# Stringer ePlan Manual

# Version 2.0

May 2019





Environment, Land, Water and Planning

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# **Stringer ePlan Manual**

# Version 2.0

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# 1. Introduction to ePlan

ePlan is a national initiative spearheaded by the Intergovernmental Committee on Surveying and Mapping (ICSM) to replace the existing paper and PDF cadastral plans with a new electronic file format (ePlan). This enables the computerisation and automation of many industry and government processes resulting in a more efficient land administration business with higher quality of cadastral data. The ePlan implementation project in Victoria consists of the following:

- A Victorian ePlan Protocol
- · ePlan supported survey software packages
- Internal government systems to manage ePlan throughout the land administration process.

This manual provides support in creating ePlans by using the ePlan supported survey software package – Stringer ePlan.

# 2. Install Stringer ePlan

Stringer ePlan can be downloaded from the following link:

http://www.stringersurvey.com.au/index.php/download/#stringer-eplan

Access to the software is for 30 days without permanent licensing. To obtain a license, contact <a href="mailto:sales@civilsurveysolutions.com.au">sales@civilsurveysolutions.com.au</a>

Stringer ePlan works on the following CAD platforms:

- AutoCAD 2016, 2017, 2018 and 2019
- AutoCAD MAP 2016, 2017, 2018 and 2019
- AutoCAD Civil 3D 2016, 2017, 2018 and 2019
- BricsCAD Version 17, 18 and 19

After installing Stringer ePlan, a ribbon is added to the CAD package. In BricsCAD, a toolbar is added that can be activated and docked in the main toolbar at the top.



# 3. Stringer ePlan Workflow

The layout of the ePlan command interface is very logical – work from left to right on the Stringer ePlan ribbon to easily create an ePlan file. Once you have linework in the drawing you can immediately commence the enumeration process. The workflow is as follows:

Settings	<ul> <li>Company Settings - set up the company credentials</li> <li>Change Jurisdiction - the State jurisdicition</li> <li>Project Settings - define the project</li> </ul>
Enumerate	<ul> <li>Select CAD objects to enumerate including:</li> <li>Parcels</li> <li>Points</li> <li>Segments</li> <li>Occupation</li> </ul>
Annotate	<ul><li>Set up Parcel linkages for Parcels</li><li>Plan Annotations</li></ul>
Review	<ul> <li>List all the enumerated data to review and edit:</li> <li>Parcels list</li> <li>Monument points list</li> <li>COGO points list</li> <li>Segment list</li> <li>Parcel report</li> </ul>
Export	<ul> <li>Export ePlan - generates an ePlan file for lodgement.</li> <li>Validate ePlan</li> <li>Create PDF</li> </ul>

# 4. Getting started with ePlan

Stringer ePlan enables attribution and enumeration of CAD drawing objects for creating ePlan to lodge online in SPEAR at Land Use Victoria (Land Registry Services).

Stringer ePlan supports small to large scale subdivisions by enumerating CAD files. Stringer ePlan operates in AutoCAD, AutoCAD Civil 3D, AutoCAD Map and BricsCAD and directly enumerates objects in your drawing.

# NOTE: Always keep one CAD file open in your CAD package. Otherwise the exported ePlan file might have incorrect information.

Below is the process for enumerating the drawing.

# 4.1 Company Setting

Settings

Company Settings - set up the company credentials
Change Jurisdiction - the State jurisdicition
Project Settings - define the project

In this section, you can enter and save your company data once for future use.

The Company Settings form allows you to add the name of the surveying firm and the name of the licensed surveyor including the registration number. You can also add the name of draft person in this form and 1234 as a random number.



Click on the Company Settings <sup>Company</sup> icon and the following form will be displayed:

🖌 Stringer ePlan - Company Settings		×
New data		
	O New co	mpany   New Surveyor
Enter new Surveyor Name and Number, separated by a	Jason Coghlan 3265	Add new data
Componedato		
Company data		
Company name	Civil Survey Solutions	V Delete Company
Surveyor name	Jon Rasmussen 1000	✓ Delete Surveyor
		Cancel Save and Exit

1. Click on the item you want to add

#### **New Company**

**New Surveyor** - Enter Surveyor Name and Number separated by a pipeline key (|) with pressing Shift+

2. Click the add new data. It will add the Company name and Surveyor name

NOTE: Make sure that the surveyor's full name match with the registered names at Surveyors Registration Board of Victoria (<u>SRBV</u>).

3. Click 'Save and Exit'.

# 4.2 Project Settings

Project

Click on the Project Settings settings icon and the following form will be displayed:

1 5	tringer ePlan - Project Information						×
	Project						
	Survey Firm						-
	Jurisdiction			Victoria			
	Plan Number						
	Surveyors Reference					Ver.	
	Licensed Surveyor (and registration Number)						-
	Data Entry By:						-
	Purpose of Survey			Select	Section 6(1)	(K)	•
	Head(s) Of Power			Select			-
	Survey Format			Level Land	1		-
	Survey Type			compiled			•
	Admin Areas	Select	<b></b>				-
	Coordinate System				Loca	al	-
	Reference Surveys						-
	Survey Description						
	Date of Survey			2018-09-0	5		
						Save and F	cit
				Ca		Save and EX	at

Complete the fields as shown below:

- Survey Firm: Click on the drop-down list and select your company name that was created in the Company Settings form
- Jurisdiction: Will be set once you click on the Stringer ePlan tool (e.g. VICTORIA).
- Plan Number: Enter plan number including check digit (e.g. PS123456A).
- Surveyor Reference: Manually add the reference required including the Version: (e.g. 123 Ver. 2.0).
- Licensed Surveyor: Select from the drop-down list which was created in the Company Settings form the Surveyor|Number
- · Data Entry By: Select from the drop-down list
- **Purpose of Survey:** Click on the 'Select' button and select what type of survey (e.g. Plan of Subdivision)-If you require more than one, hold Control down and add to your selection.
- Head(s) Of Power: Click on the 'Select' button (e.g. Subdivision Act 1988). If you require more than one, hold Control down and add to your selection.
- Survey Format: Select from the drop-down list (e.g. Level Land)
- Survey Type: Select from the drop-down list (e.g. surveyed)
  - Survey Type refers to whether the plan is based on survey, non-survey or partial survey. ePlan uses slightly different terminology as follows:

- > Surveyed = Survey
- > Computed = Non-survey
- > Compiled = Partial-survey
- Admin Areas: Click on the 'Select' button and tick on the administrative area type (on top of the page) and select the name of area from each list. You can search for area name based on the first character.

NOTE: Do not add the Locality in this step.

A Administrative Selection	11		
🔽 LGA	Locality	Parish	V Township
GREATER BENDIGO CITY		SANDHURST	EAGLEHAWK, AT (SANDHURST)
ALPINE SHIRE	ABBEYARD	ACHERON	ABERFELDY TP
ARARAT RURAL CITY	ABBOTSFORD	ADDINGTON	ACHERON TP
BALLARAT CITY	ABERFELDIE	ADJIE	AILSA TP
BANYULE CITY	ABERFELDY	ADZAR	ALBACUTYA TP
BASS COAST SHIRE	ACHERON	AIRE	ALBERTON TP
BAW BAW SHIRE	ADA.	ALBACUTYA	ALBERTON, AT (ALBERTON
BAYSIDE CITY	ADAMS ESTATE	ALBERTON EAST	ALEXANDRA TP
BENALLA RURAL CITY	ADDINGTON	ALBERTON WEST	ALLANS FLAT TP
BOROONDARA CITY	ADELAIDE LEAD	ALEXANDRA	ALMA TP
BRIMBANK CITY	AGNES	ALLAMBEE	AMHERST
BULOKE SHIRE	AINTREE	ALLAMBEE EAST	AMPHITHEATRE TP
CAMPASPE SHIRE	AIRE VALLEY	AMHERST	ANGLESEA TP
CARDINIA SHIRE	AIREYS INLET		ANNUELLO TP
CASEY CITY	AIRLY		ANTWERP TP
CENTRAL GOLDFIELDS SH	AIRPORT WEST	ANGAHOOK	APOLLO BAY TP
COLAC OTWAY SHIRE	ALBACUTYA	ANGORA	APSLEY TP
CORANGAMITE SHIRE	ALBANVALE	ANNUELLO	ARAPILES TP
DAREBIN CITY	ALBERT PARK	ANNYA	ARARAT TP
EAST GIPPSLAND SHIRE	ALBERTON	ARAPILES	ARCHDALE IP
FALLS CREEK ALPINE RES	ALBERTON WEST		ARNOLD IP
FRANKSTON CITY		ARBUCKLE	ASCOTTP
		Cancel	Save and Exit

- Co-ordinate System: Select a value from drop-down (e.g. MGA94\_Zone54)
- Reference Surveys: NOT Required
- Survey Description: NOT Required
- Date of Survey: Pick the date from the drop-down calendar
- · Click the 'Save and Exit' button to save items from the face sheet

# 4.3 Change Jurisdiction

# 

Click on change Jurisdiction <sup>Change</sup> icon and select from the list below. For a Victorian plan, select 'Victoria'.



### **4.4 Naming Conventions for Parcels**

ePlan uses a standardised element identification system based on the Victorian Standard Parcel Identifier system. Every interest type has a specific identifier format that must be used when creating new interests on a plan as follows:

[Parcel ID] \ [Plan Number]

For example, Lot 1 on plan PS123456 is represented as 1\PS123456.

The table below illustrates the naming convention for parcels in ePlan.

'#' represents a number and '%' represents a numeric or alphabet character.

Parcel Class	Format	Example
Lot	[#] \ [Plan Number]	1\PS123456
	[%] \ [Plan Number]	A\PS123456, AA\PS123456
	[#] [%] \ [Plan Number]	1A\PS123456
	[%] [#] \ [Plan Number]	G101\PS123456
	NOTE – A, E, R and S are not acceptable when % is followed by a number (e.g. A1)	
* Balance Lot	BL [#] \ [Plan Number]	BL1\PS123456
* Consolidated Lot	[Plan Number starting with PC/CP]	PC123456
Common property	CM [#] \ [Plan Number]	CM1\PS123456
Reserve	RES [#] \ [Plan Number]	RES1\PS123456
* Reserve Abuttal (@state="existing")	RESERVE – [#]	RESERVE-1
Road and Road Abuttal		
Road (@state="created")	R [#] \ [Plan Number]	R1\PS123456
* Road Abuttal (@state="existing")	ROAD – [#]	ROAD-1

Parcel Class	Format	Example
Easement (@parcelFormat="Standard" / "2D Building")	EAS [#] \ [Plan Number]	EAS1\PS123456
* Encumbering Easement (@parcelFormat="Geometry")	E [#]	E1
* Appurtenant Easement (@parcelFormat="Geometry")	A [#]	A1
* Encumbering Easement (Road) (@parcelFormat="Geometry")	R [#]	R1
Restriction	RST [#] \ [Plan Number]	RST1\PS123456
Owners Corporation	OC [#] \ [Plan Number]	OC1\PS123456
Stage Lot	S [#] \ [Plan Number]	S1\PS123456
Depth Limitation	DL [#]	DL1
Crown Parcel		
Crown Allotment	[Allotment %] ~ [Section %] \ PP [Parish or Township Code]	31~2\PP5509
	If there is no Crown Section, [Allotment %] \ PP [Parish or Township Code]	31\PP5509
Crown Portion	[Portion %] \ PP [Parish or Township Code]	1\PP4568
Parcels without SPI	NOSPI – [#]	NOSPI-1
Not in Subdivision	NIS – [#]	NIS-1
Administrative Area Parcels – Code is the Land Use Victoria official identifier, as stored in Vicmap Admin		
LGA	LGA – [VMADMIN Code]	LGA-301
Parish	PSH – [VMADMIN Code]	PSH-355
Township	TWN-[VMADMIN Code]	TWN-23
Part Parcels (@parcelType="Part")	[Prefix] [#] – p [#] \ [Plan Number]	1-p1\PS123456
Exception for Part Geometry Easements (@parcelType="Part" & @parcelFormat="Geometry" & @class="Easement")		E1-p2
and Part Existing Road (@parcelType="Part" & @state="existing" & @class="Road")		Road-1-p2

NOTE: Parcel identifier can have the check digit following the plan number e.g. "1\PS123456X". NOTE: If there is no plan number at the time of ePlan submission for Section 23, 24A, 32 or 32B applications of the Subdivision Act 1988, the term 'LV-To-Supply' must be used instead. This value will be replaced in ePlan with a Dealing Number from the Victorian Online Title System (VOTS) after the plan is registered at Land Use Victoria.

