

DEVELOPMENT AT SITE 6 FELPHAM & BERSTED

BOGNOR REGIS

A27 JUNCTION WORKS

NOVEMBER 2009

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GJF/JP/09:1003/4161(off)
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1.0 INTRODUCTION

- 1.01 This report has been prepared to provide an update of the situation regarding the A27 junction improvements embodied in Planning Conditions 56-59.
- 1.0 The conditions were recommended by the Appeal Inspector in 2005 following representations made by the Highways Agency to the appeal.
- 1.03 During the period 2005-2009 dialogue with the Highways Agency has indicated that there are compelling reasons why the aforementioned Conditions are no longer appropriate and should be either amended or deleted.
- 1.04 This report provides the background to support BDW as they seek to have the Conditions amended in the case of each junction to contributions in lieu of works and the respective payments to revised occupation trigger levels.

2.0 SEQUENCE OF EVENTS

- 2.01 In order to appreciate the work that has been carried out since the site was purchased a sequence of the events and dialogue is considered appropriate.
- 2.02 BDW inherited the approved designs of Boreham Consulting for the offsite works from which they were tasked with preparing their own designs in dialogue with both the Highways Agency (HA) and their agents InterRoute (IR).
- 2.03 Design work was progressed for all four locations and full technical approval obtained for the proposed works to Bognor Roundabout.
- 2.04 The Conditions linked occupation targets on both the Felpham and Bersted sites to the A27 junction works. These were:-

	Felpham	Bersted
Fontwell Roundabout	49	142
Crockerhill Junction	0	49
Oving Crossroads	49	142
Bognor Roundabout	142	0

- 2.05 BDW questioned the Inspectors timing of the Conditions and commissioned an “Appraisal of Impact upon A27 Junctions” – See Appendix (i). The appraisal investigated the traffic impacts of the Site 6 development at each of the A27 junctions. It revealed that the impact in traffic terms was not material at any junction and suggested that at least 400 houses could be constructed on the site before any junction works are required. It was clear that the Conditions and their timing were not capacity based. The TA was submitted to HA and dialogue followed.
- 2.06 The dialogue in turn led to comments from the HA and their agents that questioned the relevance of the proposed works.
- 2.07 Meetings were held with initially the HA (John Burns) and their agents for the A27 InterRoute at Gillingham (Derek Friday) to discuss the appraisal of the A27

junctions. At this meeting the works to Oving Crossroads were also discussed where InterRoute are progressing a safety based scheme of their own for early implementation that renders our scheme unnecessary.

2.08 Following the meeting at Gillingham MJA Consulting were directed to meet with the HA transport planners at Dorking. A meeting was held with Anthony Powell who explained the route to be followed which was via an application to Arun DC. He also advised that a meeting with his consultants Parsons Brinckerhoff should be held to discuss what should accompany the request.

2.09 A follow up meeting was held with Anthony Powell and David Holdaway (DH) of Parsons Brinckerhoff. This meeting updated matters concerning the progress the HA has made with planned improvements to the A27 around Chichester. DH asked the question “why are you doing this work” and proceeded to explain how HA plans for as near as 2014 will negate the planned improvements at Bognor Roundabout and Oving Crossroads.

In addition to the aforementioned works the emergence of the proposed Eco Quarter off the A259 would bring about significant changes to the A27 and its junctions. It is understood that grade separation is being considered together with dedicated bus lanes along the A259 as mitigation for the proposed 2000 houses. DH suggested that expenditure should only be directed towards works that were effective and long lasting and should be dealt with by way of a contribution.

2.10 In light of the above significant changes to the A27 and the additional emerging development scenarios the most appropriate way for BDW to discharge the planning conditions was requested. DH agreed to prepare a response on behalf of the HA setting out for the Bognor Roundabout a contribution in lieu of works proposal. Dialogue identified works on the A259 approach to Bognor Roundabout which were considered to be equivalent mitigation measures to the original proposals.

2.11 Internal dialogue took place between Anthony Powell and Peter Minshull of the HA. DH confirmed that Peter Minshull was happy with the proposed approach but required approval of a further colleague Paul Harwood.

- 2.12 Notwithstanding the above the HA decided to revisit the conditions in more detail including the role of the BNRR.
- 2.13 A formal response from the HA in the shape of a letter from Garry Frostick was received. This was not the aforementioned response as prepared by DH but a restatement of the HA position and role in the planning process. The response of DH to my queries about the letter explained that it was not intended to negate or set aside our useful dialogue but to simply restate the “formal” position of the HA.
- 2.14 In summary a protracted dialogue with HA and their advisors has identified compelling reasons why the passage of time has changed the need for and appropriateness of the stated A27 works. Clearly the most disruptive works to the Bognor and Oving junctions have been overtaken by events and in the case of Bognor alternative proposals to the A259 identified. In the case of the Oving Crossroads an HA road safety scheme will negate the Inspectors proposals and the longer term proposals for the junction will also change the way in which the junctions perform.
- 2.15 The Conditions relating to the Crockerhill junction and the Fontwell Roundabout relate to relatively minor signing and white lining works. The traffic appraisal identified that the Conditions were triggered by 1 additional vehicle trip at Crockerhill and 9 vehicle trips at Fontwell in the peak periods (See Appendix (i)). The phased construction of the site would suggest that the timings are inappropriately short and also emerging proposals of the HA may now render the works and the Conditions themselves unnecessary.

3.0 SUMMARY

- 3.01 The downturn in the economy has stalled the progress of Site 6 at Felpham and it will now commence at a later stage than envisaged by both the Appeal Inspector and the HA at the time of the enquiry in 2005.
- 3.02 Conditions 56-59 relating to the A27 junctions have been revisited in the light of emerging road safety schemes, major trunk road schemes and major development scenarios. All of these have combined to render the Conditions inappropriate and their replacement by contributions and revised occupation triggers.
- 3.03 BDW having considered the dialogue with the HA have proposed a schedule of contributions in lieu of works together with occupation triggers in Section 5.0 of the proposed Variation of Terms to the S106 Agreement.

Appendix (i)

“Appraisal of Impact upon A27 Junctions”

DEVELOPMENT AT SITE 6 FELPHAM & BERSTED

APPRAISAL OF IMPACT UPON A27 JUNCTIONS

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- (ii) Traffic Flow Diagrams & Tables
- (iii) A259 & B2144 Traffic Counts

1.0 INTRODUCTION

1.01 Development of site 6 at Felpham is to be accompanied by a significant amount of highway improvements. These can be summarised briefly as :-

- Construction of the Bognor Northern Relief Road
- Improvements to the A259 corridor through Bognor Regis
- Improvements to junctions on the A27 Trunk Road around Chichester

1.02 Development on both of the proposed residential areas at Bersted and Felpham has been linked to the introduction of the aforementioned works with a number of trigger levels identified in the Conditions that accompany the planning consents for the site.

1.03 The purpose of the improvements and their linkage to the levels of development on the sites is to mitigate impact and to minimise inconvenience to other uses of the public highway.

1.04 This appraisal examines the proposed works to the A27 Trunk Road together with the triggers that have been assigned to them. It also considers the impact of the construction of 100 dwellings on each of the two sites and their impact over the wider highway network.

2.0 EXISTING HIGHWAY NETWORK

- 2.01 Bognor Regis is connected to the principal highway network by both the A259 and A29. The A259 to the east passes through Littlehampton and Worthing before it becomes a coastal route. Connection to the A27 Trunk Road can be achieved via the A284 and the A280.

Both the A259 to the west of Bognor Regis and A29 to the north have junctions with A27 Trunk Road at Bognor Roundabout and Fontwell Roundabout respectively.

- 2.02 The A259 winds its way from east to west through Bognor Regis where the most congested sections are located. The A259 and A29 cater for both local and long distance traffic.

The A259 provides access to the town centre with its shopping, employment and residential areas.

- 2.03 The Bognor Regis Regeneration Transport Study recommended that the solution to the towns transport problems lay primarily with the construction of two relief roads, the first on an east-west alignment to the north of the town and the second on a north-south alignment to the east of the town centre. The transport assessment of Boreham Consulting subsequently demonstrated that a north-south bypass was not required and it was dropped from the proposals.

3.0 TRANSPORTATION ASSESSMENT & IDENTIFIED WORKS TO MITIGATE TRAFFIC IMPACT

- 3.01 Boreham Consulting prepared a Transportation Assessment on behalf of Hallam Land Management Ltd dated March 2004. This assessment considered the traffic impact of residential devolvment at both Felpham and Bersted and was instrumental in identifying mitigation measures within, and around Bognor Regis. The assessment did not however consider the impact at the more remote locations on the A27 around Chichester.
- 3.02 Notwithstanding the scope of the appraisal not extending to the A27 it provides a valuable insight into the impact of the development on the local network from which the impact at other locations can readily be assessed.
- 3.03 The appraisal highlighted the benefits of constructing an east-west bypass to the north of Bognor Regis and the benefits this would bring to the A259 through the town centre.
- 3.04 Consideration was given to the effect of constructing a number of dwellings on both Felpham and Bersted sites prior to the completion of the BNRR. The conclusion of this analysis was the agreement that development could be phased with 300 dwellings at Bersted and 350 dwellings at Felpham built and occupied prior to the completion of the BNRR. To mitigate the impact upon the local highway network, in particular the A259 a package of improvements was identified at Hotham Park and North Bersted together with the introduction of a bus service after 150-200 dwellings had been occupied. Completion of the BNRR would permit construction of a further 350 dwellings at Bersted and 400 dwellings at Felpham and would be accompanied by further improvements to the A259 and the introduction of bus priority measures.

- 3.05 The planning conditions include occupation targets that link both of the Felpham and Bersted sites to the offsite A27 works. They are as follows:

	Felpham	Bersted
Fontwell Roundabout	49	142
Crockerhill Junction	0	49
Oving Crossroads	49	142
Bognor Roundabout	142	0

- 3.06 Conditions relating works to specific levels of occupation would suggest that capacity issues have dictated the need to limit traffic generations on the network. The above suggest that 142 dwellings can be occupied on the Felpham site before works to Bognor Roundabout are required but no dwellings can be occupied on the Bersted site. Similarly 49 dwellings can be occupied on the Bersted site before the Crockerhill works are required but no dwellings on the Felpham site. The impact of the stated development limits will be examined in more detail.

4.0 TRAFFIC IMPACT OF EARLY STAGES OF DEVELOPMENT

4.01 The Boreham Consulting Transportation Assessment considered the number of vehicle trips that will be generated by the Felpham and Bersted Sites both before and after the construction of the BNRR and their impact upon the local network and principal junctions.

4.02 The study can be utilised to examine the vehicular trips that are predicted to use the A259 west to Bognor Roundabout, the B2144 to Oving Crossroads, the A29 to Fontwell Roundabout and the B2233 to the Crockerhill junction with the A27. Of the trips generated by the two sites a number will follow routes that involve the A259 east towards Littlehampton and to central Bognor etc, thereby avoiding the aforementioned A27 junctions.

4.03 The conditions relate to the impact of 49 and 142 dwellings on both sites individually or in combination ie 191 dwellings.

Typical trip generations for 49, 142 and 191 dwellings using the Boreham trip rates are as follows:-

Period	In	Out	Total
0800-0900	8	20	28
1700-1800	18	14	32

49 units

Period	In	Out	Total
0800-0900	24	58	82
1700-1800	53	40	93

142 units

Period	In	Out	Total
0800-0900	32	78	110
1700-1800	71	53	124

191 units

- 4.04 It can be seen from the above that the trips generated on the network in and around Bognor Regis vary from 28 – 32 for 49 dwellings, 82-93 for 142 dwellings and 110-124 for the combination of 49 on one site and 142 on the other. The trips are distributed and diluted across the highway network, some of which pass through the stated A27 junctions.
- 4.05 It is also proposed to assess the impact of 100 dwellings on each of the Bertsed and Felpham sites upon the local network and the A27 junctions.

Typical trip generations for 100 dwellings using the same trip rates considered by Boreham Consulting are as follows:-

Period	In	Out	Total
0800-0900	17	41	58
1700-1800	37	28	65

It can be seen that each site will generate an additional 0.97 to 1.08 trips per minute in the am and pm peak periods respectively.

The Trips generated by Phase 1 prior to completion of the BNRR are as follows:-

Period	Felpham (350)			Bersted (300)		
	In	Out	Total	In	Out	Total
0800-0900	60	144	204	51	123	174
1700-1800	130	98	228	111	84	195

For this scenario the Felpham site will generate an additional 3.4 to 3.8 vehicles/minute whilst Bersted will generate 2.9 to 3.3 vehicle trips /minute during the peak periods.

- 4.06 The impact upon the A27 junctions depends upon the location of the dwellings and the routes they follow primarily in the peak periods. Boreham Consulting examined and commissioned a number of traffic counts within Bognor Regis which were used to examine and predict impact of the development of Site 6. Occupants of the dwellings have alternative routes that they can follow to their place of work, to schools etc during the morning peak period in particular.
- 4.07 The aforementioned counts have been used to produce the directional split diagrams in Appendix (ii). Two sets have been prepared to illustrate the splits both within Bognor itself and outside Bognor where the A259, A29, B2144 and B2233 meet the A27 as it bypasses Chichester. The splits are assessments made of likely traffic patterns that will emerge in the early stages prior to the construction and opening of the BNRR to traffic.
- 4.08 Peak hour flows for the respective scenarios introduced by the Secretary of State have been set out together with a scenario in which 100 dwellings are constructed on either Bersted or Felpham individually or in tandem.
- 4.09 Predicted flows through the four Trunk Road junctions are set out in Table 1 of Appendix (ii). Bognor Roundabout and Oving Crossroads share the flows that use the A259 west towards the A27 and Chichester. Crockerhill junction and Fontwell Roundabout similarly share the flows that use the A29 north from Bognor towards the A27. The remaining flows use either the A259 east towards Littlehampton or a number of roads south of the A259 into the centre of Bognor Regis.

