Rujukan Kami: JUPEM 18/7/2.148 (***89***)

Tarikh: ***29*** September 2005

Semua Pengarah Ukur dan Pemetaan Negeri

PEKELILING KETUA PENGARAH UKUR DAN PEMETAAN
BIL. 11 TAHUN 2005

KEWAJIPAN JURUUKUR TANAH BERLESEN MENGEMUKAKAN DATA UKURAN KADASTER BERDIGIT

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1. TUJUAN

Pekeliling ini bertujuan untuk mewajibkan Juruukur Tanah Berlesen (JTB) mengemukakan data ukuran kadaster berdigit kepada Pengarah Ukur dan Pemetaan Negeri (PUPN), selaras dengan perlaksanaan sepenuhnya *'Field-to-Finish'* (F2F) di Jabatan Ukur dan Pemetaan Malaysia (JUPEM).

2. LATARBELAKANG

2.1 Pekeliling KPUP Bil. 1/1997 telah dikeluarkan supaya JTB menghantar hasil kerja dalam bentuk berdigit dan juga *hard-copy*, manakala prosedur penerimaan dan semakan kerja ukur hakmilik tanah yang dikemukakan oleh JTB adalah berdasarkan kepada Pekeliling KPUP Bil. 1/2001.

2.2 Pada tahun 2004, JUPEM telah membangunkan *Licensed Land Surveyor Module (LLSM)* untuk menyemak secara berdigit sepenuhnya kerja ukuran kadaster yang dijalankan oleh JTB. Modul ini dapat mempercepatkan proses semakan dan penyediaan hakmilik B1 TIFF.

2.3 Sehubungan itu, bagi memenuhi hasrat di atas, JTB dikehendaki melaksana dan mengemukakan hasil kerja digital sepenuhnya kepada JUPEM Negeri.

3. FORMAT DATA BERDIGIT

JTB hendaklah menghantar format data berdigit dalam bentuk ASCII yang terdiri daripada:

i. .fbk – Field Observation Data
ii. .cor – Corrections
iii. .sob – Solar Observation Data
iv. .bcs – Bearing Close Statement
v. .acs – Area Comparison
vi. .ncp – Deduced Field Data
vii. .tps – Traverses
viii. .lot – Lot Details
ix. .bdy – Bearing, Distance & Coordinates
x. .job – Job Details
xi. .edm – EDM Test
xii. .fah – Fahrasat
xiii. .coo – Coordinates Information
xiv. .bln – Base Line
xv. .tpo - Topography
xvi. .po - Old Value

Serta;

i. .tiff - Certified Plan
ii. .pdf - Calculation Volume
iii. .xml - Digital Signature

Struktur format yang perlu dihantar adalah seperti di **Lampiran 'A'.**

4. TINDAKAN JUPEM NEGERI

JUPEM Negeri hendaklah memproses data berdigit yang dihantar oleh JTB mengikut tatacara yang ditetapkan oleh Jabatan. Carta aliran bagi proses kerja JTB adalah seperti di **Lampiran 'B'.**

5. TARIKH BERKUATKUASA

5.1 Bagi kerja yang mana nombor lot dikeluarkan **mulai 01 Januari 2006**, data ukuran kadaster hendaklah dihantar mengikut format yang terdapat dalam pekeliling ini;

5.2 Bagi kerja yang mana nombor lot dikeluarkan **sebelum 01 Januari 2006**, data ukuran kadaster boleh dikemukakan mengikut amalan semasa (Pekelilng KPUP Bil. 1/1997) **sehingga 30 Jun 2007**;

5.3 Semua JTB adalah digalakkan untuk menghantar data ukuran kadaster dalam bentuk berdigit sepenuhnya mulai sekarang; dan

5.4 **Mulai 01 Julai 2007**, JUPEM Negeri hanya akan menerima data ukuran kadaster mengikut format yang terdapat dalam pekeliling ini sahaja.

Sekian, terima kasih.