NOTE: If there is no SPI for a parcel then name it as 'NOSPI – [#]' e.g. NOSPI-1. These parcels must have a description.

NOTE: Special Parcel Usages – Special usages of Parcel element, doesn't represent an actual parcel type.

# 5. Enumerate



# **5.1 Enumerate Parcels**

After completing the first step, you can now enumerate objects in your drawing.

To create a parcel in Stringer ePlan use the Enumerate Parcel Tool. This tool is used for open and closed polylines to create parcels.

NOTE: Lines cannot be enumerated. Lines need to be converted into polylines. Use the command 'PE' to convert a line to a polyline. Closed polylines can also be created using BPOLY.



- Click on the Enumerate Parcels
- · Click on a polyline
- · The Enumerate Parcels Window will pop up

There is some information in the Enumerate Parcels Window as shown below:

- Assigned: The Assigned Bearing and Distance is assigned by the user, which can be different from the calculated ones. For example, you may need to adopt a dimension based on the title which might be different from the calculated one. The assigned values will overwrite the calculated ones and will be exported to ePlan LandXML.
- Area: is the actual area from the linework
- REG Area: This is the area you would like to assign to this parcel and export it in ePlan
- · Action: Select a state such as created, existing, extinguished for the parcel from the drop-down list
- **Parcel Intent**: This drop-down is used to define various parcel types such as Lot, Easement, Common Property
- Parcel Type: This drop-down is used to define Parcel type. It can be Single, Part, Multipart or Administrative
- **Parcel Format:** This drop-down is used to define Parcel Format. This can be Standard, Geometry for Easements, or 2D Building for Lots including building boundaries.
- · Add Links: This is used for defining Restrictions (See section 6 for defining Restrictions)
- **Description:** This filed adds a description to a Parcel (for example, Road name or description for a Restriction, or a TP reference for extinguished Crown Allotments)

NOTE: Once you have enumerated the parcel, click 'Save and Exit'. This will add a Centroid Point to the drawing and add the Parcel Number and Area text to the parcel you just enumerated. If you need to edit the parcel, click on the Parcel Number and name text and the window will pop up. For all parcel types look at the naming convention in <u>section 4.4</u> to enter a correct name in the forms.

5.1.1 Enumerate a Lot / Stage Lot

Enter the name of the Parcel in the box top left: (e.g. 1:PS716856).

- Select 'extinguished' for Action in the dropdown for cancelled Parcels. **NOTE: This is the Lot identifier** for the last plan reference for Extinguished Lots. Select 'created', 'existing', etc. for other types of parcels.
- Parcel Intent: Lot / Stage Lot
- **Parcel Type**: Single, Part or 2D Building (where at least one boundary line is a building boundary in drawing)
- Parcel format: (e.g. Standard). NOTE: Lots including building boundary must have '2D Building' for Parcel Format.
- For Extinguished Parcels you need to provide Volume and Folio (Vol/Fol) and select the Title Type. Type the Vol/Fol in at the top (e.g. 10790/065) and select Freehold, etc. as Title Type. In addition, you need to add address to the extinguished and affected Parcels in a Plan of Subdivision as well as existing Parcels in a Boundary Plan (See <u>Section 5.1.9</u>).

Stringer ePlan - P	arcel										
1:PS716856	716856		Volun	ne/Foliox	10790/065		<ul> <li>Title Type</li> </ul>	Freehold	•	Location	Address_001
Rever	se Direction of	f Parcel					-			<ad< th=""><th>d Links&gt;</th></ad<>	d Links>
From	То	Calc Brg	Assigned Brg	Brg	Гуре	Calc Dist	Assigned Dist	Dist Type	Radius	Purpose	Arc.L
12	8	281.0000	281.0000	Meas	ured	40.750	40.750	Measured	0	normal	0
8	9	9.4445	9.4445	Meas	ured	49.616	49.616	Measured	0	normal	0
9	14	100.0320	100.0320	Meas	ured	40.850	40.850	Measured	0	normal	0
14	12	189.5212	189.5212	Meas	ured	50.287	50.287	Measured	0	normal	0
From 1 Actual Assigned	2 Bearing 281.0000 281.0000	To <b>8</b> Distai 40.75 40.75	nce 10 50				Centroid	19	Parcel Owner	Irregular E	Upload 🛛
Туре	Measured	✓ Meas	sured -						Action	extinguished	i •
	Apply Ro	undings	Reset			Segment Purpos	se normal	-	Parcel Inten	Lot	
REG Area		2037.8 Area : 2	037.774			Segment De	sc <none></none>	•	Parcel Type	Single	
Misclose : 50.37	21 0.000 1:633	258.3							Parcel Forma	Standard	
dE 0.000 dN 0.	.000								Parcel Use	<none></none>	
Description					-						

NOTE: To enumerate many lots in multi-lot subdivisions, click on drawing a line through the parcels (enter 'F', and draw a line to select the parcels). Press enter and fill out the required attributes, then Save and Exit. It automatically pops up a window for all selected parcels for checking and enumerating them. From Stringer version 19.01, parcel name is filled out automatically and for the subsequent parcels, the parcel number will be incremented by 1 and assigned to parcel name. If you change the values, it keeps them for the next parcels.

TR

#### 5.1.2 Enumerate an Easement

Creating an Easement is like creating a Lot. However, you need to assign correct attributes as shown below:

• Parcel Name: E1, A1, R1 (correct naming convention for Easements according to Section 4.4)

#### NOTE: Parcel name for a part Easement is E1-p1. NOTE: Dash character like E-1 is not accepted for naming Easements.

- Action: Created, etc.
- · Parcel Intent: Easement
- Parcel Type: Single or Part (for defining the Easement parts as part of multipart Easements)
- Parcel Format: Geometry

### Click the 'Save and Exit' button.

🗲 Stringer ePlan - P	arcel											×
E1			Vo	lume/Foliox			*	Title Type	<none></none>	•	<add< td=""><td>Address&gt;</td></add<>	Address>
Rever	se Direction o	f Parcel					Ŧ				<ad< td=""><td>d Links&gt;</td></ad<>	d Links>
From	То	Calc Br	rg Assigned Brg	Brg	Туре	Calc Dist	Assig	gned Dist	Dist Type	Radius	Purpose	Arc.L
17	12	189.521	2 189.5212	Meas	ured	3.000		3.000	Measured	0	normal	0
12	8	281.000	281.0000	Meas	ured	40.750		40.750	Measured	0	normal	0
8	16	9.444	9.4445	Meas	ured	3.000		3.000	Measured	0	normal	0
16	17	100.595	59 100.5959	Meas	ured	40.757		40.757	Measured	0	normal	0
					II	1						•
From 1 Actual	7 Bearing 189.5212	To <b>12</b> D 3	)istance .000				Cer	ntroid	18	•	🔲 Irregular E	Upload 🔽 dy
Assigned	189.5212		3.000							Parcel Owner	<none></none>	•
Туре	Measured	I	Measured -							Action	created	•
	Apply Ro	oundings	Reset			Segment Purpos	ie no	rmal	-	Parcel Intent	Easement	
REG Area		122.2 Are	a : 122.233			Segment Des	sc <n< td=""><td>one≻</td><td>•</td><td>Parcel Type</td><td>Single</td><td>•</td></n<>	one≻	•	Parcel Type	Single	•
Misclose : 93.53	38 0.001 1:173	3650.1								Parcel Format	Geometry	•
dE 0.001 dN 0.	000									Parcel Use	<none></none>	•
Description												
						Select Parcel		Save to File	Sa	ve Save	and Exit	Cancel

Go to Section 6.1 to add required attributes to the Easement.

#### 5.1.3 Enumerate Road Abuttals

The Road is enumerated as a Parcel from a polyline drawn where the road is. **NOTE: This is an open polyline which is converted to a parcel.** 

The ROAD is enumerated as below:

- Name: For existing Road you need to use ROAD-# (e.g. ROAD-2)
- Description: This is the name of the road (e.g. BEAUFORT ROAD)
- REG Area: 0
- Action: Existing
- · Parcel Intent: Road
- Parcel Type: Single or Part (for defining the Road parts as part of multipart Roads)
- Parcel Format: Standard

Once you have completed all details click on the 'Save and Exit' button.

NOTE: Once you have added the centroid to the Road Parcel, you can move that centroid point to a preferred position for showing the Road name in the PDF Plan.

🗲 Stringer ePlan - Pa	arcel									×
ROAD-2			Volur	me/Foliox		<ul> <li>Title Typ</li> </ul>	e <none></none>	-	<add< td=""><td>Address&gt;</td></add<>	Address>
Revers	e Direction of	f Parcel				Ŧ			<ac< th=""><th>ld Links&gt;</th></ac<>	ld Links>
From	То	Calc Brg	Assigned Brg	Brg Type	Calc Dist	Assigned Dist	Dist Type	Radius	Purpose	Arc.L
9	22	100.0320	100.0320	Measured	45.850	45.850	Measured	0	normal	0
•					III					4
From 9		To <b>22</b>				Centroid	23	•		Upload 🔽
Actual	Bearing 100.0320	Dista 45.85	nce 50						🔲 Irregular B	Bdy
Assigned	100.0320	45.8	50					Parcel Owner	<none></none>	-
Туре	Measured	- Meas	sured -					Action	existing	•
	Apply Ro	undings	Reset		Segment Purpos	enormal	-	Parcel Inten	Road	•
REG Area		0.0 Area:0	0.000		Segment Des	<none></none>	-	Parcel Type	Single	•
Misclose : 100.03	20 45.850 1:1 3 006	1.0						Parcel Forma	Standard	-
								Parcel Use	<none></none>	•
Description										
					Select Parcel	Save to File	Sa	ive Save	and Exit	Cancel

### 5.1.4 Enumerate a Created Road

The created Road is enumerated as a parcel from a closed polyline drawn where the road is.

The ROAD is enumerated as below:

- Name: For created Road you need to use R [#] \ [Plan Number] (e.g. R2\PS123456)
- Description: This is the name of the road (e.g. BEAUFORT ROAD)
- REG Area: (e.g. 200)
- · Action: Created
- · Parcel Intent: Road
- · Parcel Type: Single or Part (for defining the Road parts as part of multipart Roads)
- **Parcel Format:** Standard or 2D Building (where at least one boundary line is a building boundary in drawing)
- Parcel Owner: A Parcel Owner is required (e.g. City of Melbourne)

Once you have completed all details click on the 'Save and Exit' button.

NOTE: Multipart created Roads can be also created in ePlan. In this case, each part is created using a name based on the parcel naming convention in <u>Section 4.4</u> (e.g. R1-p1\PS123456). The multipart parcel itself (R1\PS123456) should be created in Parcel Linkages window according to <u>Section 6.2</u>.

#### 5.1.5 Enumerate a Reserve

The Reserve is enumerated as a parcel from an open or closed polyline drawn where the reserve is.