- 4.10 From Table 1 it can be seen what level of traffic generation has been used as the triggers for the A27 junction works.

Taking each junction in turn:-

Bognor Roundabout works are triggered by no occupation at Bersted and 142 occupations at Felpham. The flows associated with 142 occupations on Felpham are 22 additional movements in the am peak and 25 in the pm peak. These equate to 1 additional traffic movement through the junction every 2 mins 44 seconds am and 2 mins 24 seconds pm. Bognor Roundabout currently accommodates a high level of traffic flows against which the above flows are immeasurable.

Oving Crossroads works are triggered by 49 occupations at Felpham and 142 occupations at Bersted. The flows associated with this scenario are 20 additional movements in the am peak and 23 in the pm peak. These equate to one additional traffic movement every 3 minutes am and 2 mins 36 seconds pm. Again in comparison with the current flows accommodated by the junction the flows are immeasurable.

Crockerhill junctions works are triggered by no occupations on Felpham and 49 occupations at Bersted. The flows associated with this scenario are 1 additional movement both am and pm.

Fontwell Roundabout works are triggered by 49 occupations on Felpham and 142 occupations on Bersted, as for the Oving Crossroads. The flows associated with this scenario are 9 additional movements in the am peak and 10 in the pm peak. These equate to one additional traffic movement every 6 mins 40 secs and 6 mins pm.

The effect of a balanced development with similar numbers of dwellings emerging on both sites is illustrated by the 100 dwelling scenarios individually and in tandem.

It can be seen that at both Bognor Roundabout and Oving Crossroads the impact of 100 dwellings at Bersted is equal to the impact of 142 dwellings at Felpham.

- 4.11 A material impact can be interpreted as an increase of 5% on any one arm of a junction. To investigate this situation traffic counts were carried out on the A259 approach to Bognor Roundabout and the B2144 approach to Oving Crossroads during the am and pm peak periods (see Appendix (iii)). The counts revealed two way flows on the A259 of 1695 (am) and 1795 (pm) in 2009 and on the B2144 539 (am) and 801 (pm) (See Table 2). The disparity in the B2144 flows reflects the differing ways in which drivers use the route in the am and pm periods. Table 3 illustrates the predicted increases that each scenario equates to. With 142 dwellings at Felpham the trigger for Bognor Roundabout increases of 1.29 and 1.39% are predicted.

For 49 dwellings at Felpham and 142 dwellings at Bersted the trigger for Oving Crossroads increases of 3.71 and 2.87% are predicted.

- 4.12 If material increases of 5% are considered the impact can be seen in Table 4. By averaging the am and pm assessments up to 360 dwellings could be occupied at Bersted before a material increase in two way flows along the A259 occurred. Similarly up to 520 units at Felpham could be occupied to achieve the same level of increase. With occupations coming forward on both sites at a similar level up to 400 occupations on the two sites could occur before the 5% increase was achieved. Lower values are achieved by considering the B2144 with its lower baseline flow levels against which predicted flows have a higher level of impact. Planned improvements to the Oving Crossroads by the Highways Agency are

likely to bring forward improvements to the performance and safety of the junction at an earlier date than the required 191 occupations on both sites.

- 4.13 It can be seen from the predicted traffic generations that any ARCADY analysis of Bognor Roundabout would be unable to predict any change in junction performance as a result of the levels of development traffic considered. Similarly any LINSIG analysis of Oving Crossroads will be unable to detect any change in signal timings or queues as a result of the predicted development traffic.
- 4.14 Analysis has suggested that the occupation targets that trigger works to the A27 junctions are not capacity based. A total of 142 occupations on Felpham generates 22 (am) and 25 (pm) trips through Bognor Roundabout which is similar to 100 occupations on Bersted, traffic from which triggers the works at no occupations. The analysis that informed occupation triggers is far from clear, as the predicted levels of impact for the early phases are at a very low level in highway and traffic terms. On the assumption that both sites develop in tandem there are compelling reasons to suggest that a minimum of 200 dwellings on Bersted and 200 dwellings on Felpham could be occupied before any of the A27 improvements are carried out. The impact of this would add an additional movement every 46 seconds (am) and 41 seconds (pm) to Bognor Roundabout and every 90 seconds (am) and 86 seconds (pm) to Oving Crossroads.
- 4.15 Traffic generated by the two elements of site 6 will be diluted across the local network and mitigated along the A259 corridor. Completion of the BNRR will also provide a significant level of relief for the A259 through Bognor.
- 4.16 The mitigation measures relating to the A27 junctions together with their timing were introduced at a time when the housebuilding market was relatively buoyant in comparison with the prevailing situation in 2009. The viability assessments that informed housebuilders in 2006 / 2007 are no longer applicable and infrastructure works must now be programmed at times when they are both

absolutely necessary and affordable. Development at Site 6 will introduce additional traffic movements at the A27 junctions but in a steady incremental manner. In the early stages the level of impact is very modest and in traffic terms not material. A combined total of 650 dwellings will be occupied on the sites before construction of the BNRR is completed and the occupation of 400 dwellings on the sites before the A27 works are introduced would on the evidence of this appraisal appear appropriate.

5.0 CONCLUSIONS

- 5.01 This appraisal has attempted to predict the level of impact upon the A27 junctions during the early stages of development of Site 6 at Bognor Regis and found it to be on a modest scale.
- 5.2 The conditioning and timing of mitigation works to the junctions would appear to be unrelated to the scale of any predicted traffic impact. Any benefits in capacity terms will be modest and any rescheduling of their implementation will have an immeasurable impact upon the performance of the junctions.
- 5.03 The Highways Agency is requested to reconsider the planning conditions that relate to the A27 works and agree new implementation triggers that reflect both the predicted traffic impacts and the prevailing state of the housebuilding industry.
- 5.04 As a strategic route the A27 around Chichester will in the future undoubtedly be the subject of major improvements involving grade separation of the junctions. Much of the A27 corridor will eventually be upgraded in this manner. In the meantime introduction of the identified improvements in a timely manner will mitigate the impact of development at Bognor Regis.

Appendix (i)

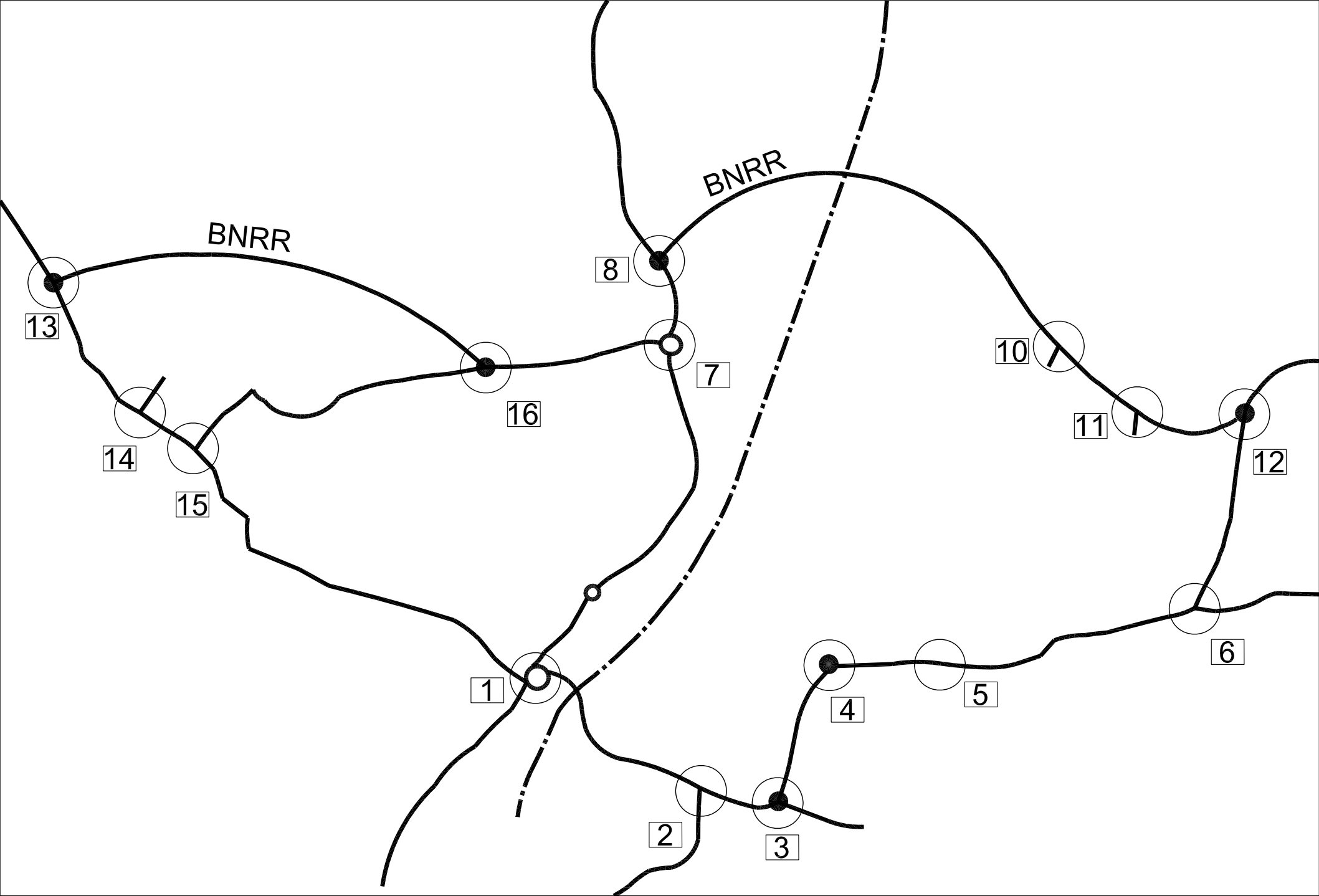
Junction Location Plan



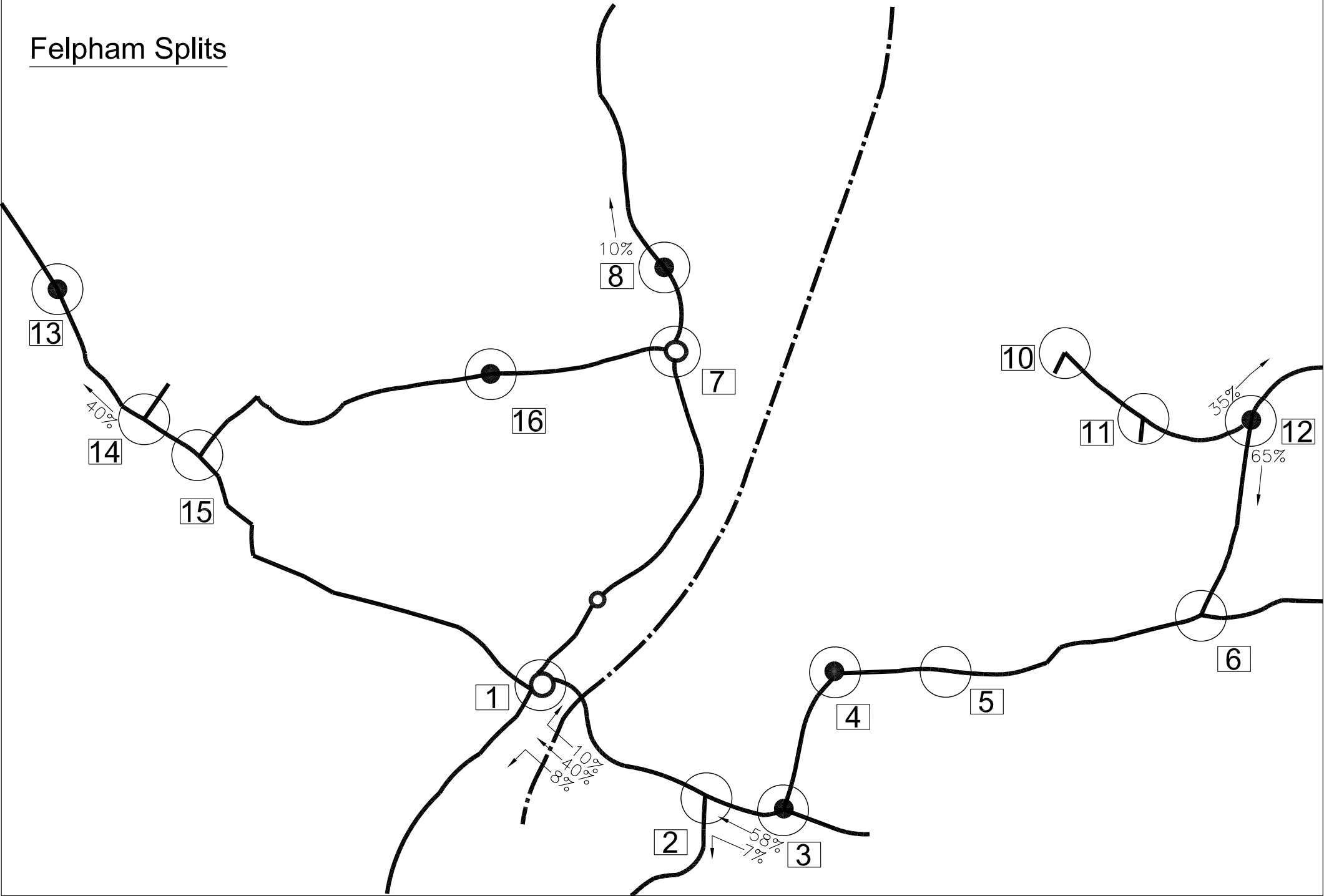
Junction Location Plan

Appendix (ii)