"BERKHIDMAT UNTUK NEGARA"

(DATO' HAMID BIN ALI)
Ketua Pengarah Ukur dan Pemetaan
Malaysia

Salinan Dalaman :

Timbalan Ketua Pengarah Ukur dan Pemetaan

Pengarah Ukur Bahagian Kadaster

Pengarah Ukur Bahagian Pemetaan

Salinan Luaran :

Setiausaha,
Lembaga Juruukur Tanah Semenanjung Malaysia

Lampiran 'A'

Struktur Fail LLSM ASCII

No	EDM			Fahrasat			Fieldbook			Corrections			Solar Observations			Bearing Close Statement			Area Comparison		
	Field Desc.	Type (Char)	Null	Field Desc.	Type (Char)	Null	Field Desc.	Type (Char)	Null	Field Desc.	Type (Char)	Null	Field Desc.	Type (Char)	Null	Field Desc.	Type (Char)	Null	Field Desc.	Type (Char)	Null
1.	InstNo [1]	50	N	FileName [2]	10	N	FileName [2]	10	N	FileName[2]	10	N	FileName[2]	10	N	FileName[2]	10	N	FileName[2]	10	N
2.	Negeri [3]	2	N	FileNo[2]	20	N	FileNo[2]	20	N	FileNo[2]	20	N	FileNo[2]	20	N	FileNo[2]	20	N	FileNo[2]	20	N
3.	SurveyorIC	50	N	SurveyType[4]	2	N	StnFromNo	10	Y	StnFromNo	10	Y	OccStnNo	10	N	StnFromNo	10	N	Negeri	2	N
4.	Location	50	Y	Negeri	2	N	StnFromType [5]	10	Y	OccStnNo	10	N	OccStnType	10	N	StnFromType	10	N	Daerah	2	N
5.	Code [6]	1	N	Daerah	2	N	StnFromSerial	10	Y	StnToNo	10	N	OccStnSerial	10	Y	StnFromSerial	10	Y	Mukim	2	N
6.	JUBLID [7]	10	Y	Mukim	2	N	OccStnNo	10	N	CorrectionNo [8]	10	N	OccCorNorth	12	N	OccStnNo	10	N	Seksyen	3	N
7.	PillarFrom [9]	2	N	Seksyen	3	N	OccStnType[5]	10	N	ValuePerStone[10]	16	N	OccCorEast	12	N	OccStnType	10	N	Lot	7	N
8.	PillarTo [9]	2	N	Lot	7	N	OccStnSerial	10	Y	Index [11]	10	N	StnToNo	10	N	OccStnSerial	10	Y	SKLArea	16	N
9.	StdPillarDist [12]	10	N	SurveyorIC	50	N	StnToNo	10	N	CorrectionType [13]	2	N	StnToType	10	N	StnToNo	10	N	PUArea	16	N
10.	InstPillarDist [14]	10	N	StartDate	8 (yyyymmdd)	N	StnToType[5]	10	N	StartStation [15]	10	N	StnToSerial	10	Y	StnToType	10	N	SvyArea	16	N
11.	DistanceDiff [16]	10	N	EndDate	8 (yyyymmdd)	N	StnToSerial	10	Y	LineCode[29]	2	N	SurveyorName	50	N	StnToSerial	10	Y	Percentage[17]	16	N
12.	SumDiff [18]	10	N	InstNo	50	N	CLFrom	8 (deg.mmss)	Y				InstNo	50	Y	ReadBearing28	8 (deg.mmss)	N	Misclosure [19]	16	N
13.	ObsTime [20]	6 (hhmmss)	N	Remarks	50	Y	CRFrom	8 (deg.mmss)	Y				Date[21]	8 (yyyymmdd)	N	SReadBearing[28, 22]	8 (deg.mmss)	N			
14.	ObsDate [23]	8 (yyyymmdd)	N				CLTo	8 (deg.mmss)	N				OBS_NO	2	N	DiffBearing[28]	8 (deg.mmss)	N			
15.	Temp [24]	10	N				CRTo	8 (deg.mmss)	N				CL_RO_1[25, 28]	8 (deg.mmss)	N	TotalOccStn[26]	3	N			
16.	Updated[27]	8(yyyymmdd)	N				AvgBearing [28]	8 (deg.mmss)	N				H_CL_SUN_TR	8 (deg.mmss)	N	CorrNo[8]	3	N			
17.							VAToCL	8 (deg.mmss)	N				V_CL_SUN_TR	8 (deg.mmss)	N	CorrPerStn [10]	8 (deg.mmss)	N			
18.							VAToCR	8 (deg.mmss)	N				OBS_TIME_1	6 (hhmmss)	N	Remarks	30	Y			
19.							SDToCL	10	N				H_CL_SUN_TL	8 (deg.mmss)	N						
20.							SDToCR	10	N				V_CL_SUN_TL	8 (deg.mmss)	N						
21.							HD	10	N				OBS_TIME_2	6 (hhmmss)	N						
22.							ObsDate	8 (yyyymmdd)	N				H_CR_SUN_TL	8 (deg.mmss)	N						
23.							ObsTime	6 (hhmmss)	N				V_CR_SUN_TL	8 (deg.mmss)	N						
24.							LineCode[29]	2	N				OBS_TIME_3	6 (hhmmss)	N						
25.							Remarks	30	Y				H_CR_SUN_TR	8 (deg.mmss)	N						
26.							ParentFrom [30]	10	Y				V_CR_SUN_TR	8 (deg.mmss)	N						
27.							ParentTo [31]	10	Y				OBS_TIME_4	6 (hhmmss)	N						
28.													AVG_TIME	6 (hhmmss)	N						
29.													CR_RO	8 (deg.mmss)	N						
30.													AVG_ZENITH	8 (deg.mmss)	N						
31.													AVG_H	8 (deg.mmss)	N						
32.													AVG_RO	8 (deg.mmss)	N						
33.													REF_COOR	8 (deg.mmss)	N						
34.													DECLINATION	8 (deg.mmss)	N						
35.													AZIMUTH_CAL	8 (deg.mmss)	N						
36.													TRUE_BEARING	8 (deg.mmss)	N						
37.																					
Name	xxx.edm			xxx.fah			xxx.fbk			xxx.cor			xxx.sob			xxx.bcs			xxx.acs		