The Reserve is enumerated as below:

- Name: For Reserve you need to use RES [#] \ [Plan Number] (e.g. RES2\PS123456).
- Description: Name of the reserve (e.g. BEAUFORT)
- REG Area: 200
- Action: created
- · Parcel Intent: Reserve

- Parcel Type: Single or Part (for defining the Reserve parts as part of multipart Reserves)
- **Parcel Format:** Standard or 2D Building (where at least one boundary line is a building boundary in drawing)
- Parcel Owner: A Parcel Owner is required

NOTE: Existing closed Reserve requires an address.

	/6			Volume/Folio						<4>	Add Address>
Reve	erse Direction	of Parcel		Title Type		•				<	<add links=""></add>
From	То	Calc Brg	Assigned Brg	Brg Type	Calc Dist	Assigned Dist	Dist Type	Radius	Purpose	Arc.L	Bdy.Desc
372	385	278.1851	278.1851	Measured	6.500	6.500	Measured	0.000	normal	0	<none></none>
385	374	8.1840	8.1840	Measured	2.000	2.000	Measured	0.000	normal	0	<none></none>
374	373	98.1851	98.1851	Measured	6.500	6.500	Measured	0.000	normal	0	<none></none>
373	372	188.1900	188.1900	Measured	2.000	2.000	Measured	0.000	normal	0	<none></none>
rom	372 Booting	To 38	5				Centroid	386	•	Create	Uploa
ctual ssigned	278.1851	Di: 6.5	6 500		Irregul	ar Bdy	Reset			REG Area	Area : 13
ctual ssigned	278.1851 278.1851	Di: 6.5	6.500		Irregul	ar Bdy Ily Roundings	Reset			REG Area	Area : 13
ctual ssigned vpe	278.1851 278.1851 Measured	Di: 6.5	6.500	-	Irregul	ar Bdy Ily Roundings Segment Purpose	Reset		Parcel	REG Area Action created	Area : 13
ctual ssigned ype	278.1851 278.1851 Measured	Dit 6.5 Parcel Own	er UNITED ENE	▼ RGY DISTRIBI ▼	Irregul	ar Bdy Iy Roundings Segment Purpose Segment Desc	Reset normal <none></none>	•	Parcel Parce	REG Area Action created Intent Reserve I Type Single	Area: 13
ctual ssigned /pe	278.1851 278.1851 Measured	Dit 6.5 Parcel Own	er UNITED ENE	▼ RGY DISTRIBI ▼	Irregul	ar Bdy Ily Roundings Segment Purpose Segment Desc	Reset		Parcel Parce Parcel F	REG Area Action Created Intent Reserve I Type Single Format Standard	Area: 13 13.
ctual ssigned ype isclose : 278.	278.1851 278.1851 Measured	Dit 6.5 Parcel Own 87662.5	er UNITED ENE	▼ RGY DISTRIBI ▼	Irregul	ar Bdy Ily Roundings Segment Purpose Segment Desc	Reset	•	Parcel Parce Parcel F Parcel F	REG Area Action created Intent Reserve I Type Single Format Standard el Use <none></none>	Area : 13 13.
ctual ssigned rpe isclose : 278. E 0.000 dN	278.1851 278.1851 Measured .1850 0.000 1: 0.000	Di: 6.5 Parcel Own 87662.5	er UNITED ENE	▼ RGY DISTRIBI ▼	Irregul	ar Bdy Ily Roundings Segment Purpose Segment Desc	Reset	•	Parcel Parce Parcel F Parcel F	REG Area Action created Intent Reserve I Type Single Format Standard el Use <none></none>	Area : 13 13.

#### 5.1.6 Enumerate Crown Parcels

Crown Parcels are captured using the Enumerate Parcel form. Name of the Crown Parcel must be correctly defined in the Parcel name according to the <u>Naming Convention for Parcels</u>.

1:PP1234				Volume/Folio						<	Add Address>
Reverse	Direction	of Parcel		Title Type		•					<add links=""></add>
From	То	Calc Brg	Assigned Brg	Brg Type	Calc Dist	Assigned Dist	Dist Type	Radius	Purpose	Arc.L	Bdy.Desc
1	2	91.5659	91.5659	Measured	176.645	176.645	Measured	0.000	normal	0	<none></none>
2	3	196.2444	196.2444	Measured	107.684	107.684	Measured	0.000	normal	0	<none></none>
3	4	270.0000	270.0000	Measured	222.369	222.369	Measured	0.000	normal	0	<none></none>
4	1	34.5358	34.5358	Measured	133.275	133.275	Measured	0.000	normal	0	<none></none>
From <b>1</b> Actual	Bearing 91.5659	To 2 [	2 Distance 176.645		Irregul	ar Bdy	Centroid	5		Create     REG Area	Upload Area : 21362. 21362.7
From <b>1</b> Actual Assigned	Bearing 91.5659 91.5659	To <b>2</b> [	2 Distance 176.645 176.645		Irregul	ar Bdy Ily Roundings	Centroid Reset	5		Create     REG Area     Action existing	Upload Area : 21362.7 21362.7
From <b>1</b> Actual Assigned Type	Bearing 91.5659 91.5659 Measured	To 2 [	2 Distance 176.645 176.645 • Measured		Irregul App S	ar Bdy Ily Roundings Segment Purpose	Centroid Reset	5	Parce	Create REG Area Action existing el Intent Crown A	Upload Area : 21362.7 21362.7 Ilotment
From <b>1</b> Actual Assigned Fype	Bearing 91.5659 91.5659 Measured	To 2 E 1 Parcel Ow	2 Distance 176.645 176.645 • Measured vner <none></none>	•	Irregul	ar Bdy Ily Roundings Segment Purpose Segment Desc	Centroid Reset normal <none></none>	5 •	Parce Parce	Create     REG Area     Action existing el Intent Crown A sel Type Single	Upload Area : 21362.7 21362.7 Jlotment
From <b>1</b> Actual Assigned Type	Bearing 91.5659 91.5659 Measured	To 2 [ 1 Parcel Ow	2 Distance 176.645 176.645 • Measured vner <none></none>	•	Irregul	ar Bdy Ily Roundings Segment Purpose Segment Desc	Centroid Reset normal <none></none>	5 •	Parce Parce	Create     REG Area     Action existing el Intent Crown A     lel Type Single Format Standar	Upload Area : 21362. 21362.7 Illotment
From 1 Actual Assigned Fype Vilsclose : 316.585 JE 0.000 dN 0.00	Bearing 91.5659 91.5659 Measured 01 0.000 1:1	To 2 1 Parcel Ow 1574592.4	2 Distance 776.645 T76.645 Measured Inner <none></none>	• •	irregul	ar Bdy Iy Roundings Segment Purpose Segment Desc	Centroid Reset normal <none></none>	5 •	Parce Parce Parcel Parcel	Create     REG Area     Action existing el Intent CrownA el Type Single Format Standar cel Use <non></non>	Uploac Area : 21362. 21362. Jorment d

NOTE: If the Crown parcel is an extinguished (cancelled) parcel, then the name of the Crown parcel would be placed in PDF as Last Plan Reference. To replace this value with the correct plan reference, enter the expected plan reference in 'Description' to be displayed as Last Plan Reference (e.g. 1\TP123456) in PDF.

### 5.1.7 Enumerate a Common Property

Common Property is created as a parcel using the Enumerate Parcel form.

1:PS555444				Volume/Folio						<	Add Address>	
Reve	rse Direction	of Parcel		Title Type		•					<add links=""></add>	
From	То	Calc Brg	Assigned Brg	Brg Type	Calc Dist	Assigned Dist	Dist Type	Radius	Purpose	Arc.L	Bdy.Desc	Ē
82	89	220.2831	220.2831	Measured	12.949	12.949	Measured	0.000	normal	0	<none></none>	
89	88	310.2831	310.2831	Measured	3.062	3.062	Measured	0.000	normal	0	<none></none>	
88	95	39.4355	39.4355	Measured	3.214	3.214	Measured	0.000	normal	0	Exterior Face	
95	94	309.4355	309.4355	Measured	6.262	6.262	Measured	0.000	normal	0	Exterior Face	
94	93	39.4355	39.4355	Measured	0.500	0.500	Measured	0.000	normal	0	Exterior Face	
93	105	309.4355	309.4355	Measured	12.765	12.765	Measured	0.000	normal	0	Exterior Face	
105	104	219.4355	219.4355	Measured	1.000	1.000	Measured	0.000	normal	0	Exterior Face	
104	108	309.4355	309.4355	Measured	6.263	6.263	Measured	0.000	normal	0	Exterior Face	
108	107	310.3857	310.3857	Measured	3.330	3.330	Measured	0.000	normal	0	<none></none>	_
om	82	To 8	9				Centroid	110	•	Create	Uploa	ld
ctual	Bearing 220.2831	D 1	)istance 2.949		🔲 Irregula	ar Bdy				REG Area	Area : 3 13	31:
signed	220.2831		12.949		App	ly Roundings	Reset		Ad	tion created		
/pe	Measured		✓ Measured	•	S	Segment Purpose	normal	•	Parcel Int	tent Comm	on Property	
		Parcel Ow	ner <none></none>	•		Segment Desc	<none></none>	-	Parcel T	ype Single		
isclose : 123 3	850 0.001 1.	06630 6							Parcel For	mat 2D Buil	ding	
E 0.001 dN 0	.000	100033.0							Parcel U	Jse <none></none>		
escription	Smith Ro	bad										_



#### 5.1.8 Enumerate a Restriction

There are two main types of Restrictions:

- 1. Spatial Restrictions
- 2. Non-Spatial Restrictions

To create a spatial Restriction, you need to create a parcel for the affected area. See <u>Section 4.4</u> for the naming convention for a created Restriction. Spatial restrictions should be fixed to lot boundaries using a connection such as a Topo line or an offset (See Section 5.4). For Restriction enumeration see <u>Section 6.3</u>.

Non-spatial restrictions can be defined without any geometry. See Section 6.3.

1:PS55544	4			Volume/Folio						<	Add Address>
Reve	rse Direction	of Parcel		Title Type		•					<add links=""></add>
From	То	Calc Brg	Assigned Brg	Brg Type	Calc Dist	Assigned Dist	Dist Type	Radius	Purpose	Arc.L	Bdy.Desc
82	89	220.2831	220.2831	Measured	12.949	12.949	Measured	0.000	normal	0	<none></none>
89	88	310.2831	310.2831	Measured	3.062	3.062	Measured	0.000	normal	0	<none></none>
88	95	39.4355	39.4355	Measured	3.214	3.214	Measured	0.000	normal	0	Exterior Face
95	94	309.4355	309.4355	Measured	6.262	6.262	Measured	0.000	normal	0	Exterior Face
94	93	39.4355	39.4355	Measured	0.500	0.500	Measured	0.000	normal	0	Exterior Face
93	105	309.4355	309.4355	Measured	12.765	12.765	Measured	0.000	normal	0	Exterior Face
105	104	219.4355	219.4355	Measured	1.000	1.000	Measured	0.000	normal	0	Exterior Face
104	108	309.4355	309.4355	Measured	6.263	6.263	Measured	0.000	normal	0	Exterior Face
108	107	310.3857	310.3857	Measured	3.330	3.330	Measured	0.000	normal	0	<none></none>
m	82	То 8	9				Centroid	110	•	Create	Upload
	Bearing		)istance								Area : 313.6
tual	220.2831	1	2.949		Irregula	ar Bdy				REG Area	31
signed	220.2831		12.949		App	ly Roundings	Reset		۵	ction created	
ре	Measured		✓ Measured	•	9	Segment Purpose	normal	•	Parcel I	ntent Restrict	ion
		Parcel Ow	ner <none></none>	•		Segment Desc	<none></none>	•	Parcel	Type Single	
adaaa : 100 :	2650 0 001 1	106620.6							Parcel Fo	ormat Standar	d
0.001 dN	0.000 0.001 1.	100039.0							Parce	Use <pre></pre>	
	This is a		يت فقي الم								

### 5.1.9 Add an Address

Click on 'Add Address' and include the information.

