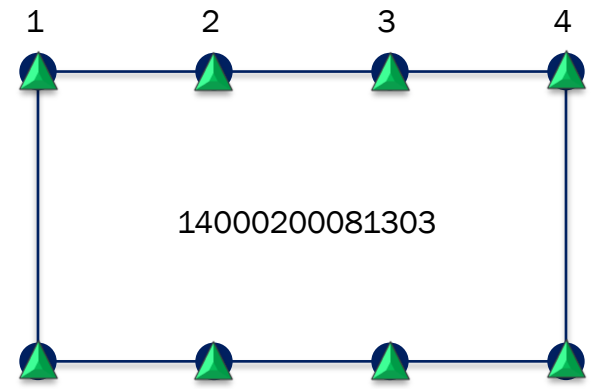
## Register Precomp File



7.		PRECOMPASCI\ (19)	12.711 MB	03/10/2019
8.		PDUK\ (4)	69.444 KB	03/10/2019
9.		CRM\ (4)	64.007 KB	03/10/2019
10.		NDCDB\ (13)	471.601 KB	03/10/2019
11.		ATTACHMENT\ (3)	69.945 KB	03/10/2019
12.		WARTA\ (4)	65.378 KB	03/10/2019
13.		C3\ (12)	51.471 KB	03/10/2019
14.		RELATIVE_NDCDB\ (12)	6.524 KB	03/10/2019
15.		PU\ (4)	58.043 KB	03/10/2019