No	NCP			TPS (crlf delimitered)			LOT			BOUNDARY			JOB			Surveyed Station		
	Field Desc	Type (Char)	Null	Field Desc	Type (Char)	Null	Field Desc	Type (Char)	Null	Field Desc	Type (Char)	Null	Field Desc	Type (Char)	Null	Field Desc	Type (Char)	Null
1.	OccStnNo	10	N	ObjectInfo [32]	256	N	UPI	16	N	UPI	16	N	SurveyedFileNo	18	N	FileName2	10	N
2.	OccStnType[5]	10	Y	Ordinate [33]	GLOB	N	CentroidX	12	N	FromMarkDesc[5]	13	N	CompletedDate	10	N	FileNo[2]	20	N
3.	OccStnSerial	10	Y	RecordsDelim[34]	3 (END)	N	CentroidY	12	N	FromStnNo	10	N	CVApprovedDate	10	Y	StnNo	10	N
4.	StnToNo	10	N				Area	16	N	FromX	12	N	StartCalVolNo	4	Y	MarkDesc[5]	10	N
5.	StnToType[5]	10	Y				Unit [35]	3	N	FromY	12	N	StartPageNo	3	Y	Serial	10	Y
6.	StnToSerial	10	Y							FromCoorType	1	N	EndCalVolNo	4	Y	North	12	N
7.	FinalBearing[28]	10 (deg.mmss)	N							Bearing[28]	9	N	EndPageNo	3	Y	East	12	N
8.	FinalDistance	10	N							Distance	10	N				Code[36]	10	N
9.	Remarks	10	Y							Unit [37]	3	N				Remarks	30	Y
10.	LineCode[29]	2	Y							ToMarkDesc[5]	13	N						
11.										ToStnNo	10	N						
12.										ToX	12	N						
13.										ToY	12	N						
14.										ToCoorType	1	N						
15.										Class [38]	1	N						
16.										LineCode [29]	2	N						
17.										ValueCode [39]	2	N						
18.										Plan	12	Y						
19.										Remark	12	Y						
20.																		
Name	xxx.ncp			xxx.tps			xxx.lot			xxx.bdy			xxx.job			xxx.coo		