🖌 Location Address						E ×
LocationAddress_001	Complex Name Admir	nistrative Area 🛛 🗹 Road Name				
	Complex Name					
	Description			Address Type	Primary	$\sim$
	Priority		1 4	Flat Type	<none></none>	$\sim$
				Flat Number		
	Administrative Area					
	Admin Area Type	Locality	$\sim$	Floor Level Type	<none></none>	$\sim$
	Admin Area Name	ocalitvISKIPTONI102757	~	Floor Level Number		
	Post Code		3361			
				Number First		41
	Road Name			Number Suffix First		
	Road Name		BLAKE	Number Last		
	Road Name Type	Street	~	Number Suffix Last		
	Road Name Suffix	<none></none>	~			
	Road Type	Private	~			
		Tivate	-			
Delete Add	Parcel Reference	<none></none>	~		Quit Save	Save and Exit

- · Click on the 'Add' button, bottom left
- · Tick on 'Administrative Area & Road Name' at the top
- · Complete the Administrative Area fields
- Admin Area Type: Select 'Locality' from the drop-down list NOTE: The only accepted value for this item is 'Locality'
- · Admin Area Name: Select a value from drop-down list (e.g. Skipton)
- Post Code: e.g. 3361

Complete the Road Name

- Road Name: e.g. Blake
- Road Name Type: Select a value from the drop-down list (e.g. Street)
- Road Name Suffix: Select a value from the drop-down list (e.g. None)
- Road Type: Select a value from the drop-down list (e.g. Public). NOTE: For private roads, select 'private'.
- Parcel Reference: None
- Address Type: Select a value from the drop-down list (e.g. Primary)
- Number First: e.g. 41
- Number Last: e.g. 45

Click the 'Save and Exit' button to add the address to this parcel.

NOTE: If you DON'T want the address to be added to the parcel then click 'QUIT'. If you have already given a parcel an address and no longer need it, click on the address in the parcel and then click 'QUIT'. The address will be removed from that parcel. You don't need to add an address for created Lots, unless required.

### 5.1.10 Donut Parcels

ePlan supports all types of donut parcels including nested donuts (donuts within donuts). Donut parcels consist of polygons with internal holes. These are captured in Stringer ePlan as a single continuous simple polyline beginning and ending on the outer ring of the donut. To connect the inner rings of the donut, double lines need to be drawn (see diagram below). One line, traces into the inner rings and the other line traces out. The connecting lines must be the normal boundary. It should be noted that the direction of inner rings reverses with each level of internal ring. If the outer ring is clockwise, then the first level internal ring will be

anticlockwise, then the second level internal ring will be clockwise, and so on. Below are examples showing different types of donut polygons.



NOTE: The red arrows illustrate the direction of the rings with the order of line segments selection for polygon creation.



Multiple connection lines





Donut within donut



Multiple connections from the same point

Multiple connections from the same point can be done in any order provided all the double lines are followed before the single line.



### **5.2 Enumerate Segments**

In ePlan, traverse lines, radiations, topo lines and building boundaries need to be enumerated by using the Enumerate Segments function.



- Click on the Enumerate Segment <sup>Enumerate</sup> icon and select the line you want to enumerate.
- · Click on the traverse, topo, radiation or building boundary lines
- Purpose: Select what is required (e.g. traverse)
- · Upload: Make sure it is ticked on if you want it to be added to the XML
- Click 'Save & Exit'

🥖 Stringer ePlan -	Segment			×
From 126	to 85			
	Assigned	Computed		
Bearing	95.4307	95.4307		Measured -
Distance	22.261	22.261		Measured -
	Apply Roundings			
Instrument	Total Station	•	Purpose tra	averse 🔻
	Coord	inate Ref		
	Description	(optional)		
	Physical Boundary De	escription <pre></pre>		•
				Upload 🔽
Save : Se	lect New Segment	Save	Save and Exit	Cancel and Exit

To define building boundaries (median, interior face, exterior face, or other) enumerate them by assigning a Physical Boundary Description. See below example for selecting the correct value:

🖌 Stringer ePlan -	Segment					×
From 29 to	o 27					
	Assigned	Compute	ed .			
Bearing	88.4440	88.4440			Measured	-
Distance	53.164	53.164			Measured	-
	Apply Roundings					
Instrument	Theodolite and EDM	•	I	Purpose	normal	-
	Coord	inate Ref				
	Description	(optional)				
	Physical Boundary Dr	ascription	<none></none>	_		_
			<none> Exterior Face</none>	_		
		I	Interior Face			
Save : Se	lect New Segment		Median Other			

NOTE: To assign different values to the computed bearings and distances, enter the required values in the Assigned Textbox. The visualiser will show the values entered to the text boxes. In addition, if you need to show the adopted dimensions underlined in PDF, change the Measured value in the drop-down to Adopt Dimension. To Enumerate an Arc:

- Click on the Enumerate Segment <sup>Enumerate</sup> icon and select the arc you want to enumerate.
- · Click on the topo or building boundary arcs
- Purpose: Select what is required (e.g. topo)
- Upload: Make sure it is ticked on if you want it to be added to the XML
- · Click 'Save & Exit'

### NOTE: You can assign different values to Bearing, Chord (Distance), Radius and Arc Length.

🇲 Stringer ePlan	- Segment	—	
From 110 t	o 111		
	Assigned Computed		
Bearing	114.2847 114.2847 Measured	~	
Distance	8.725 8.725 Measured	~	
Radius	19.0117174 19.01172		
Arc Length	110.6504 110.65044		
	Apply Roundings		
Instrument	Theodolite and EDM V	Purpose normal	~
	Coordinate Ref		
	Description (optional)		
	Physical Boundary Description <pre></pre>		~
		Uplo	bad 🗸
	Save / Next Segment	Seament	

### **5.3 Enumerate Points**

#### **5.3.1 Boundary Points**

Once parcels are enumerated, points are automatically added to their corners. Once added to the parcel, they have a default setting on Parcel Points as following:

- Mark Name: Next available
- Survey Point Type: Boundary
- State: Proposed

int Number 8	E 708007.162	N 5826573.690	
ark Name	CGPNT-8		Identification Number (oID)
scription		Horizontal Monument	Vertical Monument
Survey Point Type	boundary ~	Horizontal Control	Vertical Control
State	proposed ~	Datum	Datum
		Order	V Order V
		Fix	V Fix
Plan Monument		Fix	Fix Height
Plan Monument Monument Type		Fix	Height
Plan Monument Monument Type State	∼ New ∼	Fix	Fix Height
Plan Monument Monument Type State Condition		Fix	Fix Height Cur.Date 2018-05-24
Plan Monument Monument Type State Condition	New ~ Abandoned ~	Fix	Cur.Date 2016-05-24

### **5.3.2 Centroid Points**

The centroid point and centre of the arcs are also automatically added to the drawing and their default values are:

- Mark Name: Next available
- Survey Point Type: Sideshot
- State: Proposed

Point Number 18	E 708027.418	N 5826571.280	
Jark Name	CGPNT-18		Identification Number (oID)
Description		Horizontal Monument	Vertical Monument
Survey Point Type	sideshot 🗸	Horizontal Control	Vertical Control
State	proposed ~	Datum	
		Order	✓ Order
		Fix	<ul> <li>Fix</li> </ul>
Plan Monument			Height
] Plan Monument			Height
Plan Monument Monument Type	v		Height
Plan Monument Monument Type State	v New v		Height
Plan Monument Monument Type State Condition	New     V       Abandoned     V		Cur.Date 2016-05-24
Plan Monument Monument Type State Condition	New ~ Abandoned ~		Cur Date 2016-05-24
Plan Monument Monument Type State Condition	New ~ Abandoned ~		Cur Date 2016-05-24

Road Abuttals also add points:

- Mark Name: Next available
- Survey Point Type: Sideshot
- State: Proposed

🖌 Stringer ePlan - Monument			
Point Number 18	E 708027.418	N 5826571.280	
Mark Name	CGPNT-18		Identification Number (oID)
Description		Horizontal Monument	Vertical Monument
Survey Point Type	sideshot ~	Horizontal Control	Vertical Control
State	proposed $\vee$	Datum	
1		Order	✓ Order
		Fix	✓ Fix ✓
Plan Monument			Height
Monument Type	~		
State	New ~		Cur.Date 2016-05-24
Condition	Abandoned $\vee$		Reference Plan
,			
Upload		Zoom To	Save Save and Exit Cancel

### 5.3.3 Control Marks

In ePlan, pursuant to the Surveying Regulations 2015, there must be at least three PMs or PCMs connected to the survey for up to and including 10 Parcels. If there are more than 10 Parcels, further PMs or PCMs must be placed within the subdivision so that the distance between these marks is not greater than 100 metres.

To enumerate Control Marks, complete the following attributes:

- · Mark Name: Next available (Can't be the same number and must be unique)
- Description: e.g. GPSNET SKIPTON
- Survey Point Type: Control
- State: e.g. Existing

Tick the Plan Monument box

- Monument Type: e.g. Plaque
- State: e.g. Existing
- · Condition: e.g. OK

Tick the Horizontal Monument box

- Datum: e.g. MGA94\_Zone54
- Order: e.g. 3
- Fix: e.g. Adjustment
- Identification Number (oID): Nine figure number e.g. 348901330
- Current Date: e.g. 2016-05-20

NOTE: In ePlan, distances are based on the ground observation and scale factor is not applied. When including the Control Marks in your drawing, consider one of those as a base point with True MGA coordinates and use bearing and distance to connect all your marks together. If you have GNSS control points in your drawing, you need to convert the MGA coordinates into local coordinates and connect the control marks by bearings and ground distances.

💅 Stringer ePlan - Monument		
Point Number 1	E 708056.599	N 5826529.335
Mark Name	CGPNT-1	Identification Number (oID) 348901330
Description	GPSNET SKIPTON	Horizontal Monument
Survey Point Type	control ~	Horizontal Control Vertical Control
State	existing ~	Datum MGA94_Zone54 v Datum
<u> </u>		Order V Order V
		Fix Adjustment V Fix
🗹 Plan Monument		Height
Monument Type	Plaque ~	
State	Existing ~	Cur Date 2016-05-20
Condition	0К ~	Reference Plan
1		
Upload		Zoom To Save Save and Exit Cancel

#### 5.3.4 Reference Marks

Reference marks are enumerated as Reference points in Stringer ePlan. To define them as monuments, you need to tick 'Plan Monument' and assign attributes as Monument Type, State and Condition.

### 5.3.5 Traverse Points

Traverse points are automatically created when you enumerate a segment as a traverse line. However, to create a traverse point, assign 'traverse' for the Survey Point Type and 'existing' for State. There is no need to assign other attributes to traverse points.

### **5.4 Enumerate Occupation**

The Enumerate Occupation function in Stringer ePlan adds different occupation types (Plan Features) to the diagram. The examples of plan and survey documents that require ePlan Occupation are Plans of Subdivision (containing a building return), survey-based Transfer of Land Act applications, Re-establishment surveys and Abstract of Field Records.

The following Occupation types have been considered in the Victorian ePlan:

- · Building Return (hatched walls on Plan of Subdivision)
- Masonry Wall (to cover brick walls, buildings, etc.)
- Timber Wall
- Fence
- · Offset (to show an offset for restriction diagrams on Plan of Subdivision)
- · Chainage
- Kerb
- · Gate
- Centreline
- No symbol (e.g. Not Fenced, Not Defined, etc.)
- Railway
- Rockwall
- Hedge
- Other (e.g. verandah, roller door, etc.)

To create an Occupation, you need to draw polylines and enumerate them as Occupation.