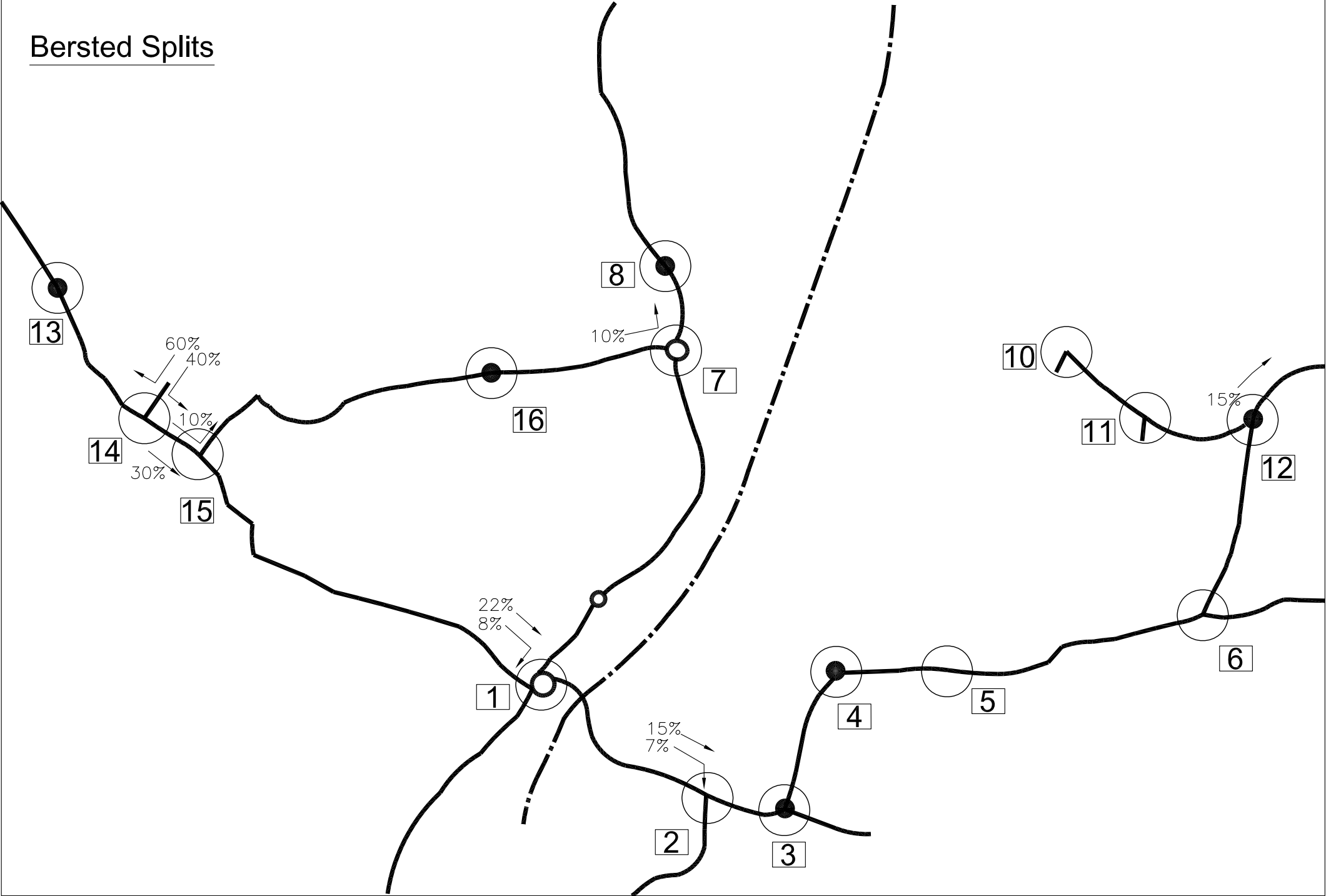
Traffic Flow Diagrams



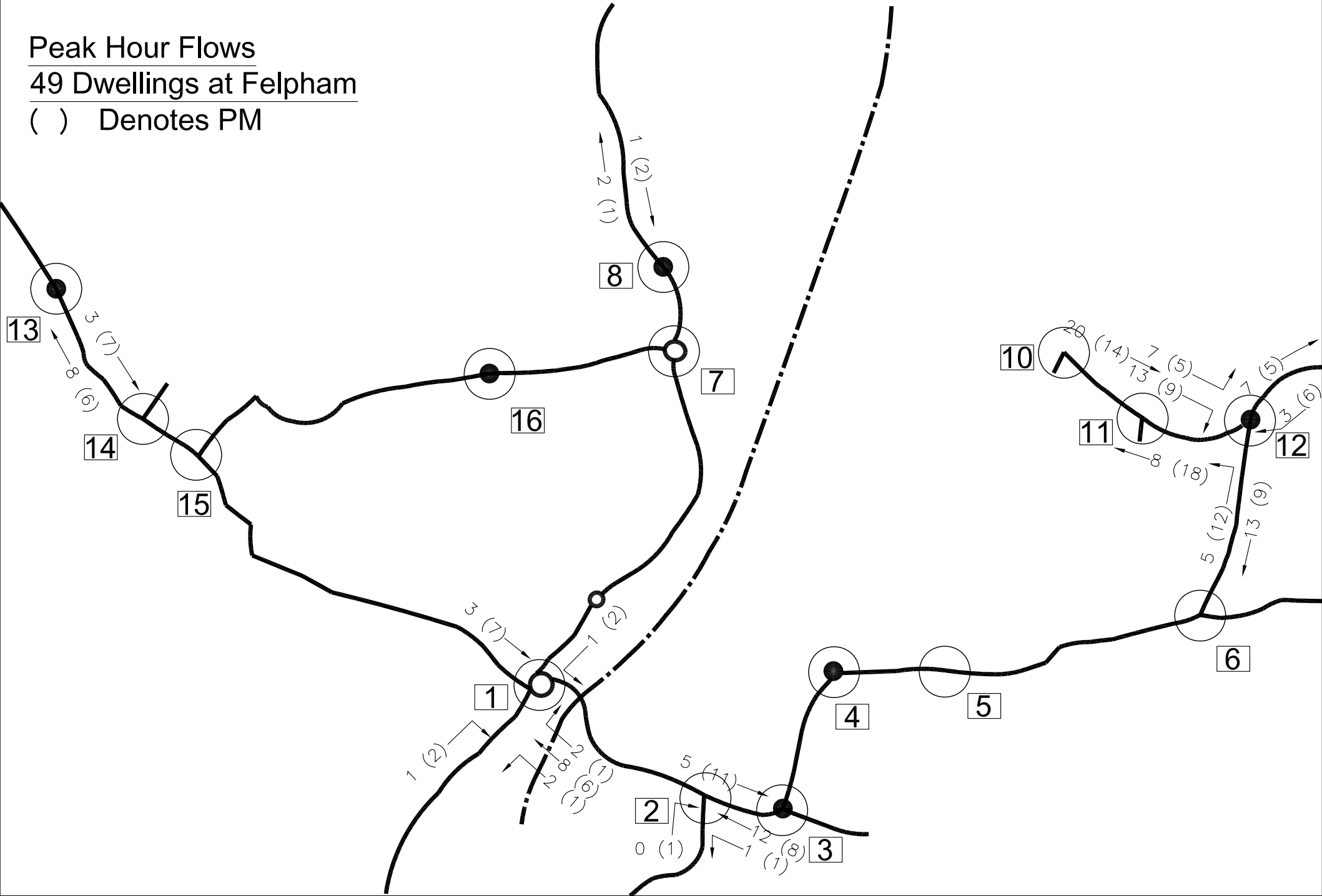
Felpham Splits



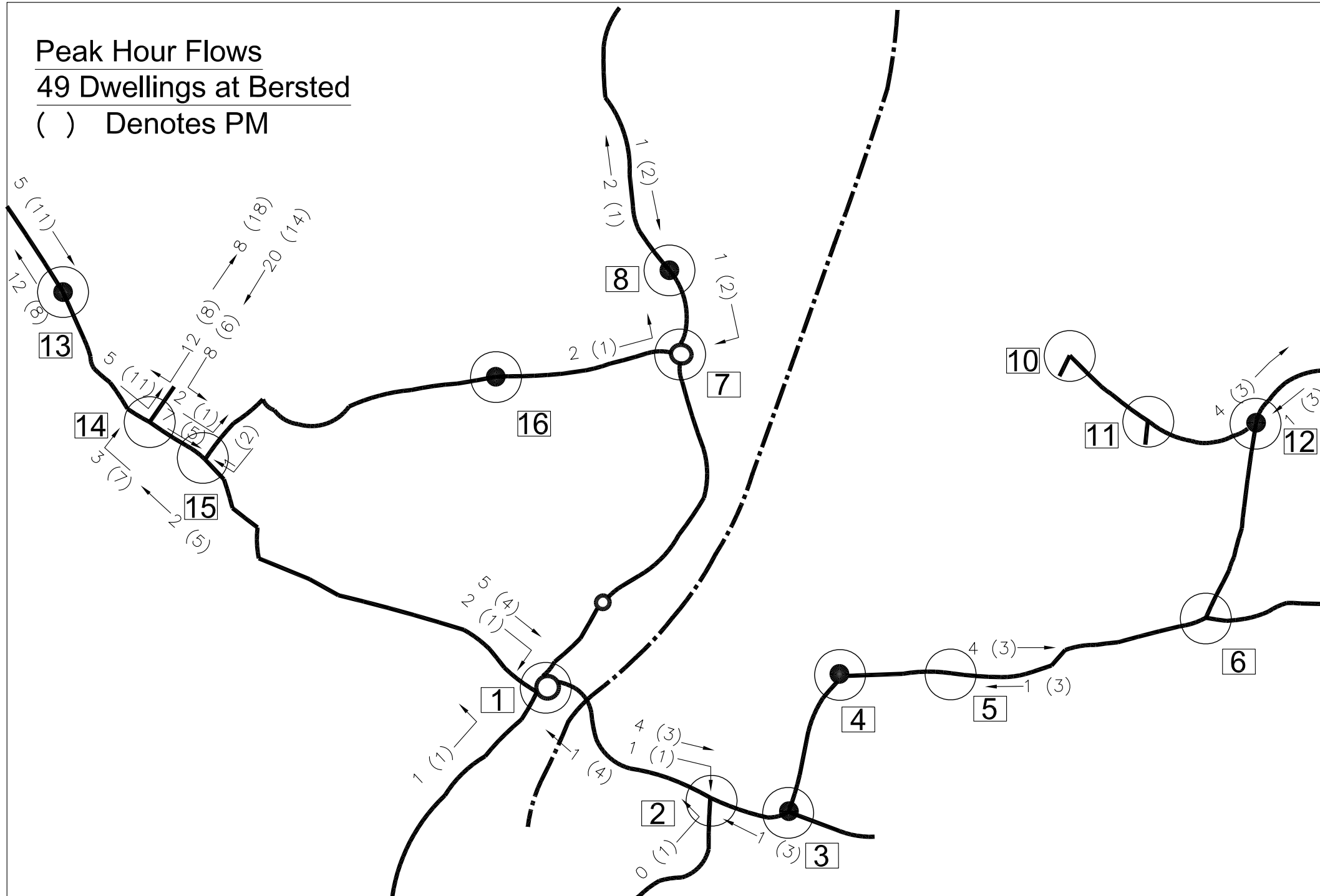
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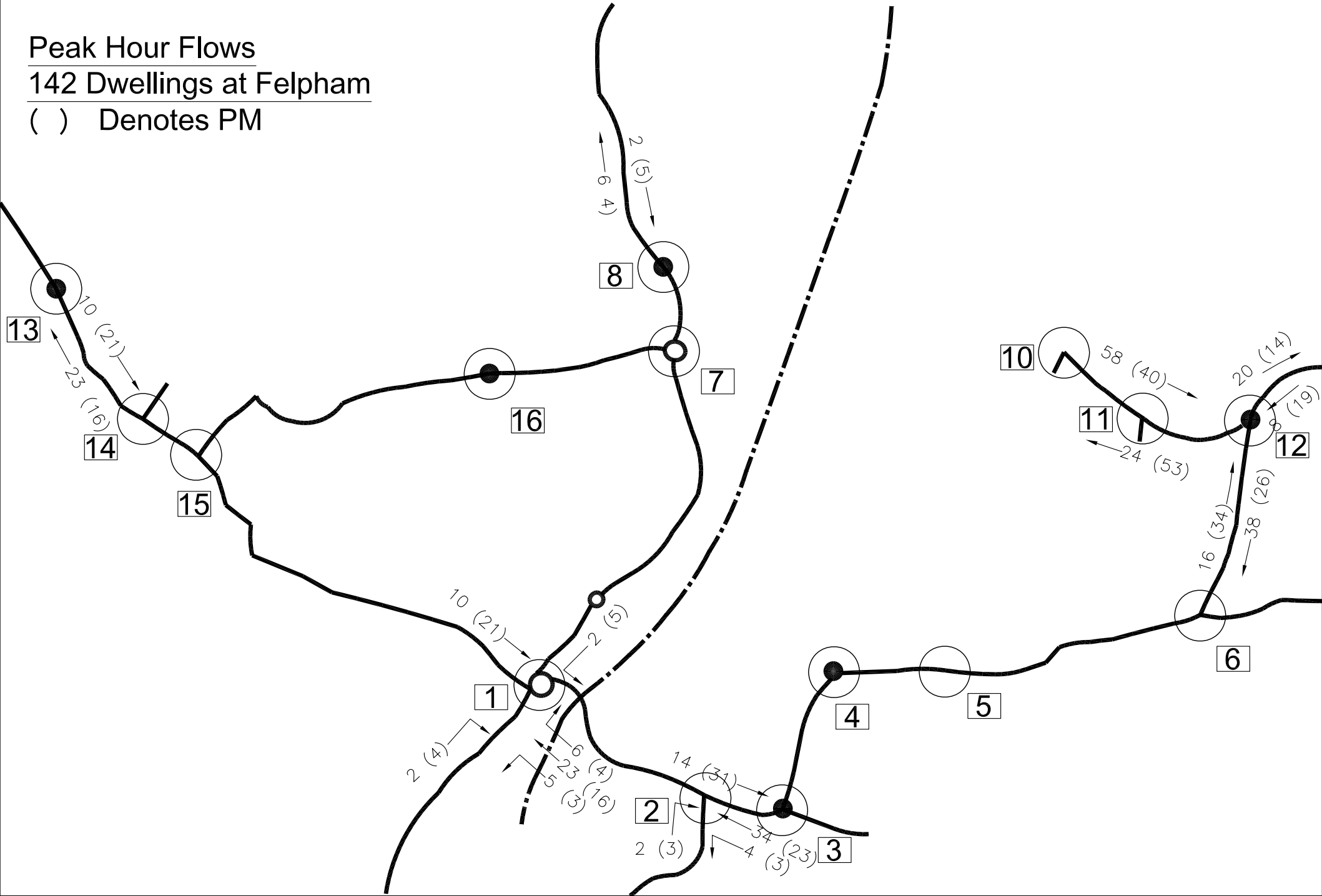
Peak Hour Flows
49 Dwellings at Felpham