No	Topo Offset			PO			Baseline		
	Field Desc.	**Type (Char)**	**Null**	**Field Desc.**	**Type (Char)**	**Null**	**Field Desc.**	**Type (Char)**	**Null**
1.	Filename[2]	10	N	FileName[2]	10	N	FileName[2]	10	N
2.	Fileno[2]	20	N	FileNo[2]	20	N	FileNo2	20	N
3.	StnFromNo	10	N	Plan	12	N	StnFromNo	10	Y
4.	OccStnNo	10	N	UPI	16	N	OccStnNo	10	N
5.	StnToNo	10	N	ApDate[41]	8	N	StnToNo	10	N
6.	Code[42]	5	N	Class	1	N	BaseLineNo49	10	N
7.	StringNo[44]	10	N	Bearing[28]	8	N	Index50	10	N
8.	Ordered	10	N	Distance	10	N	BaseLineType51	3	N
9.				Unit[35]	1	N	LineCode[29]	2	N
10.				StnFromNo	10	Y			
11.				StnFromPointKey	40	Y			
12.				StnFromType[5]	10	Y			
13.				StnFromSerial	10	Y			
14.				StnFromNorth	12	Y			
15.				StnFromEast	12	Y			
16.				StnOccNo	10	N			
17.				StnOccPointKey	40	N			
18.				StnOccType[5]	10	N			
19.				StnOccSerial	10	Y			
20.				StnOccNorth	12	N			
21.				StnOccEast	12	N			
22.				StnToNo	10	N			
23.				StnToPointKey	40	N			
24.				StnToType[5]	10	N			
25.				StnToSerial	10	Y			
26.				StnToNorth	12	N			
27.				StnToEast	12	N			
Name	**xxx.tpo**			**xxx.po**			**xxx.bln**		

1. Instrument no. E.g. 1234gty123

2. File number e.g. 1-2002. (FileName + FileNo = PUPWP12/2002)

    a. (Refer as FileNo or SvyFileNo) JUPEM & LS e.g. PUSEL416/2001, PUBLSEL438/1999

    b. SEL = Selangor, BL = License Surveyor

3. Negeri Code, e.g 01 = Johor, 02 = Kedah, 03 = Kelantan, 04 = Melaka, 05 = Negeri Sembilan, 06 = Pahang, 07 = Pulau Pinang, 08 = Perak, 09 = Perlis, 10 = Selangor, 11 = Terengganu, 14 = Wilayah Persekutuan KL, 16 = Putrajaya

4. Cantuman = 1, Pecahan Lot-Lot = 2, Ukuran Berimilik Tanah Kerajaan = 3, Strata = 4, Pengambilan = 5,Penyerahan Sebahagian Lot = 6, Ukuran Semula = 7, Ukuran Pengesahan = 8, Rizab = 9, Serahan Dan Berimilik Semula = A, Ukuran Berimilik & Pecahan T. Kerajaan = B, Gazet = G, Verifikasi = V

5. According to Pekeliling Ketua Pengarah Ukur dan Pemetaan 2002 :
BKB = Batu Konkrit Baru, BL = Batu Lama, BKL = Batu Konkrit Lama, PpBB = Pepaku Besi Baru, PB = Paip Baru, PL = Paip Lama, TKL = Tiang Konkrit Lama, PgKL = Pancang Konkrit Lama, pkB = Paku Baru, PkL = Paku Lama, TT = Tiada Tanda, PpBL = Pepaku Besi Lama, TAB = TandaatasBatu, PTU = Peti Tanda Ukur, PgKK = Pancang Kayu Keras, Tp = Tanam Pastian, Pkt = Piket , GPS = GPS

    Legacy Code:
    BKBB = Batu Konkrit Baru Bernombor, BKUL = Batu Konkrit Ukuran Lama, BB = BB, TKB = Tiang Konkrit Baru, PgKB = Pancang Konkrit Baru,

6. 0, from department; 1, from JUBL

7. JUBL registered company ID e.g. (14051-V)

8. The order of the correction being calculated. For example: If survey job has 3 corrections then the correction number for first correction is 1, for the second one is 2 and so on

9. Numeric e.g. 1 or 2

10. Value per stone in decimal format. For example: -0.00022344

11. Integer that use to mutiply the value per stone to get the value of current C or M correction

12. Pillar distance standard

13. M = Meridian, C = Circuit

14. Pillar distance read from total station

15. The static station that use for particular adjustment. When a correction is deleted, the entire coordinate except the static station will be adjusted to the original value

16. Distance difference (StdPillarDist - InstPillarDist). E.g. 0.001

17. First class survey can have only 5% difference or less

18. Total previous DiffDistance – DiffDistance. E.g 0.001

19. First class survey can have only 1:8000 ratio or more

20. Observation Time

21. Tarikh Cerapan

22. Should read bearing

23. Observation Date

24. The temperature at observation in Celsius

25. C = Circle, L = Let, R = Right, RO = Reference Object, V = Vertical, H = Horizontal, T = Target, A = Angle, S = Slope, D =Distance