🗲 Occupation	<b>×</b>
Type of Plan Feature	BRT
Description of Plan Feature	
	Add FieldNote Reference
Upload 🔽	Save & Exit Cancel and Exit

NOTE: Adding field note reference is optional. However, for Offset you need to add a description to each Offset to be shown on the plan.

🗲 Occupation	<b></b>
Type of Plan Feature	OFF •
Description of Plan Feature	0.30
	Add FieldNote Reference
Upload 🔽	Save & Exit Cancel and Exit

To enumerate a chainage, pick the polyline and add a description for the chainage. The length of the chainage is calculated by the software.

Se	elect Polyline for Occupation :						
	Occupation						
	Type of Plan Feature	CHAIN -					
	Description of Plan Feature	Road Width					
		Add FieldNote Reference					
	Upload 🔽	Save & Exit Cancel and Exit					

# 6. Parcel Linkages

# Annotate

•Set up Parcel linkages for Parcels •ePlan Annotations

The Parcel Linkages tool is used for defining non-spatial parcels. For example, an Easement, Restriction, or Owners Corporation, can be defined using this tool. Moreover, this tool should be used for creating multipart parcels and assigning geometry parts to them.



Click the Linkages icon and complete the required fields.

### **6.1 Easements**

Easements in ePlan are captured using a slightly different method to paper plans. In ePlan, a polygon (Geometry Easement (e.g. E1)) is created in the diagram for each easement area, the polygon is then assigned to the easement interest(s) (e.g. EAS1).

If the geometry easement comes in parts, then the multipart geometry parcel needs to be created in Parcel Linkages first and then it should be assigned to the easement interest (e.g. EAS1). If there are multiple interests over the same easement area, the polygon is not duplicated and will be simply assigned to all relevant interests.

Complete the following three steps to create an easement:

1. An individual polygon should be drawn on the diagram to include the geometry of each Easement, as easements are currently shown on PDF Plans (see figure below).



NOTE: You do not need to draw the overlapping easement polygons. The overlapping easements will be identified and visualised automatically by the ePlan visualiser. However, if the automatic naming of the overlapping easements does not suit you, alternatively create a geometry easement and enumerate it for the overlapping area(s) with your desired name.

On the diagram, the easements should have a name of 'E#' (for encumbering Easement), 'A#' (for appurtenant Easement) or 'R#' (for encumbering Easement (road)). Part Easements should have a description of 'E#-p#', 'A#-p#', or R#-p#. No origin should be included within the name of easements drawn on the diagram.

# NOTE: For any Encumbering Easement (Road), there must be one created Road in the diagram with the same geometry and name ('R#').

2. For each unique combination of purpose/origin/beneficiary, a Standard/2D Building Easement should be created within the **Parcel Linkages Tool**. The Standard/2D Building Easement should include the

reference(s) to the geometry segment(s) created in step 1 and some information about that Easement (e.g. purpose, origin, beneficiary).

- 3. If you need to have an Easement Width, add an Annotation (Easement Width) in <u>ePlan Annotations</u> and connect it back to the Geometry Easement (E#).
- If you need to replace the Purpose or Origin of easement with the user-defined text in front sheet, add an annotation (Easement Purpose or Easement Origin) in <u>ePlan Annotations</u> and connect it back to the Non-spatial Easement (EAS#).

For an Easement, the following attributes are required in the Parcel Linkages to connect the geometry Easement to the required attributes:

- Name: e.g. EAS1\PS123456
- · Action: e.g. created
- · Parcel Intent: Easement
- Parcel Type: e.g. Single
- Parcel Owner: e.g. CORANGAMITE SHIRE COUNCIL
- Parcel Use: e.g. Drainage
- Parcel Format: e.g. Standard
- · Upload: Ticked

To link the geometry Parcels to this non-spatial Parcel, tick on 'Has Linkages' and select the Parcel Reference from the drop-down list and click 'Save Changes'. To link more geometries, click on add 'New Association':

- · Parcel Reference: e.g. E1 (from drop-down list)
- · Click 'Save Changes' (if not, any changes made will not be saved)

🖌 Non-Spatial Parcels and Linka	ges			
[MultiParcel_001	Name Action Parcel Intent Parcel Type Parcel Owner Parcel Use Parcel Use	EAS1\PS123456 created	☑ Has Linkages	Name LNK-101 Parcel Reference E1 Liability 0 Lot Entitlement 0
Add New Non-Spatial Parcel Remove Non-Spatial Parcel	Upload Volume/Folio Title Type	<add address=""></add>		Remove from Association       Add New Association       Save Changes   Exit

### 6.2 Multipart Parcel

A Multipart Parcel is a parcel that consists of multiple closed or unclosed polylines. It is represented using a parent 'Multipart" parcel linked to 2 or more children 'part' parcels.



Part Parcels have a different naming convention to regular parcels to ensure they are unique in the file: [Prefix] [#] – p [#] \ [Plan Number] e.g. 1-p1\PS123456

For multipart Easements, you need to draw part Parcels in the diagram and name them as: (@ParcelType="Part" & @ParcelFormat="Geometry" & @class="Easement"), e.g. E1-p1

🖌 Stringer ePlan -	Parcel										×
E1-p1				Volume/Folio						<	Add Address>
Reve	rse Direction	of Parcel		Title Type		•	]				<add links=""></add>
From	То	Calc Brg	Assigned Brg	Brg Type	Calc Dist	Assigned Dist	Dist Type	Radius	Purpose	Arc.L	Bdy.Desc
9	10	268.4440	268.4440	Measured	2.170	2.170	Measured	0.000	normal	0	<none></none>
10	11	335.5640	335.5640	Measured	5.424	5.424	Measured	0.000	normal	0	<none></none>
11	12	88.4440	88.4440	Measured	6.509	6.509	Measured	0.000	normal	0	<none></none>
12	13	245.5640	245.5640	Measured	4.001	4.001	Measured	0.000	normal	0	<none></none>
13	9	155.5640	155.5640	Measured	3.742	3.742	Measured	0.000	normal	0	<none></none>
From	From <b>g</b> To <b>10</b> Centroid <u>14</u> Create Upload Actual 268.4440 2.170 Irregular Bdy REG Area 14.22						Upload 🕑 Area : 14.212 14.212				
Assigned	268.4440		2.170		App	ly Roundings	Rese	t		Action created	•
Туре	Measured		- Measured	•	5	Segment Purpose	normal	normal		I Intent Easeme	ent 👻
		Parcel Ow	ner <none></none>	•		Segment Desc	<none></none>	•	Parce	el Type Part	•
Misclose : 274. dE -0.001 dN	Misclose : 274.4548 0.001 1:18479.1         Parcel Format         Geometry            dE -0.001 dN 0.000         Parcel Use										
Description	Description Select Parcel Save to File Save and Exit Cancel										

In the next step, in the Parcel Linkages, define E# (e.g. E1) as a multipart Easement and have the following features:

Non-Spatial Parcels and Linkage	S	· An			×
MultiParcel_001 MultiParcel_002	Name Action	E1	🔽 Has Linkages		
	Parcel Intent Parcel Type	Easement	E1p1 E1p2 E1p3	Name	LNK-101
	Parcel Owner	✓	2100	Parcel Reference E1-p1	
	Parcel Format	Geometry		Liability Lot Entitlement	0
	Upload 🔽	<add address=""></add>		Remove from Associati Add New Association	on
Add New Non-Spatial Parcel	Volume/Folio				
Remove Non-Spatial Parcel	Title Type	<na> •</na>		Save Changes Exi	t

The parent multipart Parcel contains a @ParcelType attribute value of 'multipart'. The multipart Parcel contains Parcel linkages to all the corresponding 'part Parcels'.

The easement is then defined as follows:

Non-Spatial Parcels and Linkages	1				<b>x</b>
MultiParcel_001 MultiParcel_002	Name	EAS1\PS822817	📝 Has Linkages		
	Action	created -			
	Parcel Intent	Easement -	E1	Name	LNK-201
	Parcel Type	Single -		Parcel Reference E1	
	Parcel Owner	CITY OF GREATER BET -			
	Parcel Use	Drainage 🔹		Liability	0
	Parcel Format	Standard -		L of Entitlement	0
	Description			Remove from Asso	ciation
	Upload 🔽	<add address=""></add>		Add New Associa	ation
Add New Non-Spatial Parcel	Volume/Folio				
Remove Non-Spatial Parcel	Title Type	<na> •</na>		Save Changes	Exit



# **6.3 Restrictions**

There are two main types of Restrictions:

- 1. Spatial Restrictions
- 2. Non-Spatial Restrictions

Spatial Restrictions are used to show footprints for the affected area. In the following example, RST1:PS123456 has been captured as a geometry; and a description is then added to the form.



	6			Volume/Folio						<4>	Add Address>
Reve	erse Direction	of Parcel		Title Type		•	]			<	Add Links>
From	То	Calc Brg	Assigned Brg	Brg Type	Calc Dist	Assigned Dist	Dist Type	Radius	Purpose	Arc.L	Bdy.Desc
460	456	179.0200	179.0200	Measured	48.968	48.968	Measured	0.000	normal	0	<none></none>
456	453	179.0200	179.0200	Measured	50.000	50.000	Measured	0.000	normal	0	<none></none>
453	450	179.0200	179.0200	Measured	50.000	50.000	Measured	0.000	normal	0	<none></none>
450	470	179.0856	179.0856	Measured	28.996	28.996	Measured	0.000	normal	0	<none></none>
470	471	270.0000	270.0000	Measured	20.000	20.000	Measured	0.000	normal	0	<none></none>
471	472	359.0305	359.0305	Measured	177.778	177.778	Measured	0.000	normal	0	<none></none>
472	460	89.2800	89.2800	Measured	20.000	20.000	Measured	0.000	normal	0	<none></none>
Actual	Bearing 179.0200	D	istance 8.968		🗆 Irregul	ar Bdy				REG Area	Area : 3561.4 3561.4
Assigned	179.0200		48.968		App	ly Roundings	Reset			Action created	
Гуре	Measured		✓ Measured	•	s	Segment Purpose	normal	-	Parcel	Intent Restriction	on
		Parcel Own	ner <none></none>	•		Segment Desc	<none></none>	•	Parce	Type Single	
Misclose : 317. dE 0.000 dN	.1403 0.000 1: 0.000	1445949.1							Parcel F Parce	ormat Standard el Use <none></none>	1
Description	1. NO D	WELLING IS T	O BE LOCATED	INSIDE THE HATC	POLIC	SON 2. NO DWE	LEING SHALL LA	CEED A REI		OVE THE NAT	URAL GROUND

Finally, benefited and burdened Lots need to be defined using <Add Links> in Enumerate Parcel form, which links those parcels to the Restriction.