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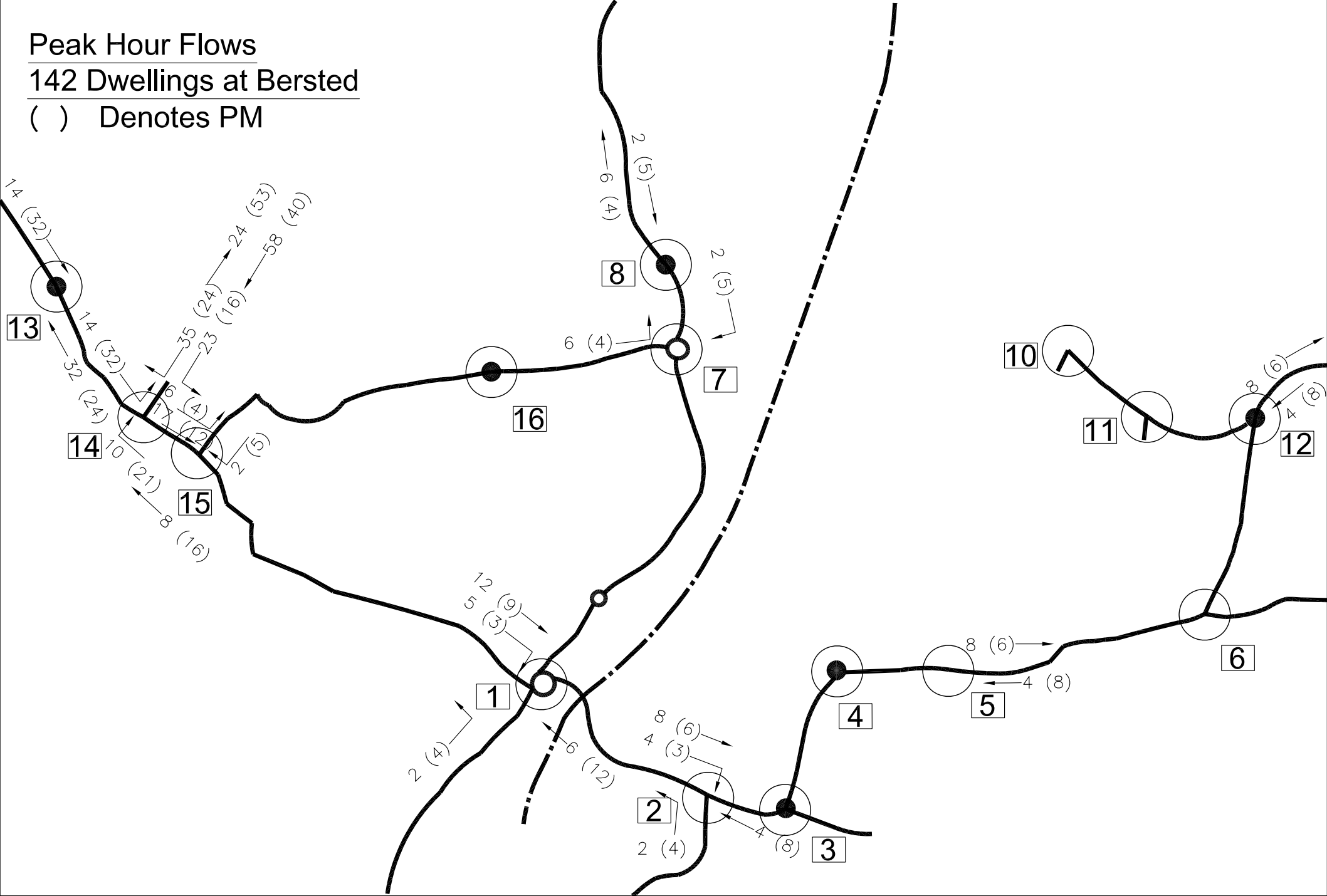
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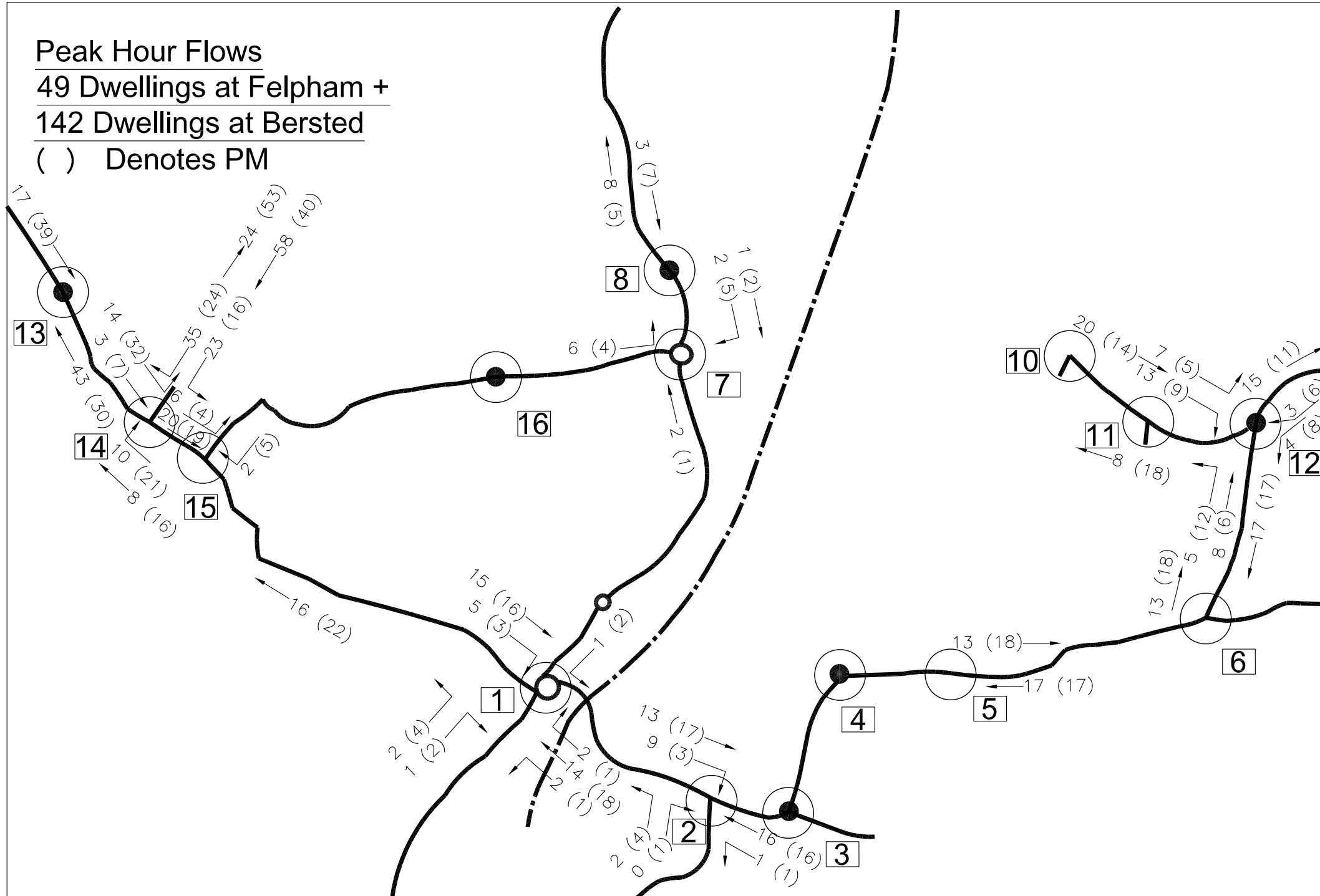
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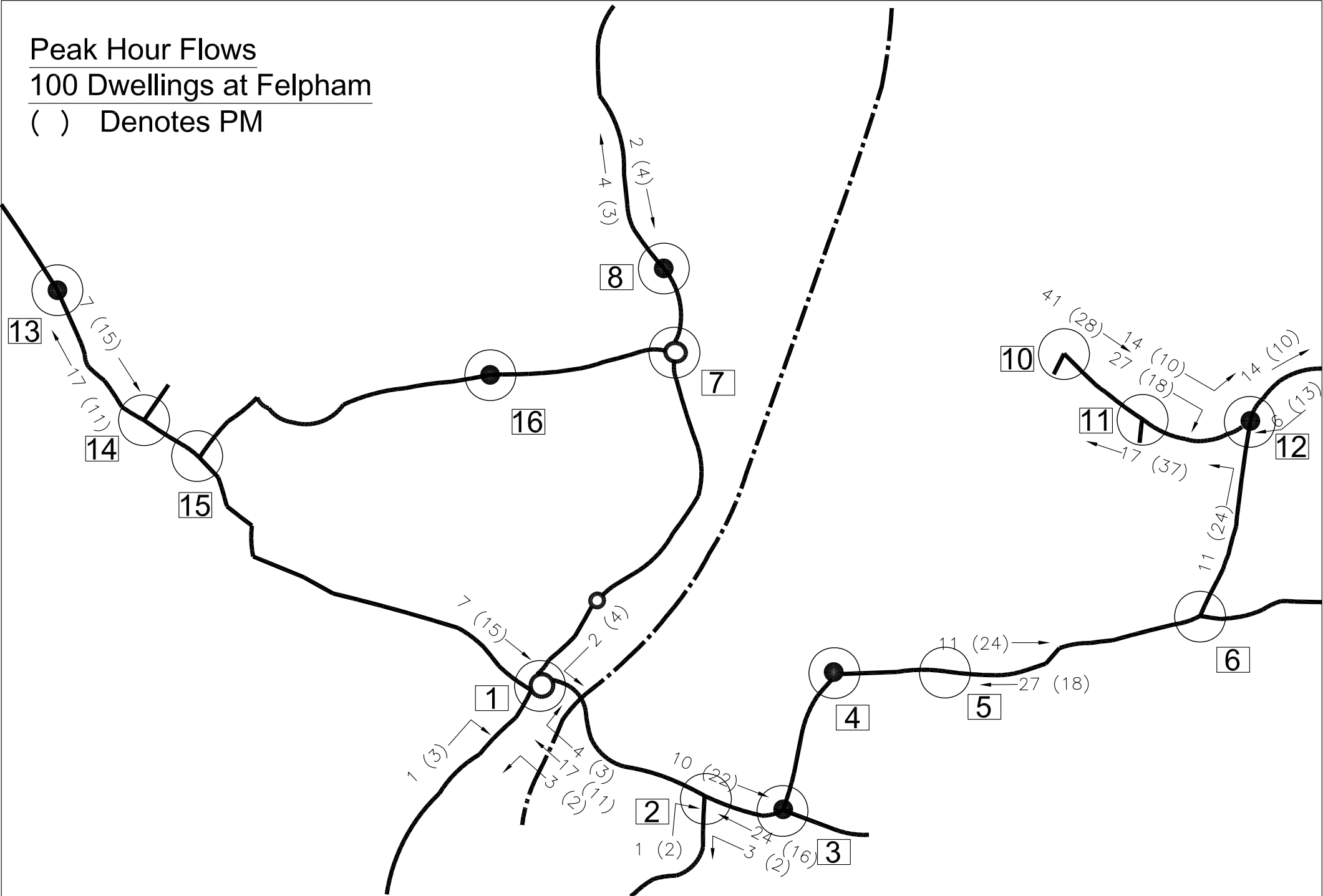
Peak Hour Flows
142 Dwellings at Bersted
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() Denotes PM