26. Total occupied stations. ~30

27. Last modify date

28. Deg.mmss e.g. 103.3010

29. TSM Code

    a. Unknown = 0 Boundary = 1 Connection = 2 Revised = 3 Datum = 11 Traverse = 12 OnLine = 13 CloseBearing = 14 Azimuth = 15 Calculated = 16 Produced = 17 TP(Tanam Pastian) = 18 Topo = 19 Dpi/KI = 20 EDM = 21 Diff_Test = 22 OnlineCheck = 23 TT(Tiada Tanda) = 24 CheckAngle = 25 PO (Per Origin) = 26 Cancel = 99

30. This station number represents occupied station of online's parent

31. This station number represents front station of online's parent

    a. T = Traverse e.g. T, 1

    b. B = Boundary e.g. B, 2

    c. C = Connection e.g. C, 3

    d. L = Lot (LotNo, Negeri, Daerah, Mukim/Pekan/Bandar, Seksyen, Area) e.g. L, 2183, 06, 05, 07, 000, 1300.000

    e. K = Coordinate, R = Rigid, P = Plotting e.g. K, 20, R or K, 20, P

32. For T, B, C, L e.g. 54, 45, 44, 55

33. For K (y, x,,,, unit) e.g. 52475.890, -4142.304,,,, M

34. Fill with "END"

35. A = Acre, F = Squere Feet, H = Hectare, M = Square Meter, R = Acre.rod.poles (ASCII using 0.0.0, Database using Acre unit)

    a. A2 = 4046.856 M^2

    b. F2 = .09290304 M^2

    c. H = 10000 M^2

d. M2 = 1 M^2

e. Rod2 = 25.29285 M^2

f. ekar = 4 rod

g. rod = 40 pole , e.g. 8.3.0

36. 0 = Unknown, 1 = PDUK, 2 = Assumed, 3 = SKL, 4 = Traverse, 5 = OnLine, 6 = GPS, 7 = Diff_Test, 8 = Topo, 9 = KnownPoint, -1 = Cancel

37. F =Feet, L = Link, I = Inch, D = Depa (Kelantan), M = Meter

38. 1 = First Class, 2 = Second Class, 3 = Third Class, D = Demarcation, P = PU, 0 = Not Set

39. 0 = Survey Line, 1 = Ki(ra) Line, 2 =Scaled Line, 3 = Not Set

40. 1 = Hadir, 2 = Tak Hadir, 3 = Cuti Rehat(119 E), 4 = Cuti Sakit Swasta(118 E), 5 = Cuti Sakti Kerajaan(118 E), 6 = Non-Effective, Latihan Dan Cuti Panjang(121 E), 7 = Cuti Tanpa Rekod, 8 = Cuti Rehat Sabtu, 9 = Hari Tidak Kerja Luar, 10 = Hari Ahad, 11 = Hari Cuti Kelepasan Am

41. Approve Date

42. String code denote same offset object

43. S = Sementara, T = Tetap

44. String number denote same feature

45. Ringgit Malaysia

46. BKBB = Batu Konkrit Bernombor Baru Ditanam, BKB = Batu Konkrit Kosong Ditanam, BKU = Batu Konkrit Diubah, Default = 0

47. Full Mileage Claim. Y=Yes, N=No

48. H=Hotel, L=Lojing, F=Food, E=Elaun Harian, M=Mileage, D=Dobi, T=Telephone, O=Tol, P=Parking, S=Post, A= Taxi, B= Bus, R= Train, Y= Ferry, N=Others, K=Elaun Kerja Luar, C= Others(Tuntutan Pelbagai), W=Wang Asing