🗲 Stringer ePlar	n - Parcel							A.	1	S		
14:PS12345	ō				Volume/Folio						<ac< td=""><td>ld Address&gt;</td></ac<>	ld Address>
Re	verse Direction	of Parcel			Title Type		T				</td <td>Add Links&gt;</td>	Add Links>
From	То	Calc Brg	Assig	ned Br	rg Brg Type	Calc Dist	Assigned Dist	Dist Type	Radius	Purpose	Arc.L	Bdy.Desc
456	455	269.0608	26	69.060	08 Measured	71.415	71.415	Measured	0.000	normal	0	<none></none>
455	458	359.0046	38	59.004	6 Measured	49.423	49.423	Measured	0.000	normal	0	<none></none>
458	459	89.2800	8	89.280	0 Measured	40.352	40.352	Measured	0.000	normal	0	<none></none>
459	460	89.2800	17	89 1	Parcel Reference Links				2 000	normal	0	<none></none>
					Title Reference RST1:PS123456 RST1:PS123456	Re Re Re	striction striction Burden striction Benefit					
From	456	To 4	455							Ţ	Create	Upload 🗹 Area : 3513 721
	Bearing	(	Distance		•				P.		<b>DEO 1</b>	
Actual	269.0608	ī	71.415		Parcel Reference		•				REGATE	3513.721
Assigned	269.0608		7	1.4	Туре		•	Cancel and Exit		A	ction created	-
Туре	Measured		- M	lea	REMOVE CURRENT	AD	D	SAVE and EXIT		Parcel Ir	tent Lot	~
		Parcel Ov	vner <	none>	· ·	_	Segment Desc	<none></none>	-	Parcel 1	Type Single	-
										Parcel For	rmat Standard	
dE -0.001 d	Misclose: 398,5814 0.001 1256015.8 Parcel Use <a href="https://www.action.org">https://www.action.org</a> Parcel Use <a href="https://www.action.org">action.org</a> <a href="https://www.action.org">https://www.action.org</a> <a href="https://www.action.org">https://www.action.org</a> <a href="https://www.action.org">action.org</a> <a href="https://www.action.org">action.org</a> <a href="https://www.action.org">action.org</a> <a href="https://www.action.org">action.org</a> <a href="https://www.action.org">action.org</a> <a href="https://www.action.org">action.org</a> <a href="https://www.action.org">https://www.action.org</a> <a href="https://www.action.org"></a> action.org"/action.org"/action.org"/action.org"/action.org"/action.org"/action.org"/action.org"/action.org"/action.org"/action.org"/action.org"/action.org"/action.org"/action.org"/action.org"/action.org"/action.org"/action.org"/action.org"/action.org"/action.org"/action.org"/action.org"/action.org"/action.org"/action.org"/action.org"/action.org"/action.org"/action.org"						~					
u2 0.001 0												
Description									1			
						_	Select Parcel	Save to File		Save	Save and Exit	Cancel

### NOTE: To add the expiry date, you need to add an annotation with type 'Restriction Expiry Date'.

Non-spatial Restrictions are defined without any geometry in the Parcel Linkages. Then, similar to the abovementioned step, the benefited ad burdened parcels must be linked to the Restriction using <Add Links>.

Non-Spatial Parcels and Linkages						×
MultiParcel_001 MultiParcel_002 MultiParcel_003	Name Action	RST1\PS123456	Has Linkages			
	Parcermient	Restriction		Name	LN	JK-001
	Parcel Type	Single ~		Parcel Reference		$\sim$
	Parcel Owner	~		Filter by Type		
	Parcel Use	<none> ~</none>				
	Parcel Format	Standard ~		Liability		0
	Description			Lot Entitlement		0
	Description of Restri	ction				
	Upload 🗸	<add address=""></add>		Remove f		
Add New Non-Spatial Parcel			·			
V	olume/Folio					
Remove Non-Spatial Parcel	itle Type Choo	se <none> ~</none>		Save Changes	Exit	

NOTE: According to Land Use Victoria's policies, if Restriction diagram and table do not fit in one page then it is strongly recommended to define Restriction(s) in MCP and put the MCP number on the front sheet.

### **6.4 Owners Corporations**

The Owners Corporation (OC) entity must first be created in Parcel Linkages. The following attributes are required:

• The naming convention for an OC is 'OC#\Plan Number', e.g. 'OC1\PS123456'.

NOTE: Do not use spaces or symbols.

- · Description: Free text
- State: e.g. created
- Type: Single
- There are 3 OC usages in the Parcel Use drop-down list 'Unlimited', 'Limited' and 'Limited to Common Property'.
- · Format: is always 'Standard'

Non-Spatial Parcels and Linkage	s		/		×
MultiParcel_001 MultiParcel_002 MultiParcel_003	Name	OC1\PS123456 created	🔽 Has Linkages		
	Parcel Intent Parcel Type	Owners Corporation	1:PS123456 2:PS123456 3:PS123456 CM1\PS123456	Name Parcel Reference 1:PS123	LNK-201
	Parcel Owner Parcel Use Parcel Format	Vnlimited V		Liability	10
	Description Description to add	<add address=""></add>		Lot Entitlement Remove from Assoc Add New Associa	ciation
Add New Non-Spatial Parcel	Volume/Folio			Save Changes	Exit
	The Type	<na> •</na>			

# NOTE: An address must be assigned to each Owners Corporation using "<Add Address>" in the Parcel Linkages window.

The last step is to assign the entitlement and liability values to the member Lots. Click on 'Add New Association', select each parcel and set the values in the form. The Common Property Parcel must have its values set to '0'. Some annotations are required for OC (see <u>ePlan Annotations</u>).

# 6.5 Depth Limitation

Depth Limitation Parcels naming convention is: DL[#]. For example, a Depth Limitation is represented as 'DL1'. To create a non-spatial Depth Limitation, use the Parcel Linkages tool.

🔰 Non-Spatial Parcels and Linkag	es				
MultiParcel_001 MultiParcel_002 MultiParcel_003 MultiParcel_004 MultiParcel_005	Name Action Parcel Intent Parcel Type Parcel Owner Parcel Use	DL1 existing   Depth Limitation  Single	Has Linkages	Name Parcel Reference Filter by Type	LNK-101
Add New Non-Spatial Parcel Remove Non-Spatial Parcel	Parcel Format Description 15.24 Upload V Volume/Folio Title Type	Standard		Liability Lot Entitlement Remove from A Add New Ass Save Changes	0 Association sociation Exit

NOTE: It is not required to link the Depth Limitation to affected parcels. You can enter any text including affected parcels in "Description".

# 7. ePlan Annotation

The Annotation element is used to capture various pieces of textual information.

ePlan

Click the ePlan Annotations <sup>Annotations</sup> icon to enter the annotations to your plan. The annotations are mainly for the benefit of future surveyors, examiners and auditors, where additional textual information about the plan may be required for specific situations. The requirements for each field differ depending on the annotation.

#### NOTE: Save changes after adding each annotation before adding another annotation.

Click 'Add New' to add a row for a new annotation. Select a type and add a text for the annotation as a description.

🗲 Annotations		<b>— — — —</b>
Annotation Name	Summary of Annotations	Type Crown Allotment
ANNO-1 ANNO-2 ANNO-3	2	
Parcel Reference		Ψ.
Add New	Delete Annotation Sar	ve Changes Exit

# NOTE: Some annotations require a Parcel Reference e.g. Easement Width. They are listed in the below sections.

For an overview of all the annotations added to this form, click on the 'Summary of Annotations' *button* and all added data for the ePlan Annotations will be shown as below:

All Annotation	ıs	₽		×
Link Name	Parcel	Туре	Description	
ANNO-1	<none></none>	Crown Section	6	
ANNO-2	<none></none>	Crown Allotment	2	
ANNO-3	E1	Easement Width	3	

# 7.1 Textual Annotation Types

The following annotations require the surveyor to qualify the annotation with text in the description field. The following types **do not** require a 'Parcel Reference':

- Planning Permit
- Report on Datum
- Instrument and Calibration Details

- Crown Section
- Crown Allotment
- Crown Portion
- Other Crown Description
- Section 12(2) of the Subdivision Act 1988 applies vide this plan
- Section 12(2) of the Subdivision Act 1988 does not apply vide this plan
- Purpose of Plan
- Additional Purpose of Plan
- · Grounds for Removal
- · Grounds for Variation
- · Grounds for Vesting
- Future Plan Number
- · Prior Survey

The following annotation types are for general use where the surveyor wishes to annotate information on the plan that is not covered by one of the textual and parcel reference types. Description should be filled in to provide the details of the annotation. Parcel Reference attribute is optional.

- · General Plan Notation
- Abstract of Field Records Notation
- Surveyor's Report Notation
- Title Closure Justification
- Supply of Supplementary Field Record Notation
- General Easement Notation
- Section 35 See Recording of Vesting Table Attached
- Implied Easement Notation

# 7.2 Referenced Annotation Types

The following annotations require the surveyor to qualify the annotation with text in the 'Description' and 'Parcel Reference' fields to identify which parcel the description applies to:

- · Easement Qualification
- · Easement Purpose
- · Easement Beneficiary
- · Easement Width
- Easement Origin
- Parcel with Area by Deduction
- Building Boundary Notation If a line description attribute contains the value of 'Other', the parcel must have a building boundary annotation attached to it.
- Restriction Expiry Date
   A date in valid UTC format to define the expiry date of a restriction. e.g. "2013-10-10". The parcel reference attribute must be used to link to a valid restriction parcel.
- · Purpose of The Owners Corporation
- Owners Corporation Notation
- The Basis For Allocation of Lot Entitlement And Liability

- · Details Of The Limitations of The Owners Corporation
- Functions or Obligations Referred By The Limited Owners Corporation
- Functions or Obligations Referred To The Unlimited Owners Corporation
- Section 35 Compulsory
- Section 35 Agreement
- Balance Of Existing OC Entitlement
- Balance Of Existing OC Liability

NOTE: Annotations can be accompanied by a Description and Parcel References. A Description is always required for all annotations. Description field must not be blank. For example, 'Parcel with Area by Deduction' requires no further description so copy the 'Type' text into the Description box.

NOTE: 'Easement Width' annotation must be only linked to Geometry Easements drawn on the diagram (specified as 'E#', 'A#' or 'R#') and not the Standard/2D Building Easements created in the Parcel Linkages (specified as 'EAS#').

NOTE: 'Implied Easement Notation', 'Easement Purpose', 'Easement Origin' and 'Easement Beneficiary' must only be linked to Standard/2D Building Easements created in the Parcel Linkages (specified as 'EAS#').

NOTE: If there is only one Crown Description in the plan, use a combination of the following three annotations to describe it:

- 1. Crown Allotment
- 2. Crown Section
- 3. Crown Portion

However, if there is more than one Crown Description, only use 'Other Crown Description' annotation to describe multiple Crown Descriptions.

NOTE: The following traditional notations are not entered as annotations and are captured elsewhere in an ePlan:

- Survey / Non-Survey
- Permanent Mark connections
- Staged plan notation

NOTE: General Plan Notation can be used for adding any description to the front sheet.

NOTE: The description of annotations is placed in a single line without any editor functions such as new line, wrapping, bullet numbering etc. Therefore, for the annotations with multi-line description like General Plan Notation, create duplicate annotations for each line to simulate the multi-line function.

# 8. Review

# •List all the enumerated data to review and edit:

- Parcels list
  - Monument points list
  - •COGO points list
- Segment list
- Parcel Report

# 8.1 Parcel List

The Parcels List lets users confirm the parcels that have been enumerated and make edits.



Click on the Parcels List List icon.

Review

A window selection can be made around all the data in the drawing with only the enumerated parcels included in the list. The list appears as follows:

,								
Parcel ID	Class	State	UpLoad	Area	Act.Area	Туре	Owner	Us
ROAD-2	Road	existing	1	0.0	0.000	Single	<none></none>	<none< td=""></none<>
ROAD-1	Road	existing	1	0.0	0.000	Single	<none></none>	<none< td=""></none<>
2:PS123456	Lot	created	1	1018.2	1018.233	Single	<none></none>	<none< td=""></none<>
1:PS123456	Lot	created	1	1019.5	1019.542	Single	<none></none>	<none< td=""></none<>
E1	Easement	created	1	122.2	122.233	Single	<none></none>	<none< td=""></none<>
1:PS716856	Lot	extinguished	1	2037.8	2037.774	Single	<none></none>	<none< td=""></none<>
								REG Are
					UpLoad		Action	
			Pa	rcel Owner		~	Parcel Intent	
			F	Parcel Use		~	Parcel Type	
					Assiss values	Save	Cancel	Save and Ex

Clicking on a row in the list will zoom to and highlight that parcel in the drawing. You can also edit any of the drop-down lists from this form.

NOTE: This tool does not list the parcels which have been created using Parcel Linkages such as Multipart parcels, Non-spatial easements (EAS#), Depth Limitations and Owners Corporations.

# **8.2 Monument Points List**

The Monument Points List lets users confirm they have the correct attributes for control points and reference marks.