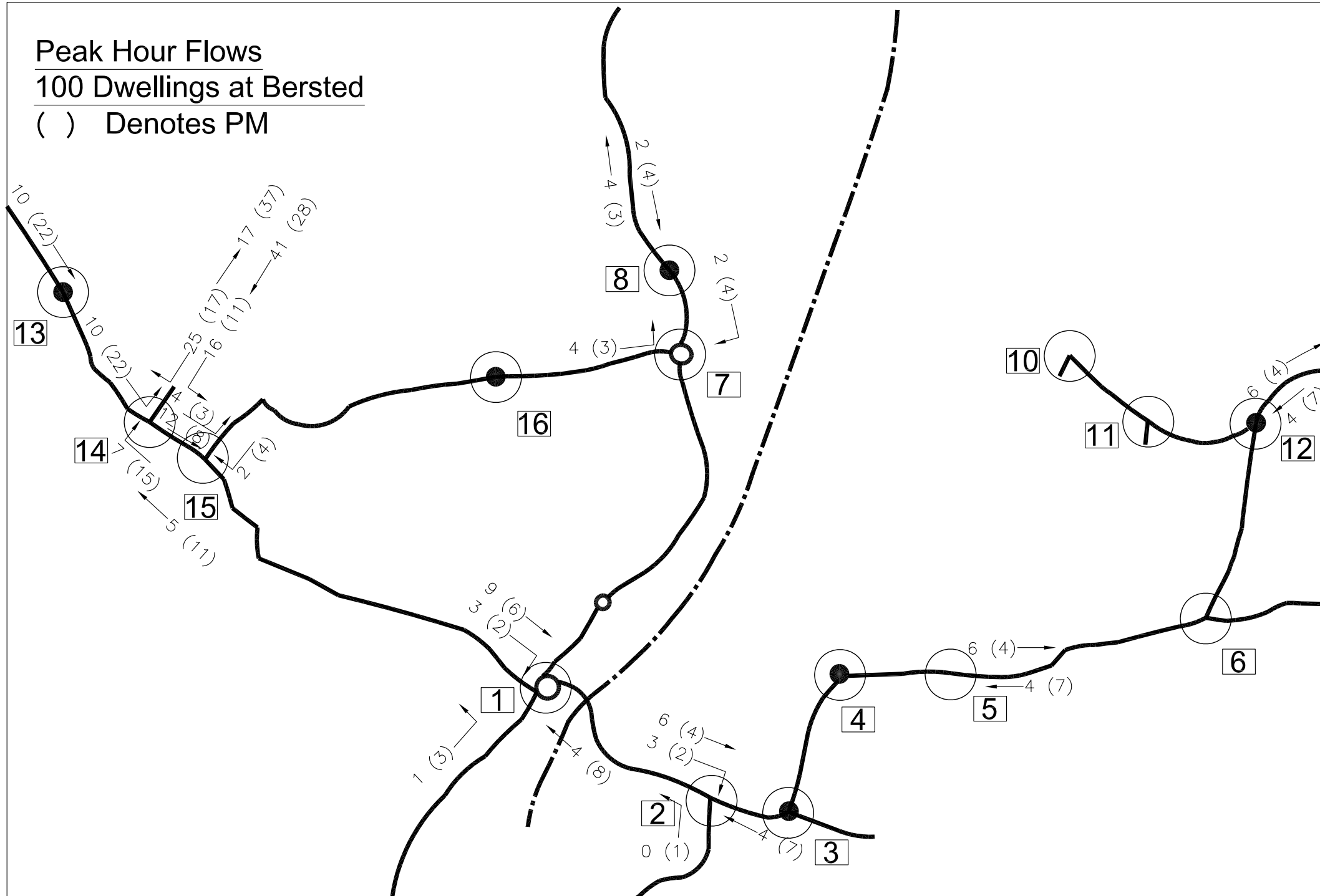
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100 Dwellings at Felpham
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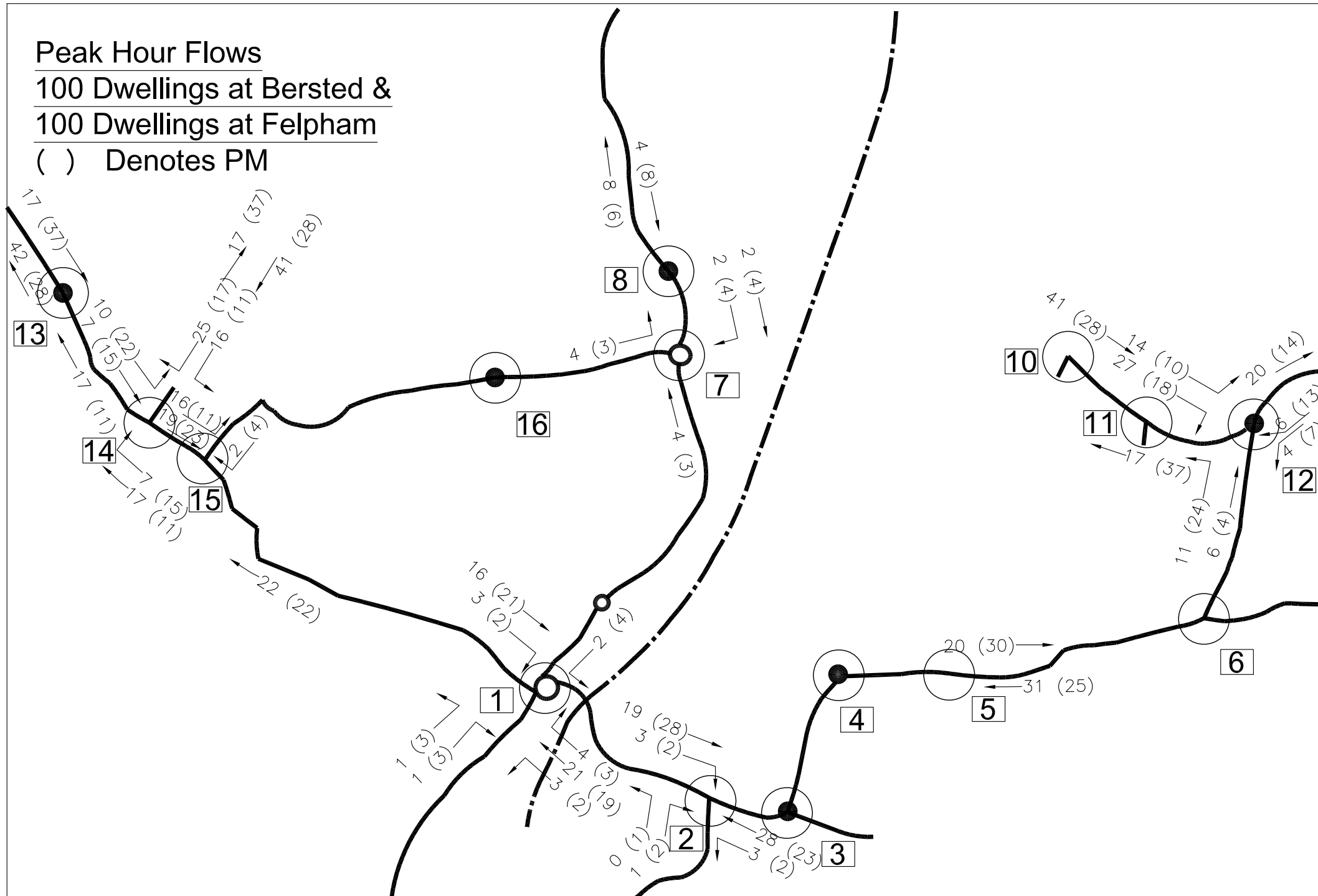
Peak Hour Flows

100 Dwellings at Bersted

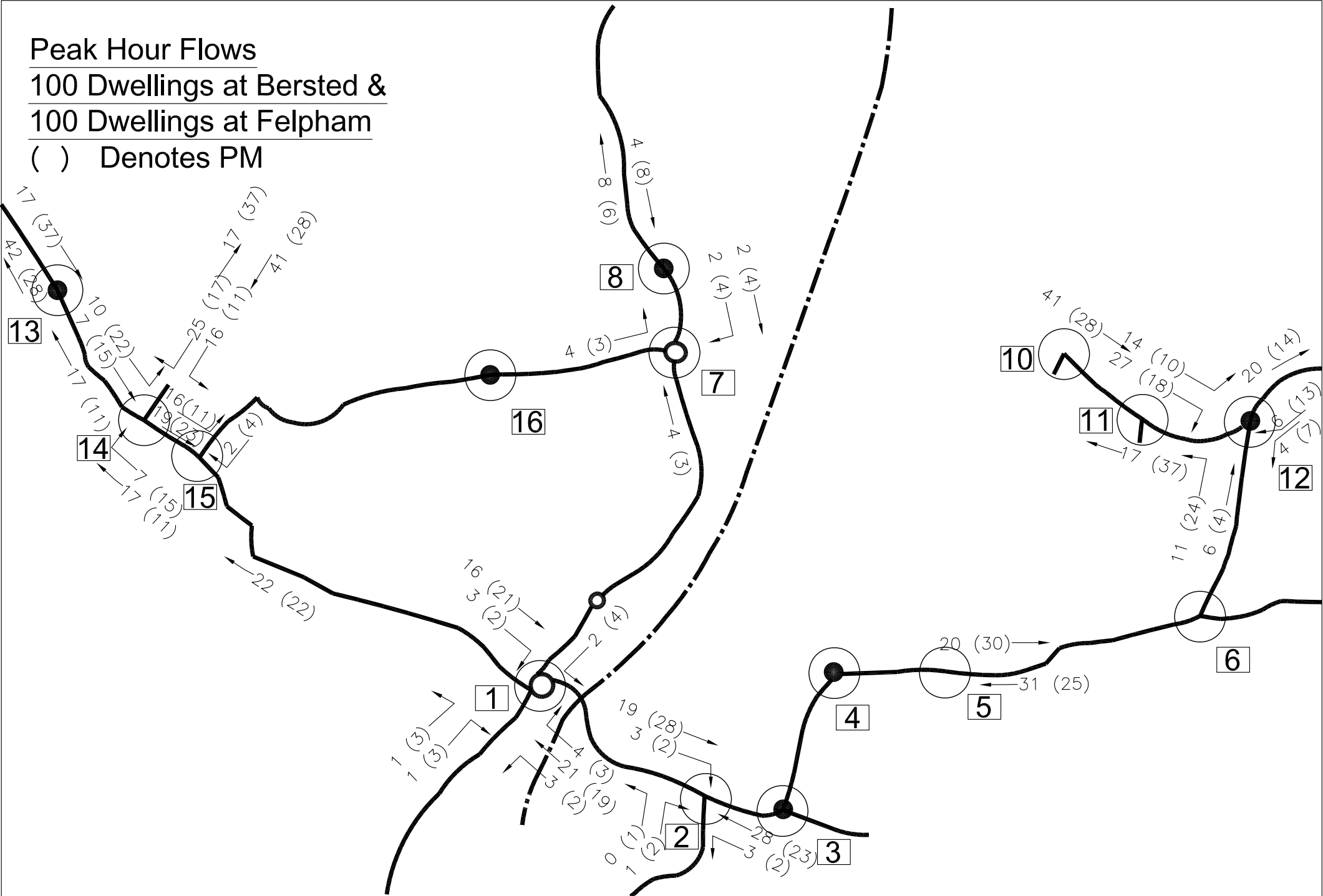
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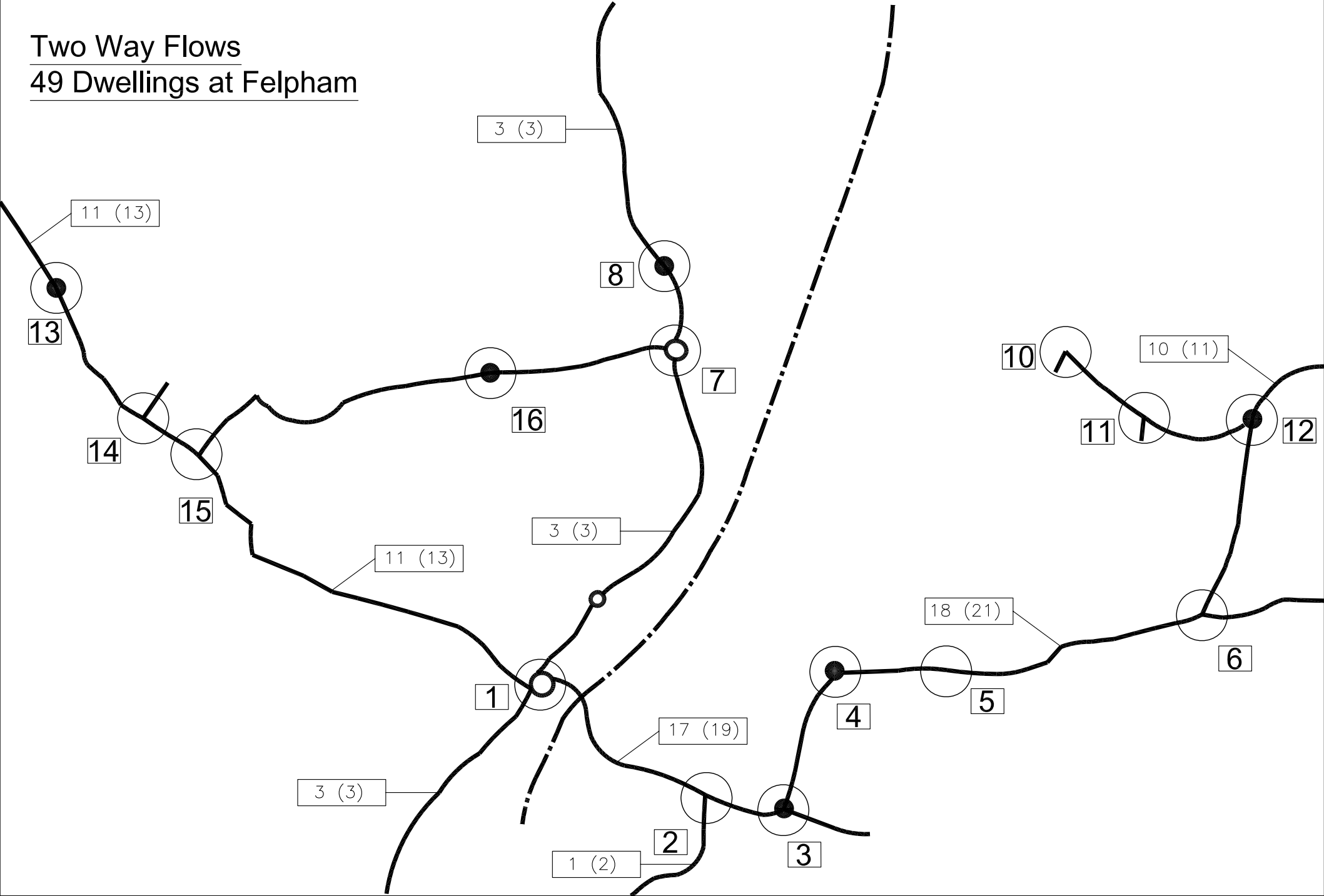
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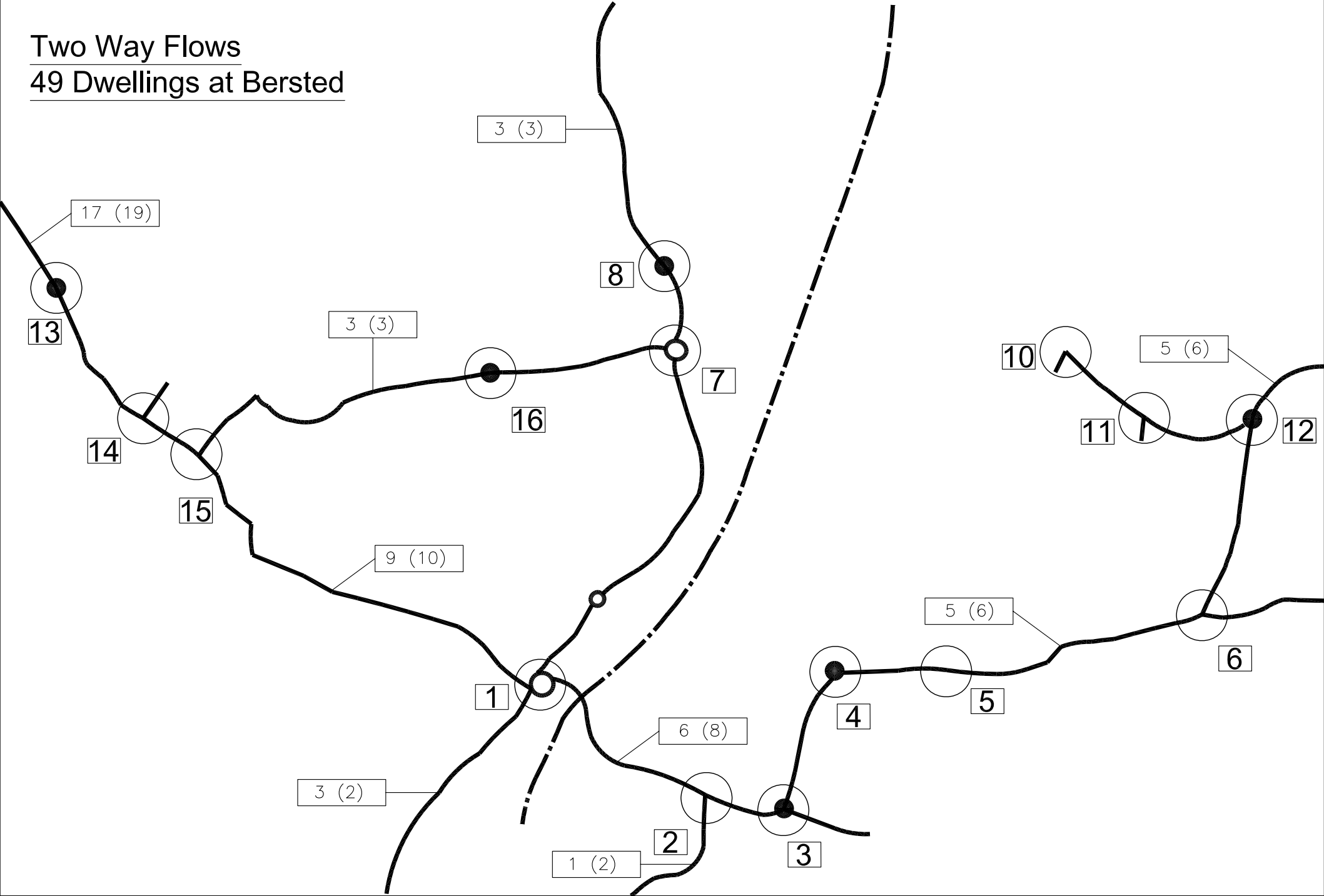
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100 Dwellings at Felpham
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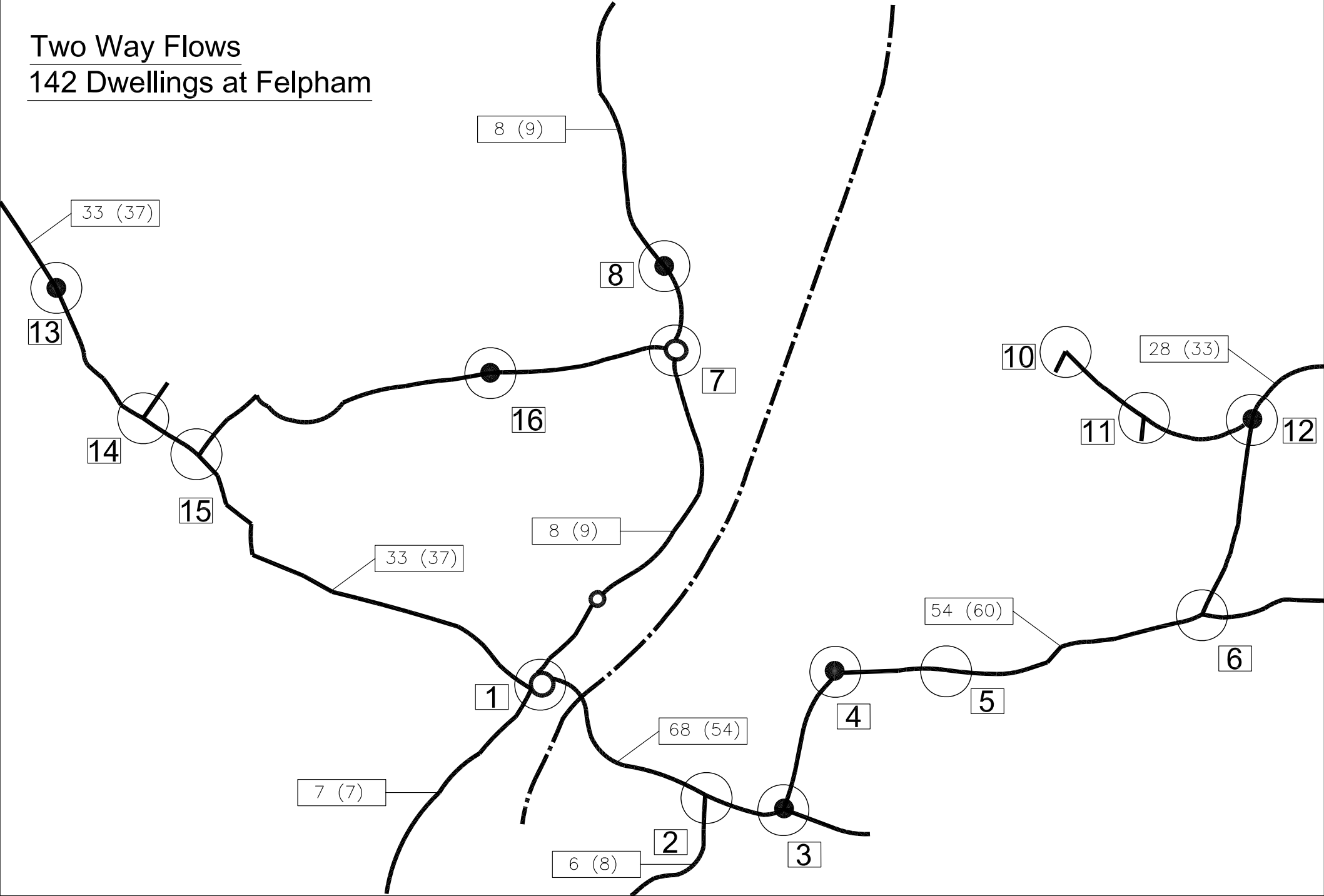
Two Way Flows
49 Dwellings at Felpham