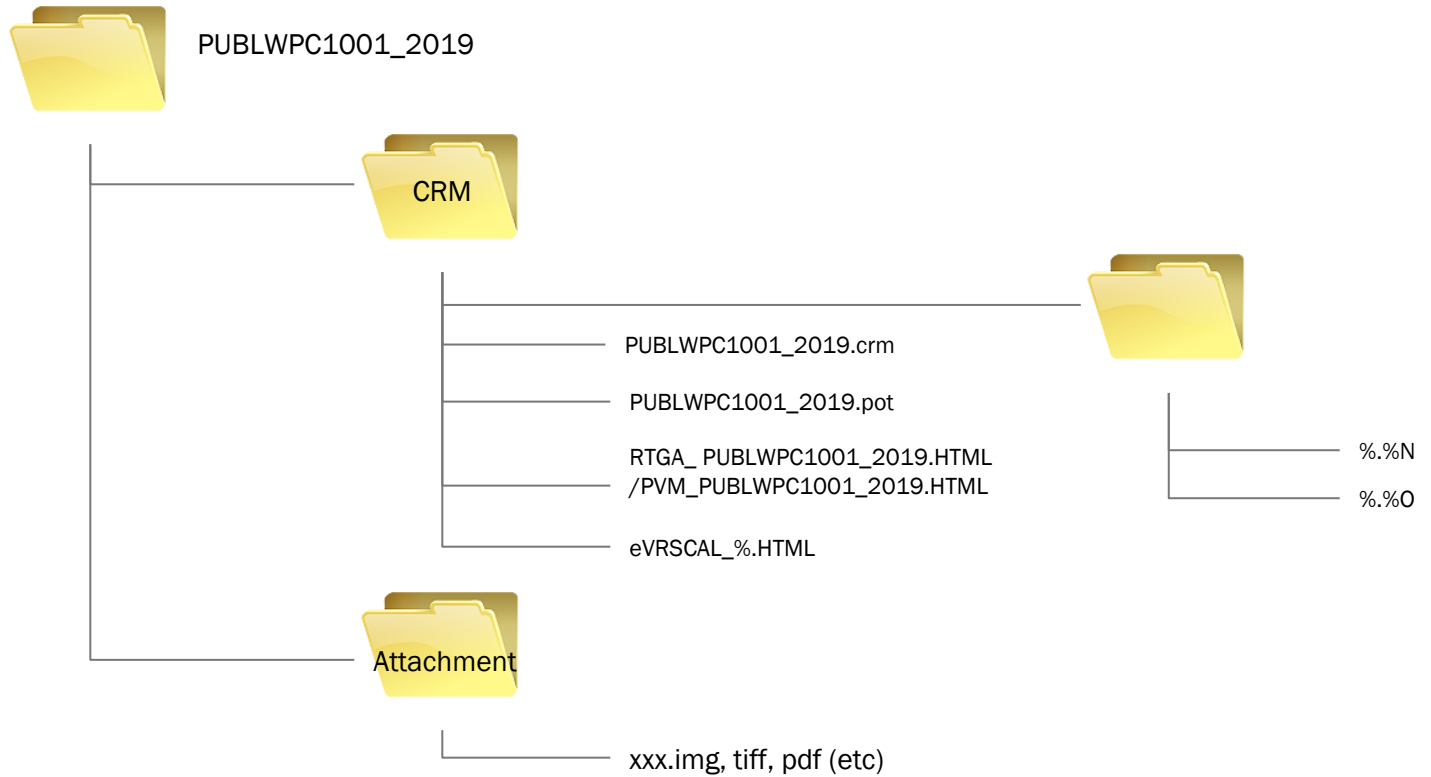
← eCadasOnline / CRM File in Attachment

## Submission 2

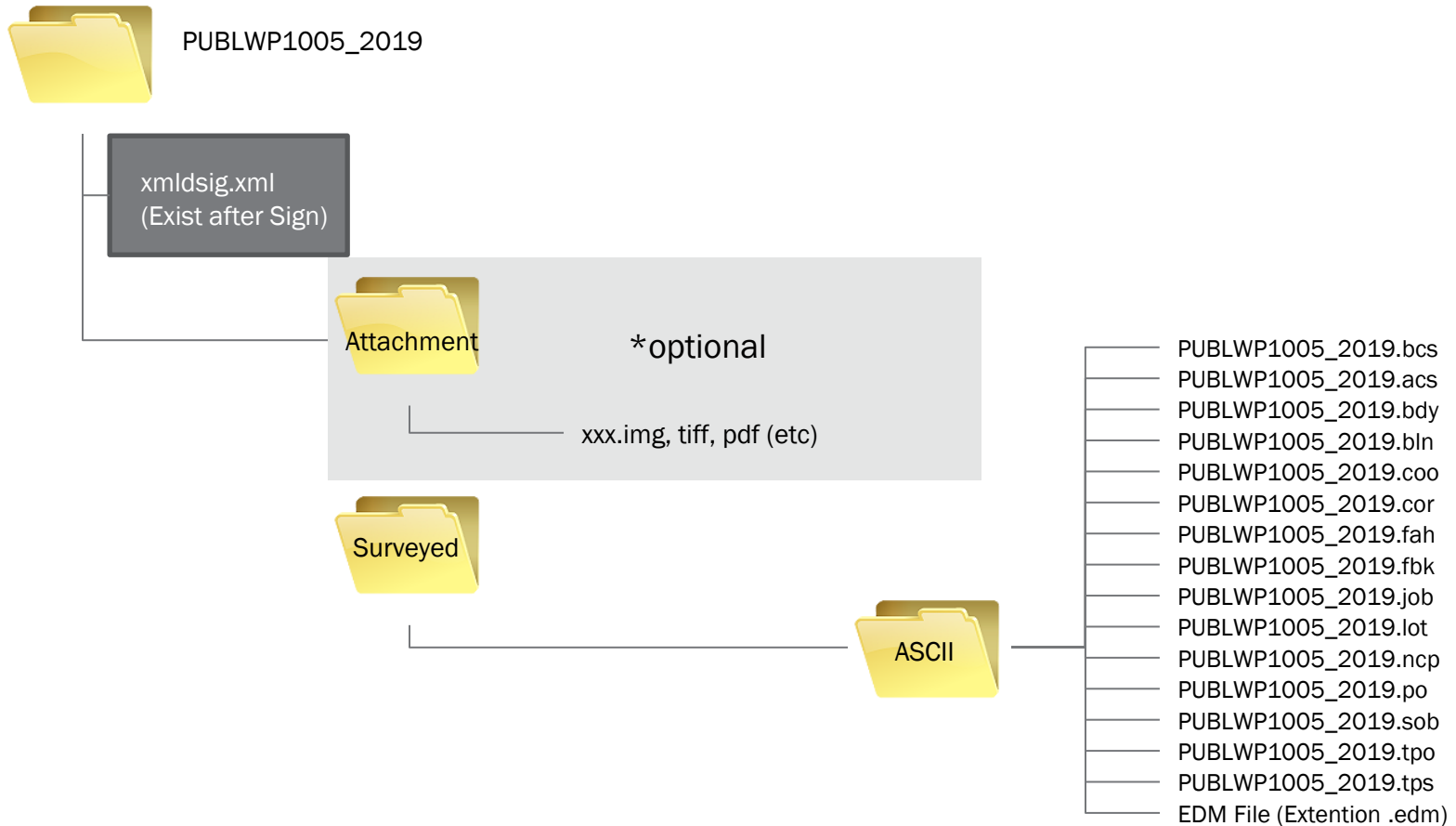


**\*EACH CRM STATIONS SHALL BE UPDATED INTO JUPEM CRM LAYERS BEFORE FINAL SUBMISSION**

# SUBMISSION 1: JOB FOLDER – CRM FILE (C-FILE)



# SUBMISSION 2: JOB FOLDER – SURVEY DATA (16 ASCII)



# FILES REQUIREMENT FOR 16 ASCII



- **FBK & the rest not mentioned - NULL**
- **ACS - needed**
- **TPS - needed**
  - No Fix Point need to define; as is FULLY GNSS Job.
- **COO - needed**
  - Every Record in COO file contain only GPS Point; where Code = 6
  - Serial Number shall comply to JUPEM Standard
  - E.g. W00666\_1
- **EDM – needed for SPAKLS**

# OUTLINE



DISCLAIMER

1

BRIEF BIOGRAPHICAL NOTE

2

SURVEY GENERAL CIRCULARS

3

UNDERSTANDING NDCDB LOT STATUS

4

UNDERSTANDING FIX POINTS SELECTION

5

SOME EXPLANATION

6

**CONCLUSION & ACKNOWLEDGMENT**

7



# CONCLUSION & ACKNOWLEDGMENT

## CONCLUSION

- Survey as we have been taught. eKadaster is just a tool for processing and file submission.
- Survey principle is still intact.



## ACKNOWLEDGMENT

- JUPEM staff inclusive of those already left the department.
- Licensed Land Surveyors involved.
- Academicians Sr Dr. Tan, Sr Dr. Azlan, Sr Norshahrizan.
- The contractors.