Click on the Monument Points List Points List icon.

A window selection can be made to review all the Monuments. The list appears as below:

			/	Assign survey	monumen	t enumerati	ons			
elect	ion									
Se	elect all	De-select all	Revers	e selection			Save to File	Cancel	s	ave and Exit
						L	0410101110	Cunton		
alues	5									
	Clear	M	ark Name	PT. Type	Conc	dition 🔽	State 🔽	Mon. Type	Plan Ref	Vpload
	Assign value	S			~	~	~	~		~
lonur	nents									
C	Number	Mark Name	PT.Type	Cond	State	Mon.Type	Upload	Plan Ref	Order	Extra
	7	CGPNT-7	control	ок	Existing	Plaque	Yes	PS123456A	0.01	YES
	2	CGPNT-2	control	ок	Existing	Plaque	Yes	PS123456A	0.01	YES
$\square$	1	CGPNT-1	control	OK	Existing	Plaque	Yes	PS123456A	0.01	YES

Clicking on a point in the list will zoom to that point in the drawing.

This list provides an opportunity to review points that you have enumerated. Any enumeration errors can be corrected here.

NOTE: The Values frame in the form provides the option to apply bulk edits to points. Select the properties you want to change for the point/s in the Values frame (e.g. Point Type, Condition, State, Mon, Type, Plan Ref, etc). In the Monuments list, select the points that are to be altered, then click the 'Assign Values' button to make the changes,

### 8.3 COGO Points List

The COGO Points List lets users review all enumerated COGO points in the drawing.



Sel	ect all	De-select all	Reverse selec	tion	Clear	
alues						
		🔽 РТ. Туре	State	V	Upload	
			~	~	Assign valu	es
lonum	ents					
Chk	Number	PT.Type	State	Upload	Extra	^
	23	sideshot	proposed	Yes	NO	
	22	boundary	proposed	Yes	NO	
	21	sideshot	proposed	Yes	NO	
	20	boundary	proposed	Yes	NO	
	19	sideshot	proposed	Yes	NO	
	18	sideshot	proposed	Yes	NO	
	17	boundary	proposed	Yes	NO	
	16	boundary	proposed	Yes	NO	
	15	sideshot	proposed	Yes	NO	
	14	boundary	proposed	Yes	NO	
	13	sideshot	proposed	Yes	NO	
	12	boundary	proposed	Yes	NO	
	11	boundary	proposed	Yes	NO	
	10	boundary	proposed	Yes	NO	
	9	boundary	proposed	Yes	NO	
	8	boundary	proposed	Yes	NO	
	7	control	ovicting	Voc	VEQ	~

Clicking on a point in the list will zoom to that point in the drawing. The form enables review/edit of the following:

- PT Type
- State
- Upload

Use the Values controls to apply bulk edits to the highlighted Monuments in the list.

# 8.4 Segment List



Click on the Segment List icon to view all the segments enumerated in the plan.

Start	End	Bearing	Distance	Purpose	Brg Type	Dist Type	Upload	
)	22	100.0320	45.850	nomal	Measured	Measured	1	
20	9	9.4445	54.616	nomal	Measured	Measured	1	
12	14	9.5212	50.287	nomal	Measured	Measured	1	
)	8	189.4445	49.616	nomal	Measured	Measured	1	
17	16	280.5959	40.757	nomal	Measured	Measured	1	
12	17	9.5212	3.000	nomal	Measured	Measured	1	
16	8	189.4445	3.000	nomal	Measured	Measured	1	
10	14	9.5212	25.290	nomal	Measured	Measured	1	
)	11	189.4445	24.660	nomal	Measured	Measured	1	
14	9	280.0320	40.850	nomal	Measured	Measured	1	
12	10	9.5212	24.997	nomal	Measured	Measured	1	
3	12	101.0000	40.750	nomal	Measured	Measured	1	
11	8	189.4445	24.956	nomal	Measured	Measured	1	
10	11	200 8626	CU0 UV	lemos	Managerad	Managerod	1	_
B	Bearing Source		•	Distance Source		▼	Upload	
	Instrument		•	Purpose		[	Apply to Tab	le

Any segment can be edited using this window.

### 8.5 Parcel Report

A window selection can be made around all the data in the drawing – only the enumerated parcels will be included in the report. A CSV file will be created, with the Bearing and Distance of each line segment (Actual and Assigned) and misclosure of each Lot. This report can be opened in Excel or Notepad and printed for QA and documentation purposes.

Right:	Example	of	report	
--------	---------	----	--------	--

Parcel ROAD-2								
Parcel Class : Road								
Parcel State : existing	3							
Parcel Owner :								
Parcel Use : <none></none>								
Start	End	Assigned Brg	Calced. Brg	Туре	Assigned Dist.	Calced. Dist	Туре	
9	22	100.032	100.032	Measured	45.85	45.85	Measured	
Misclose : 100.0320 45	5.850	1:1.0						
Area : 0.000								
Assigned Area : 0.0								
Parcel ROAD-1								
Parcel Class : Road								
Parcel State : existing	3							
Parcel Owner :								
Parcel Use : <none></none>								
Start	End	Assigned Brg	Calced. Brg	Туре	Assigned Dist.	Calced. Dist	Туре	
20	9	9.4445	9.4445	Measured	54.616	54.616	Measured	
Misclose : 9.4445 54.6	16 1	:1.0						
Area : 0.000								
Assigned Area : 0.0								
Parcel 2:PS123456								
Parcel Class : Lot								
Parcel State : created	1							
Parcel Owner :								
Parcel Use : <none></none>								
Start	End	Assigned Brg	Calced. Brg	Туре	Assigned Dist.	Calced. Dist	Туре	
12	8	281	281	Measured	40.75	40.75	Measured	
8	11	9.4445	9.4445	Measured	24.956	24.956	Measured	
10	11	100.5626	100.5626	Measured	40.803	40.803	Measured	
10	12	189.5212	189.5212	Measured	24.997	24.997	Measured	
Misclose : 318.1339 0.	000	1:368358.6						
Area : 1018.233								
Assigned Area : 1018.2	2							
								_

# 9. Export



Click 'Validate File' and 'Visualisation of File', to receive a validation report and a visualised plan in PDF format from SPEAR.



NOTE: If the PDF file is already opened for visualisation or validation, and has not been closed, you will receive the following error message on opening the PDF for the second time. To avoid the above error, close the opened PDF first.



	2 Error 0 S	ystem	Error 1 Input Require	d 2 For Information 66 Pass 57 Not App	licable
Organisation:	Land Victoria		Validation Status:	Fail	
SPEAR Reference Number:	Not Applicable		Validated on:	2016-05-24 14:42:24.401	
ePlan plan number:	PS123456A		Validator:	4.3	
ePlan version:	1				
Rule Name		Result	Rule Message		
VR017 - Redundar	1t Observations	×	1. Duplicate dimension (5826565.914 708047. 2. Duplicate dimension (582652.589 708015. 3. Duplicate dimension (582650.541 708051. 4. Duplicate dimension (5826565.914 708047. 5. Duplicate dimension (5826573.69 708017. 1. Duplicate dimension (5826573.69 708007.1 7. Duplicate dimension (582655.914 708047. 9. Duplicate dimension (582655.914 70805. 10. Duplicate dimension (582656.914 70805. 10. Duplicate dimension (582657.646 708007. 12. Duplicate dimension (582657.646 708007. 13. Duplicate dimension (5826814.584 708060. 13. Duplicate dimension (5826822.589 708015. 14. Duplicate dimension (5826588.87 708047.6)	between (5826615.457 708055.783) - 163). between (5826573.69 708007.162) - 561). between (5826615.457 708055.783) - 448). between (5826568.87 708047.677) - 163). between (5826573.69 708007.162) - 386). between (5826505.914 708047.163) - 62). between (5826508.285 708011.386) - 561). between (5826509.541 708051.448) - 163). between (5826500.541 708051.448) - 173). n between (5826502.589 708015.561) - 783). n between (5826573.69 708007.162) - 67). n between (5826622.589 708015.561) - 706). n between (5826622.589 708015.561) - 706). n between (5826622.589 708015.561) - 706). n between (5826573.69 708007.162) - 671). n between (5826578.646 708007.67) - 77).	
VR023 - Surveyor Number	Registration	×	The surveyor registration response from the Surveyor ID	on number ("3625") did not return a valid veyors Registration Board of Victoria. Error:	
VR008 - Road Par Exists	cel Description		Road parcel "ROAD-2" name.	does not have a description identifying the r	oad
VR034 - Depth Lin Check	itation Manual	0	Plan has identified that	depth limitation does not apply.	
VR116 - Prior Surv	ey Date	0	The previous plan "PS ePlan in SPEAR, a ma required.	718856" with volume/folio of "10790/065" is r nual check of the previous survey date is	iot an
VR001 - ePlan CIF Validation	Schema	Ľ			
VR002 - Survey He Completeness	eader	⊻			
VR004 - Parcel Ge	ometry Exists	⊻			
VR005 - Easemen	t Purpose Exists	⊻			
VR009 - Primary P Exists	aroel Address	⊻			

NOTE: If you require any assistance resolving ePlan validation issues, please contact the ePlan team on 03 9194 0612 and press 3, or send an email to <a href="mailto:spear.info@delwp.vic.gov.au">spear.info@delwp.vic.gov.au</a>

Below is an example of a visualised plan:

Stringer ePlan 2016	E ×
Visualisation File Created E:\Stringer ePlan\Stringer ePlan - Workshop Manuals\V Data\Cad\testing_Visualisation.pdf	ic Training
	ОК

The PDF created from the Visualisation Service uses the plan templates in Technical Note 4.

NOTE: Once signed in to SPEAR, your firm's logo will be watermarked on the visualised PDF.

NOTE: To enhance the presentation of the visualised PDF, use the ePlan Visualisation Enhancement Tool (VET). For more information refer to <u>SPEAR User Guide 57</u>.

PLAN	OF SUBDIV	ISION	EDITION 1	PS123456A
LOCATION PARISH: TOWNSHIP: CROWN DESS TITLE REFEF LAST PLAN F POSTAL ADD (at time of subditi	N OF LAND SKIPTON SKIPTON: CA. 2 SE VOL. 1079 KEFERENCE: LOT 1 ON DRESS: 41 BLAKE	C. 6 0 FOL. 065 PST16856 STREET SKIPTON 3361	COUNCIL NAME: COR	ANGAMITE SHIRE COUNCIL
VE	STING OF ROADS	AND/OR RESERVES		
1	DENTIFIER	COUNCIL/BODY/PERSO	DN	
	NL.	ni.		
			NOTATIONS	
DEPTH LIMIT	ATION:	Does Not Apply		
This is an ePi	an			
This is an ePi	an			
This is an ePi	an	EASEN		
This is an ePi	an	EASEN LEGEND: A-Appurten:	IENT INFORMATION ant Easement E-Encumbering Ea	ssement
DENTIFIER	PURPOSE	EASEN LEGEND: A-Appurten WIDTH (m)	IENT INFORMATION ant Easement E-Encumbering Ea ORIGIN	asement LAND BENEFITED/IN FAVOUR OF
DENTIFIER E1	an PURPOSE Drainage	EASEN LEGEND: A-Appurten WIDTH (m) 3	MENT INFORMATION ant Easement E-Encumbering Ea ORIGIN This plan	asement LAND BENEFITED/IN FAVOUR OF CORANGAMITE SHIRE COUNCIL
DENTIFIER E1	an PURPOSE Drainage	LEGEND: A-Appurten: WIDTH (m) 3 SURVEYORS FI	IERF: 1	ASEMENT LAND BENEFITED/IN FAVOUR OF CORANGAMITE SHIRE COUNCIL CORIONAL SHEET SIZE: A3 SHEET 1 OF 2



# 10. **FAQ**

The ePlan general FAQ's are available at:

https://www.spear.land.vic.gov.au/spear/pages/eplan/about/faqs.shtml

The table below includes the questions which have been frequently asked by Stringer ePlan users.