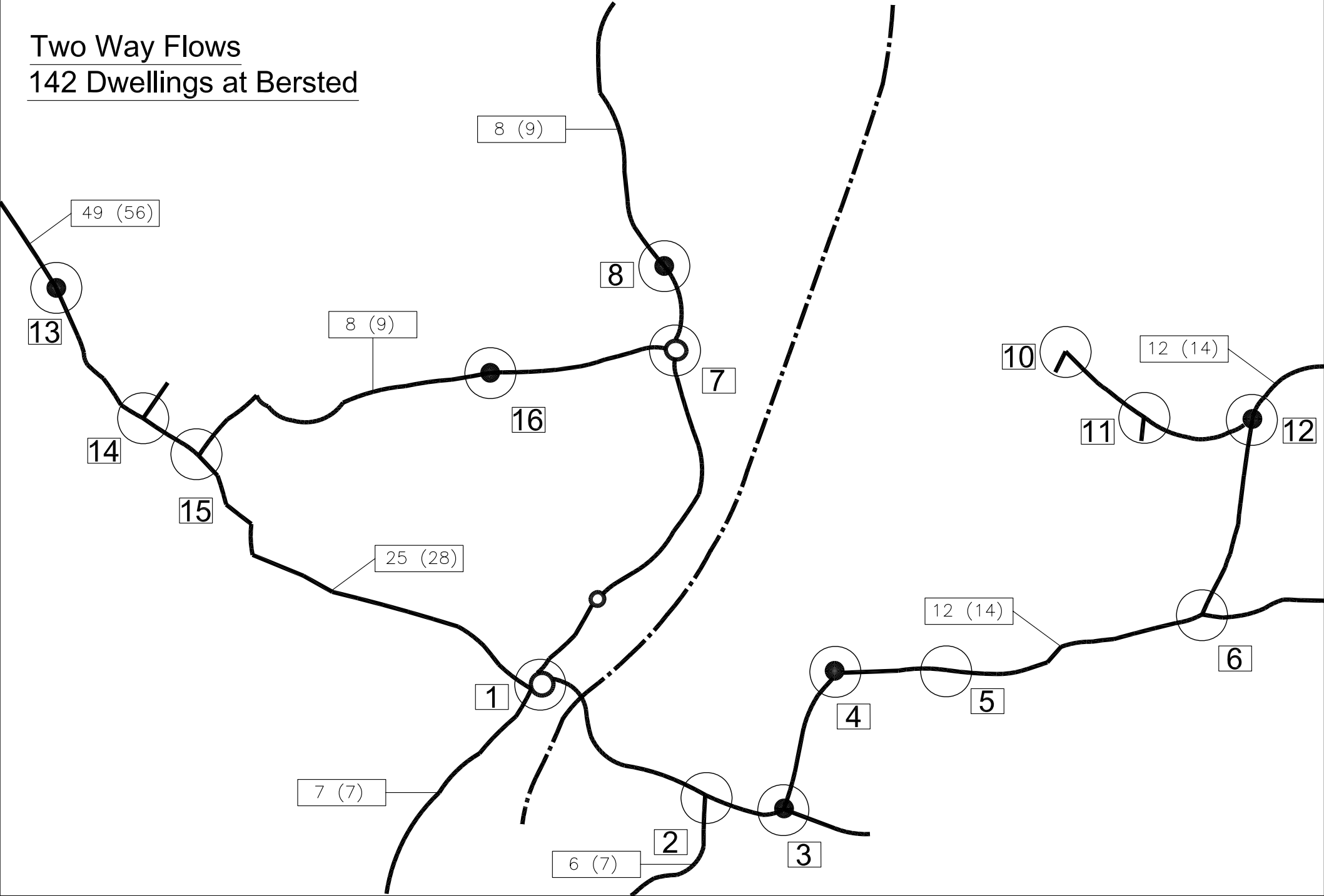
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49 Dwellings at Bersted