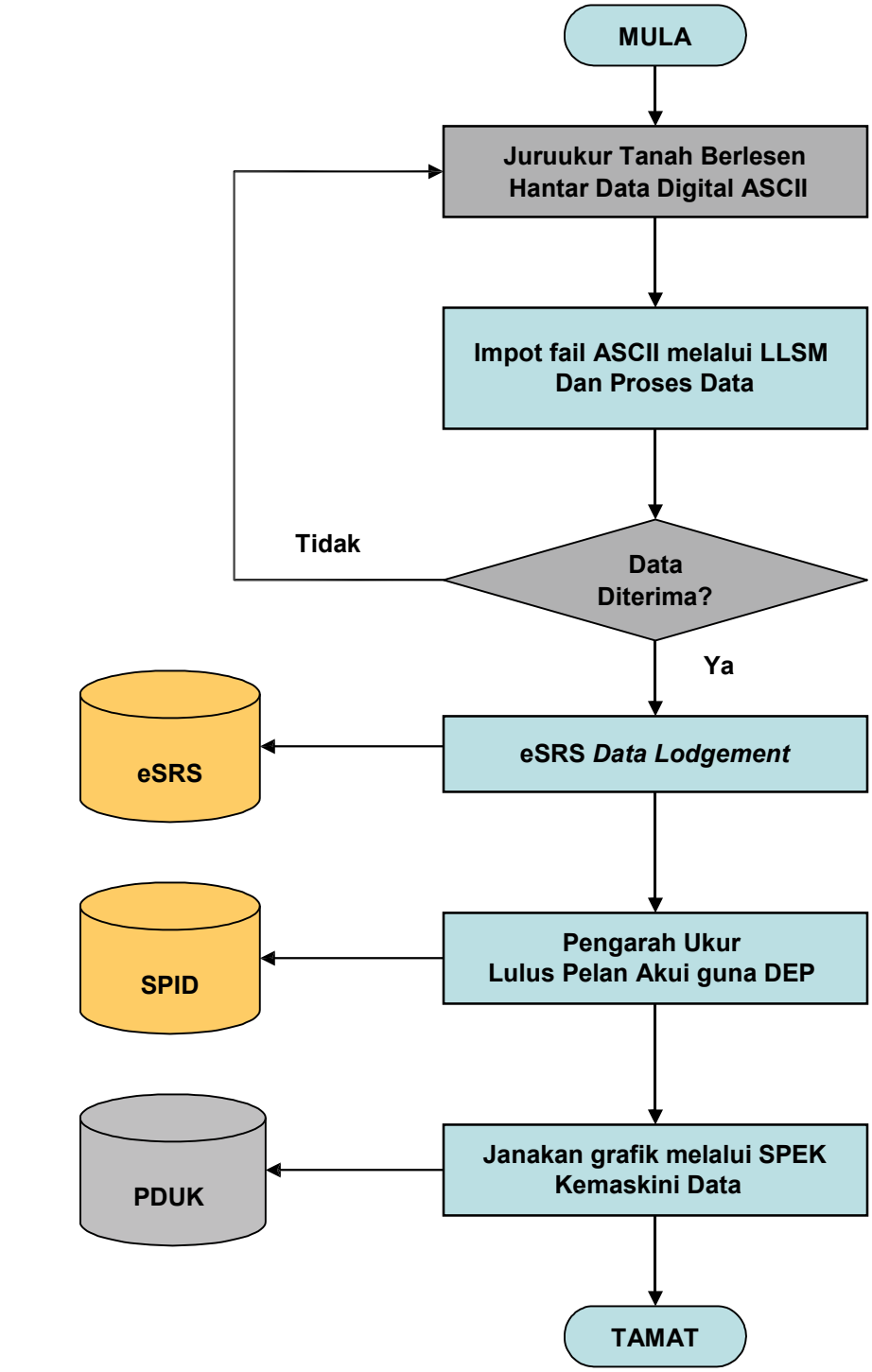
49. The order of the baseline being calculated. For example: If survey job has 3 baselines then the baseline number for first baseline is 1, for the second one is 2 and so on

50. Integer that use to indicate the sequence of the selected PO or New line to form the baseline

51. PO = Per Origin, New = Traverse

LAMPIRAN "B"

CARTA ALIR KERJA BAGI MEMPROSES DATA DIGITAL DARI JURUUKUR TANAH BERLESEN



Nota:
ASCII : American Standard Code for Information Interchange
LLSM : Licensed Land Surveyor Module
eSRS : electronic Survey Record System
SPID : Sistem Pengurusan Imej Dokumen
DEP : Digital End Product
SPEK : Sistem Pengesahan Kualiti
PDUK : Pangkalan Data Ukur Kadaster
TIFF : Tagged Image File Format