No	Question/Answer
1	What are the unsupported dealing types in ePlan?
	<ul> <li>The following are currently unsupported by ePlan:</li> <li>Multi-level Building Subdivisions – plans with boundaries defined by building are supported</li> <li>TLA Plans</li> <li>Crown Plans</li> </ul>
	These features will be rolled out progressively. Please contact the ePlan support team for any update.
2	How to submit an ePlan under Section 23, 24A or 32B that does not have any Plan Number? If you would like to submit an ePlan under Section 23, 24A or 32B that does not have any Plan Number at the time of submission to SPEAR, insert 'LV-To-Supply' in the 'Plan Number' box. This value will be replaced with the relevant Dealing Number from the Victorian Online Title System (VOTS) once your ePlan is lodged at Land Use Victoria.
3	How to add complex address? The Name/Number field is a multipurpose field that records unit number, flat number, street number or range and the number suffix. The following is an example of the complete usage of the field: Unit 25 Floor 4 45A-49B. This equates to Unit 25 on Floor 4 for the building in street number range 45A to 49B. Simply omit the components not required when entering the name/number for your address. If a building or complex name is required, tick the Complex Name and include the name of the building.
4	Do I need to round my observations?

No. ePlan requires all measurements to millimetres and seconds. The Visualiser will round the dimensions based on the Victorian Cadastral Surveys Practice Directives published in July 2018.

#### No Question/Answer

#### 5 How do I capture Irregular Lines (Natural Boundaries)?

Natural boundaries and freehand lines are represented by an irregular line. To create an irregular line, ensure that you tick the following checkbox 'Irregular Bdy' for the segments in Enumerate Parcel form.

.P3123430				Volume/Folio						<a></a>	dd Address>
Reve	rse Direction	of Parcel		Title Type		•				<	Add Links>
From	То	Calc Bro	Assigned Brg	Bra Type	Calc Dist A	ssigned Dist	Dist Type	Radius	Purpose	Arc. I	Bdy Desc
1	2	98.2319	98.2319	Measured	164.784	164.784	Measured	0.000	normal	-1	<none></none>
2	3	208.0736	208.0736	Measured	117.128	117.128	Measured	0.000	normal	0	<none></none>
3	4	270.0000	270.0000	Measured	139.356	139.356	Measured	0.000	normal	0	<none></none>
4	5	0.0000	0.0000	Measured	70.993	70.993	Measured	0.000	normal	0	<none></none>
5	1	29.1456	29.1456	Measured	64.577	64.577	Measured	0.000	normal	0	<none></none>
rom	1 Bearing 98.2319	To <b>2</b> D 1	Distance 64.784		<table-cell> Irregular B</table-cell>	Bdy	Centroid	6	·	Create REG Area	Upload Area : 19076. 19076.
From Actual Assigned	1 Bearing 98.2319 98.2319	To <b>2</b> C 1	bistance 64.784 164.784		V Irregular B	Bdy Roundings	Centroid	6	•	Create REG Area Action Created	Upload Area : 19076. 19076.
From Actual Assigned Type	1 Bearing 98.2319 98.2319 Measured	To <b>2</b> [] []	Distance 64.784 164.784 • Measured		V Irregular B Apply I Seg	Bdy Roundings yment Purpose	Centroid Reset	6	Parcel	REG Area Action created Intent Lot	Uploac Area : 19076. 19076.1
From Actual Assigned Fype	1 Bearing 98.2319 98.2319 Measured	To 2 1 Parcel Ow	64.784 164.784 Measured mer <none></none>		Irregular B Apply I Seg	Bdy Roundings gment Purpose Segment Desc	Centroid Reset normal <none></none>	6	Parcel	REG Area Action created Intent Lot I Type Single	Upload Area : 19076. 19076.
From Actual Assigned Fype	1 Bearing 98.2319 98.2319 Measured	To 2 E 1 Parcel Ow	Distance 64.784 ■ 164.784 ■ Measured mer <none></none>		V Irregular B Apply I Seg	Bdy Roundings jment Purpose Segment Desc	Centroid Reset normal <none></none>	6 •	Parcel Parcel F	Create REG Area Action created Intent Lot I Type Single Format Standard	Uploar Area : 19076. 19076.
From Actual Assigned Fype Misclose : 41.4 dE 0.001 dN (	1 Bearing 98.2319 98.2319 Measured 745 0.001 1:4	To 2 E 1 Parcel Ow 124966.6	Distance 64.784 164.784 Measured iner <none></none>	•	V Irregular f Apply I Seg	Bdy Roundings Iment Purpose Segment Desc	Centroid Reset normal <none></none>	6 •	Parcel Parcel Parcel F Parcel F	REG Area REG Area Action created Intent Lot I Type Single Signe Standard el Use <none></none>	Upload Area : 19076. 19076:
From Actual Assigned Fype Visclose : 41.4 JE 0.001 dN (	1 Bearing 98.2319 98.2319 Measured 745 0.001 1:4	To 2 C 1 Parcel Ow 424966.6	Nistance 64.784 164.784 • Measured ner <none></none>	•	Irregular B Apply I Seg	Bdy Roundings jment Purpose Segment Desc	Centroid Reset	6	Parcel Parcel Parcel F Parcel F Parcel F	Create REG Area Action created Intent Lot I Type Single Format Standard el Use <none></none>	Upload Area : 19076. 19076.
From Actual Sype Alsclose : 41.4 IE 0.001 dN ( Description	1 Bearing 98.2319 98.2319 Measured 745 0.001 1:4	To 2	Nistance 64.784 164.784 • Measured ner <none></none>	•	V Irregular 6 Apply I Seg	Bdy Roundings jment Purpose Segment Desc	Centroid Reset	6 •	Parcel Parcel Parcel F Parcel F Parce	Create REG Area Action created Intent Lot Itype Single Format Standard el Use <a href="https://www.standard">https://www.standard</a>	Uploa Area : 19076. 19076.

ePlan requires the surveyor to textually describe irregular lines, e.g. a river boundary could be described as 'edge of river'. Descriptions must be added after the line is created. To annotate an irregular line, select one segment of that irregular line and add description to that segment in the Enumerate Segment tool.

From 1 to	2 Assigned	Computed			
Bearing	98.2319	98.2319		Measured	•
Distance	164.784	164.784		Measured	-
	Apply Roundings				
Instrumen	Theodolite and EDM	•	Purpose	normal	•
		Th	is is a Segment	of an Irregular Line	e
	Irregular Line Des	cription River	r		
	Physical Boundary De	scription scription	ie>		•
	Physical Doundary De				

#### 6 How do I capture building boundaries?

ePlan does not need the bearing and distance to be recorded for the lines representing building boundaries. Each building boundary line can be described in an ePlan as an 'Interior Face', 'Exterior Face', 'Median', or 'Other'. To get building boundaries in the ePlan select the segment and enumerate it the correct attribute.

#### No Question/Answer

#### 7 How do I capture Road splays?

Road splays can be created using two topo lines. The road splay corners on the title boundary are plotted using boundary points and the external corner is plotted using a sideshot point. See below for drawing a splay corner.



# 8 Do I need to add a normal line over the building boundary line in a parcel with a building boundary?

No, the building boundary line is sufficient, and it can be Median, Interior Face, Exterior Face, or Other

#### 9 How do I create a Not In Subdivision (N.I.S) Lot in ePlan?

The NIS Lot geometry should be drawn and be enumerated with action of "referenced". The name of this parcel should be set according to the naming convention in section 4.4. Add a description like 'N.I.S' which is visualised as a Lot identifier on the PDF.

#### 10 How do I display a plan number of an extinguished (cancelled) Crown Allotment as a last plan reference on front sheet?

The plan number (e.g. 1\TP123456) should be added in the 'Description' field for the Crown Allotment Lot in enumerated parcel form.

#### 11 How should I name a Crown Allotment if there is no number for Crown Section?

If there is no Crown Section for a specific Crown Allotment, you must only enter the Crown Allotment section, e.g. 31\PP5509.

#### 12 How do I deal with multi-parish plans?

In this exceptional case, create all Parishes as Non-Spatial Parcels in the 'Parcel Linkages' with standard naming for Parishes (e.g. PSH-3012). Ensure you have selected 'Existing' for Action, 'Administrative Area' for Parcel Intent, 'Administrative' for Parcel Type, and name of parish (e.g. LONGWOOD) for Description and link the corresponding Lots to each Parish. The multi-Parish Lots should be linked to all relevant Parishes.

#### 13 How can I add connected permanent marks as a notation?

You need to add an annotation called 'General Plan Notation' and include any notation. There are no text editor facilities in the Annotation form.

No	Question/Answer
14	How can I assign a value of 'Easement Purpose' out of the drop-down list?
	Create a new annotation (Easement Purpose) and reference it to the Non-Spatial Easement (EAS#) and put your desired text as a description. This value will override the value of purpose assigned to the Easement (EAS#) in the visualised PDF.
15	How can I add more origins to an Easement?
	Create a new annotation (Easement Origin) and reference it to the non-spatial Easement (EAS#) and include your desired text as description. This value will override the value of origin assigned to the Easement (EAS#) in the visualised PDF.
16	How can I truncate road connections?
	You don't need to truncate road connections in CAD as the Visualiser will truncate the road connections automatically. You can also use the truncation functionality available in the Visualisation Enhancement Tool.
17	How can I reverse the direction of walls hatches?
	If you have created a Building Return plan feature and the direction of hatches is reversed, you need to go back to CAD file and reverse the line direction using the "REVERSE" command in CAD.
18	How does the Visualiser label the building boundaries on PDF?
	If there are different types of building boundaries (Median, Exterior Face, Interior Face or Other) within a plan, the Visualiser labels the boundaries with the lowest cardinality on PDF and leave the building boundaries with highest cardinality without label. It is also commented on the front sheet for clarification.
19	How can I assign more than one address to a single extinguished lot?
	In ePlan, it is not possible to assign multiple addresses to a single extinguished parcel.
20	How can I show a dimension label which is not displayed on PDF?
	Check the label in VET to ensure that it's not hidden. If it is not hidden, create a Polyline on top of the existing line in your CAD file and enumerate it as a Topo line.
21	What Internet browser can I use for visualising or enhancing a plan?
	The following browsers are currently supported:
	Google Chrome (Recommended)
	• Firefox
22	Do I need to link the defined Depth Limitation to lots in plan
	No. Instead, you would be able to add any free text to General Plan notation in Annotation section.
23	How can I do back/forward bearing to add or deduct 180° to/from bearing?
	No. This function is automatically done by visualisation service based on the best practice.
24	Is there any text editor/formatting functions in Annotation description, like line break, wrap, bullet)
	No. All the free text in annotation is created in a single line with default format

No	Question/Answer				
25	How can I slightly change the bearing, distance, or area on PDF				
	Enumerate the corresponding geometry and assign a new value for bearing, distance, or area				
	🖌 Stringer ePlan - Segment – 🗆 🗙				
	From 3 to 4				
	Assigned Computed				
	Bearing         270.0000         Measured            Distance         2714         2713.534         Measured				
	Apply Roundings				
	Instrument Theodolite and EDM V Purpose normal V				
	Coordinate Ref				
	Description (optional)				
	Physical Boundary Description <pre>cnone&gt; </pre>				
	Upload 🔽				
	Save : Select New Segment Save and Exit Cancel and Exit Save				
26	Do I need to apply any rounding on bearing, distance, or area based on Survey Practice Handbook?				
	No. It is store the second study of the second starts are stored in the second store of the Direction				
	No. It is strongly recommended do not use or apply any rounding to measured survey data. ePlan services are				
	responsible to automatically round the measurements according to the Survey Practice Handbook.				