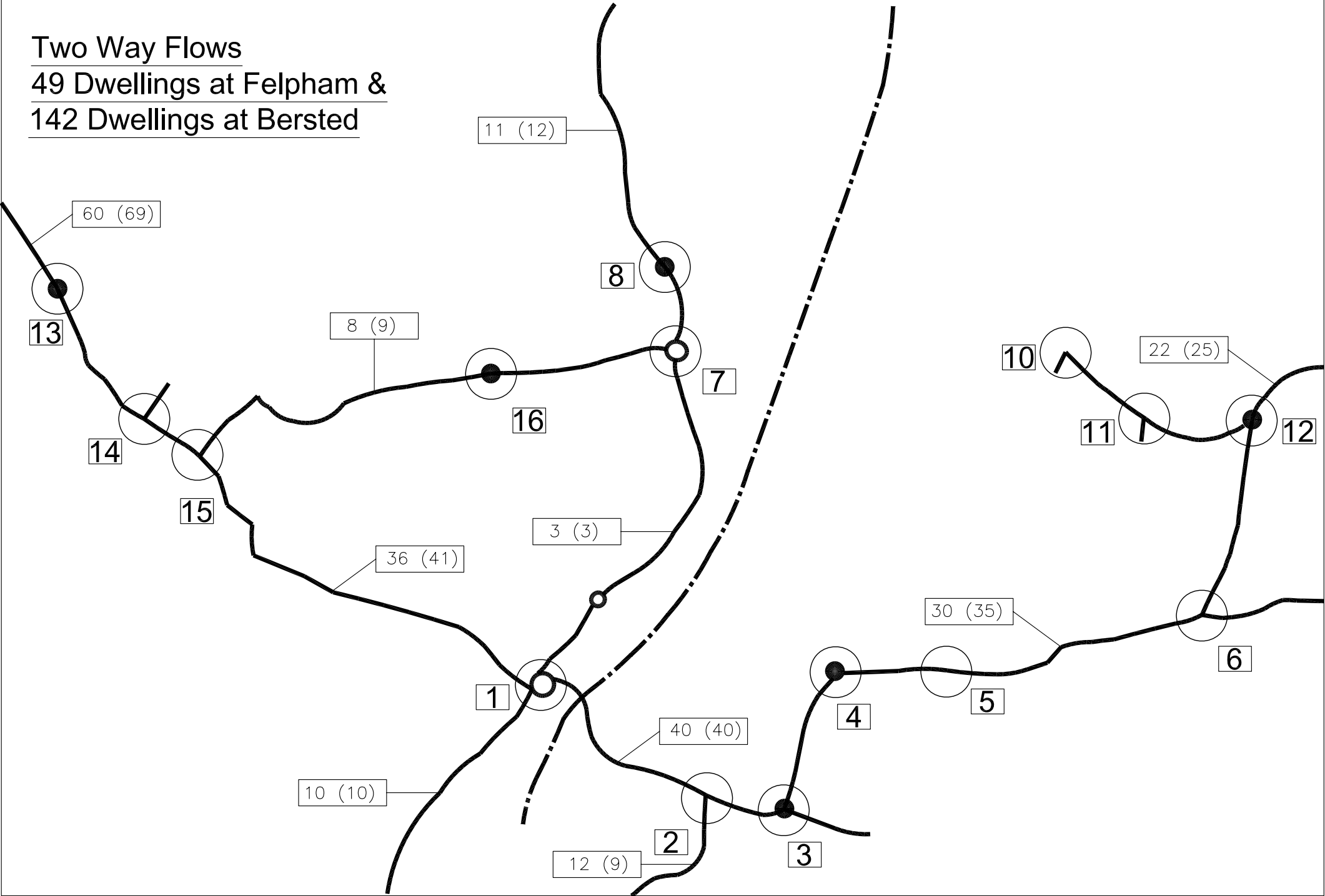
Two Way Flows
142 Dwellings at Felpham



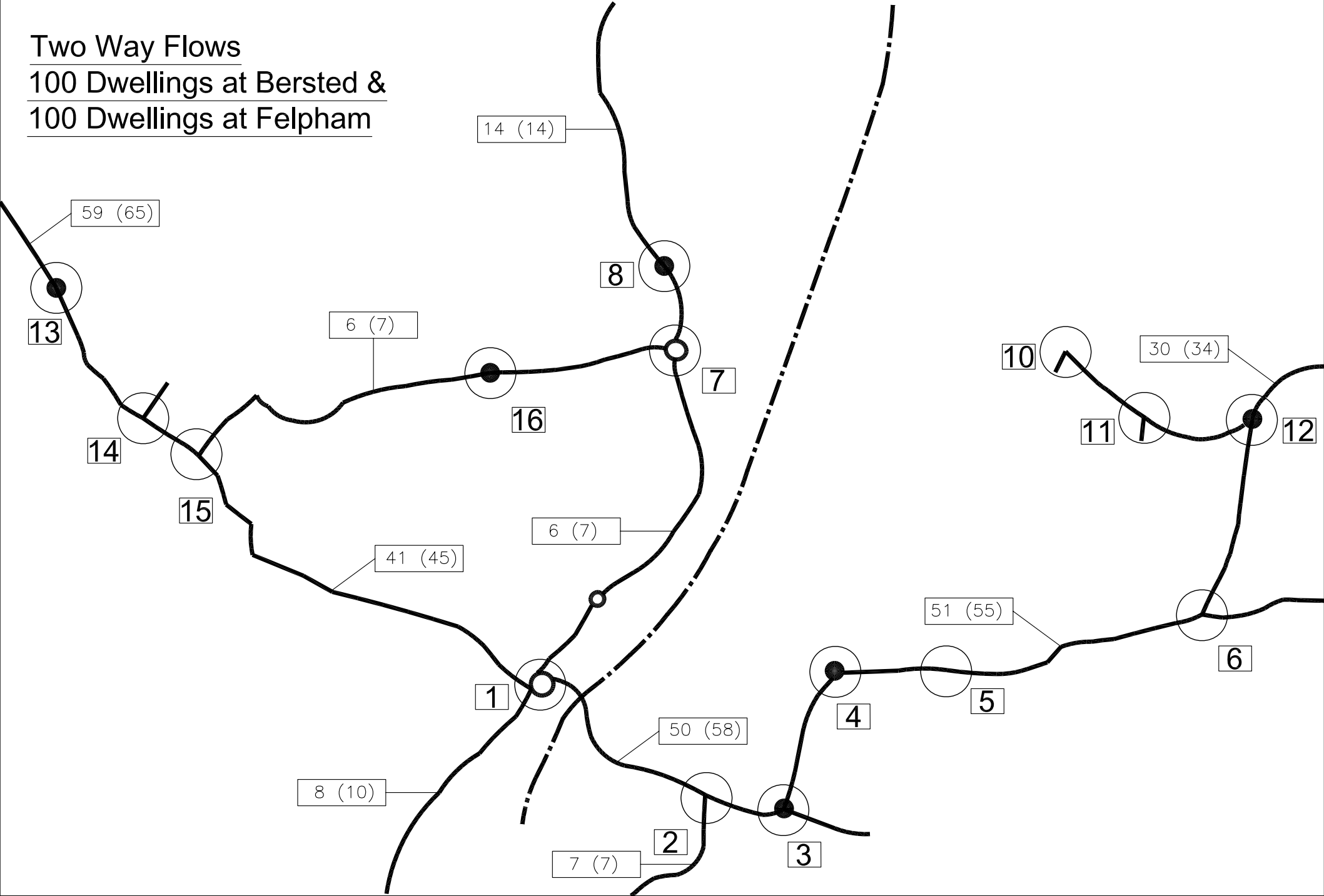
Two Way Flows
142 Dwellings at Bersted



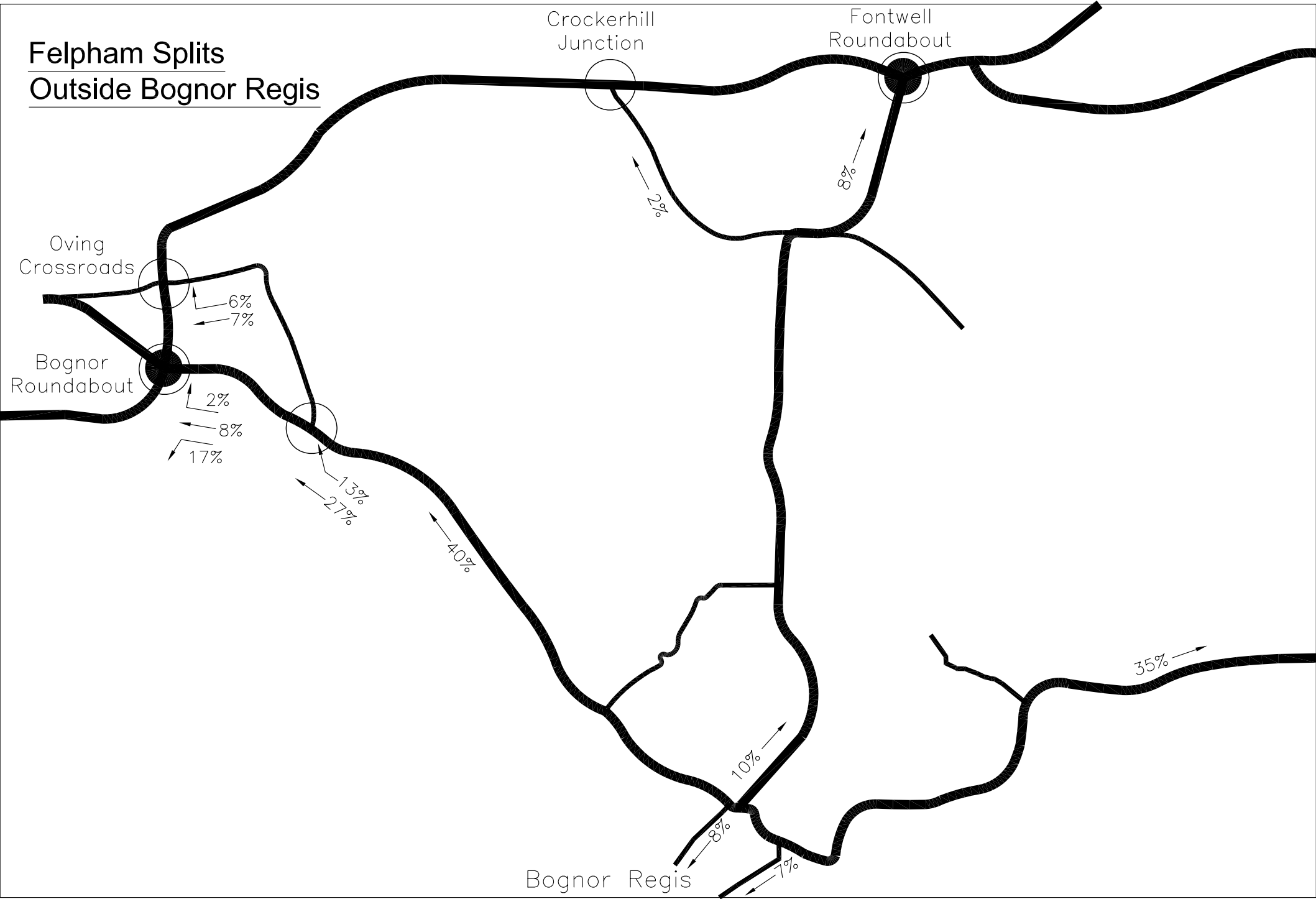
Two Way Flows
49 Dwellings at Felpham &
142 Dwellings at Bersted



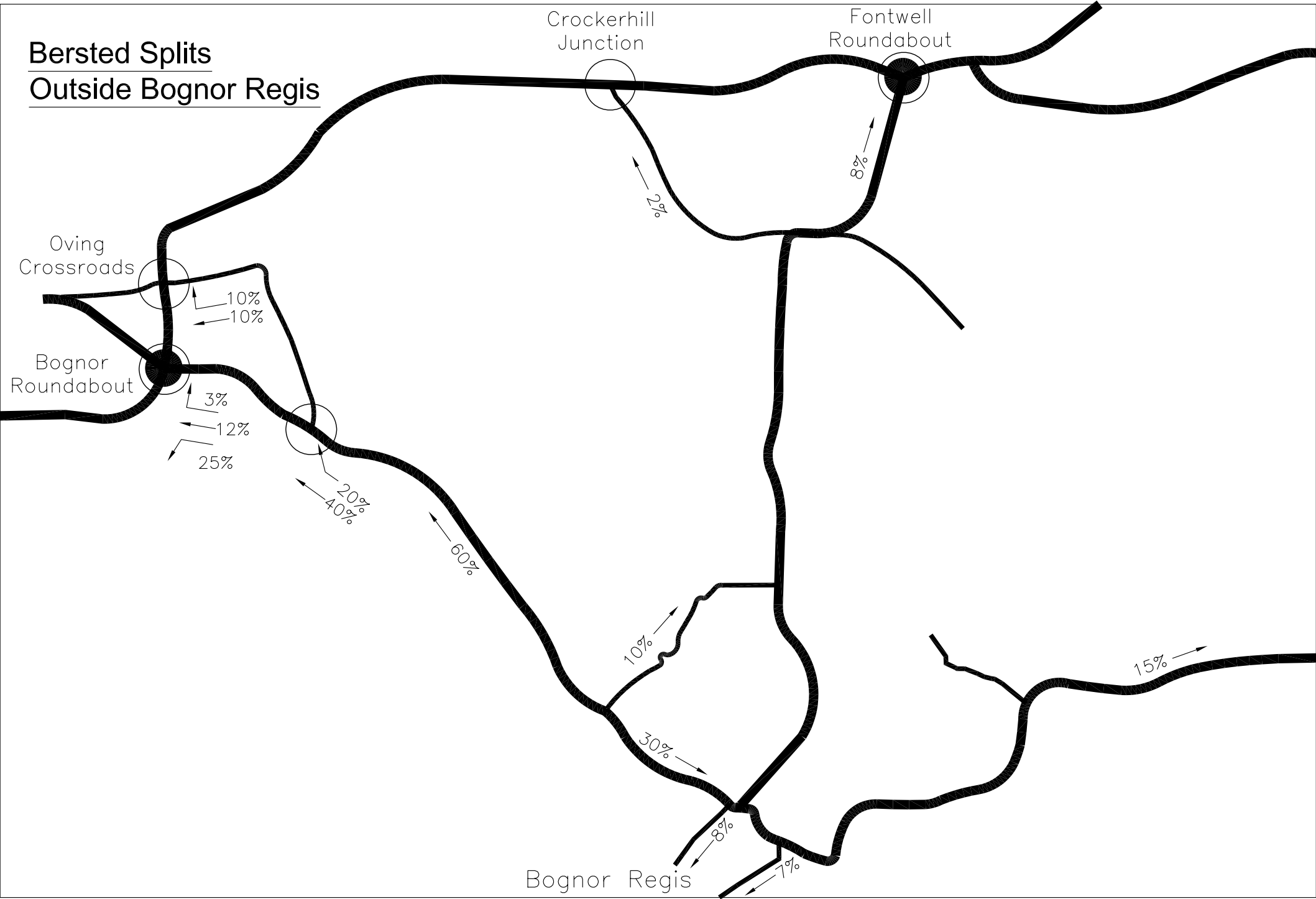
Two Way Flows
100 Dwellings at Bersted &
100 Dwellings at Felpham



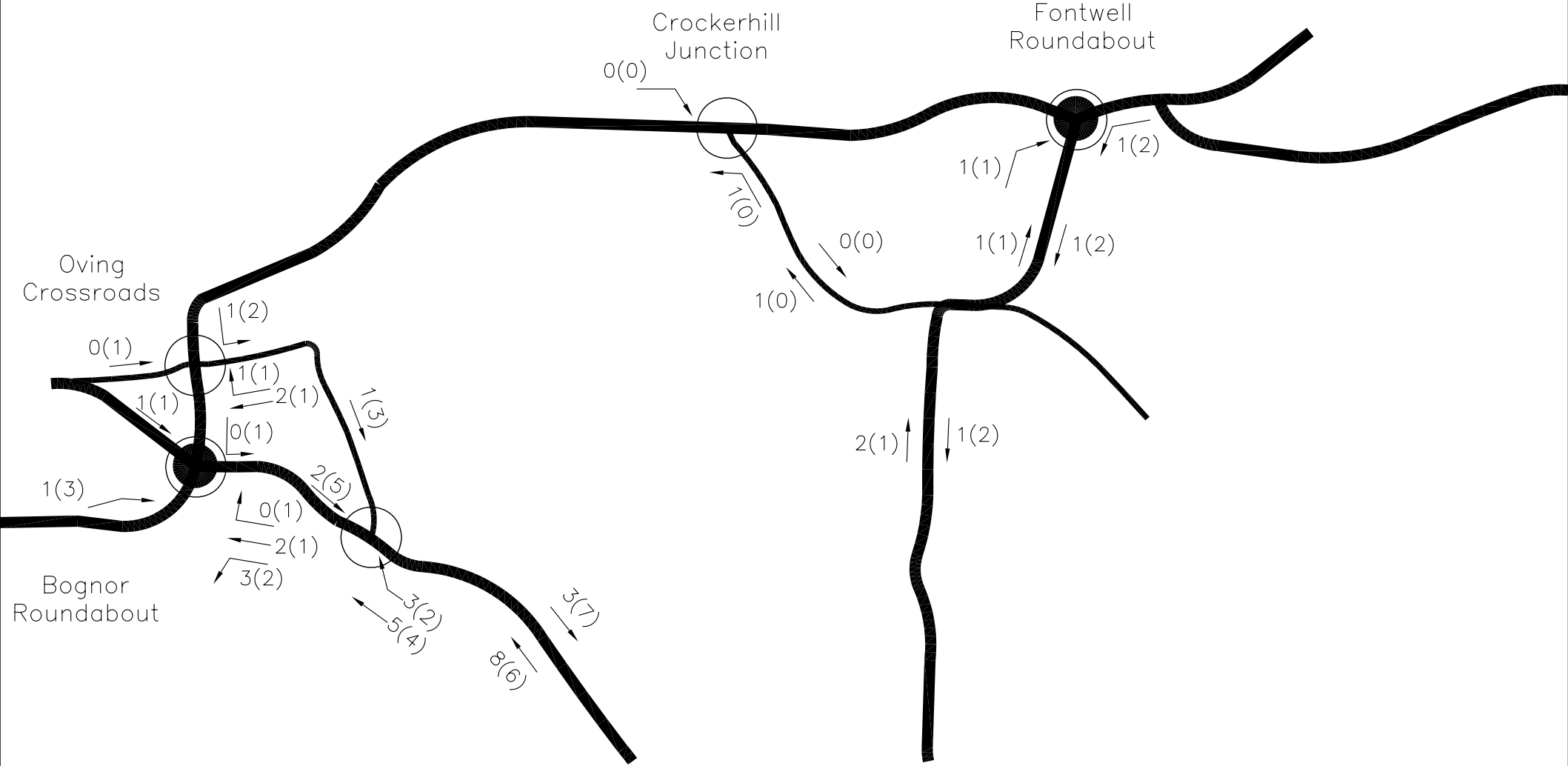
Felpham Splits
Outside Bognor Regis



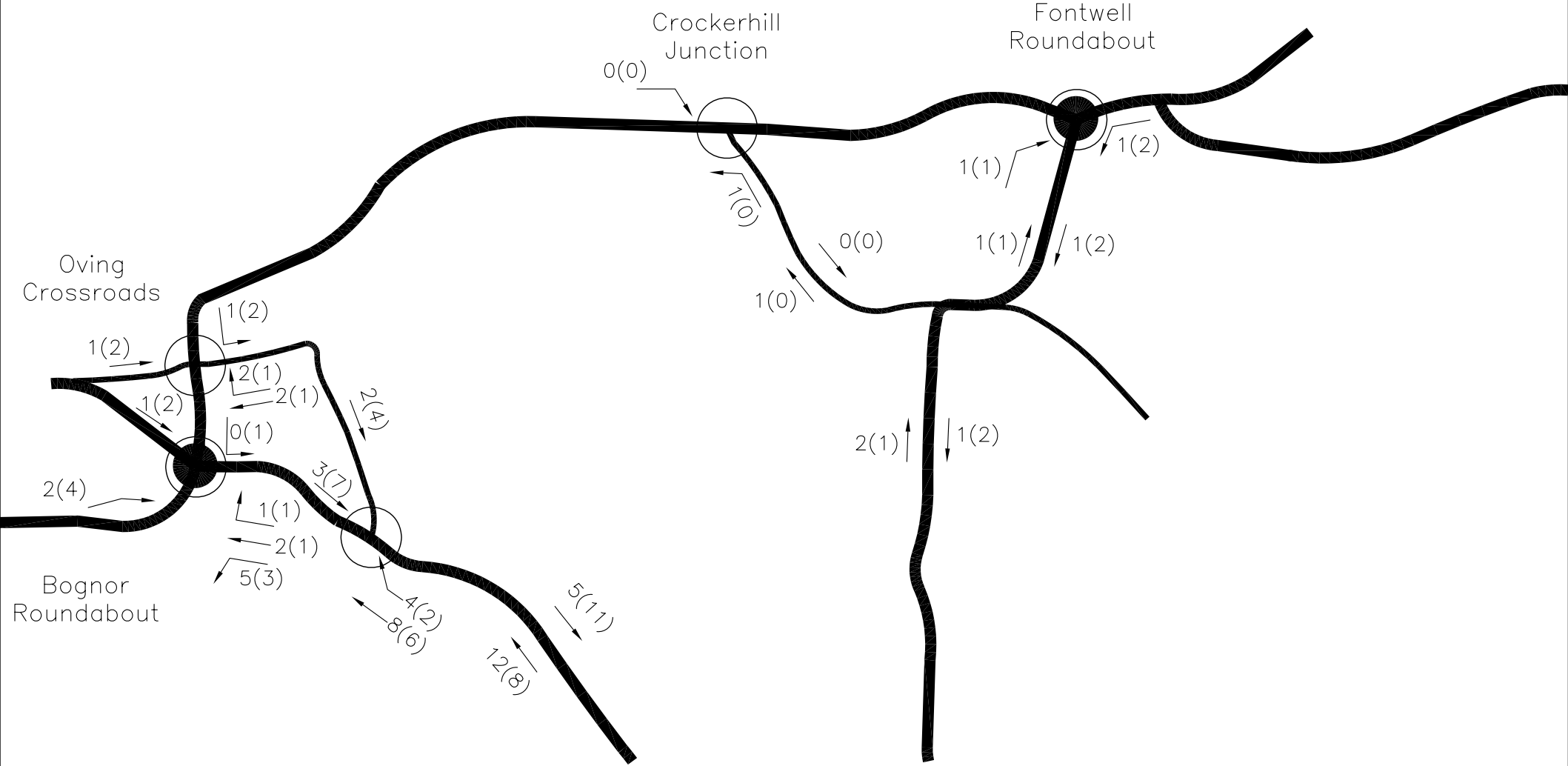
Bersted Splits
Outside Bognor Regis



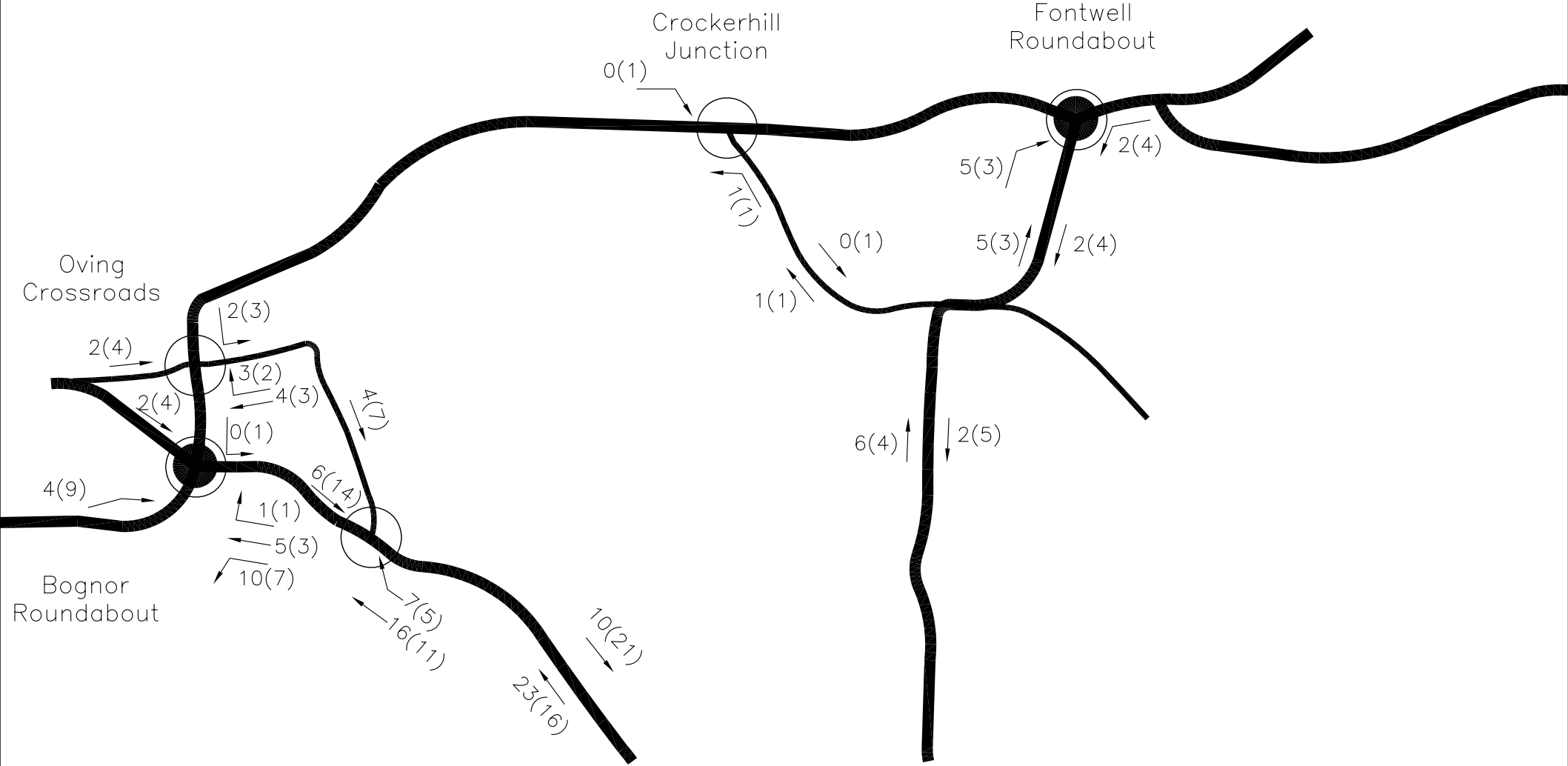
Flows for 49 Dwellings at Felpham
Outside Bognor Regis



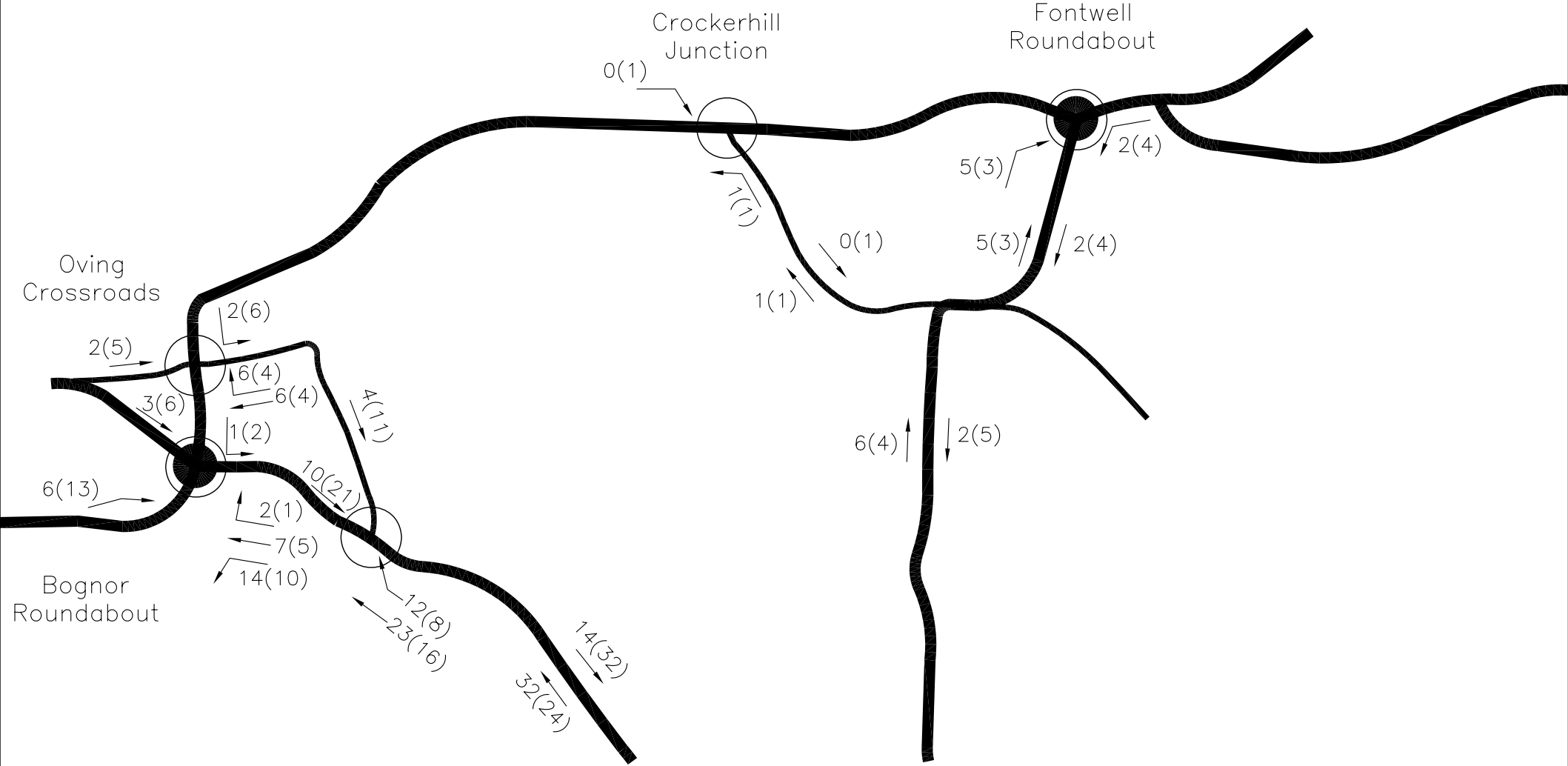
Flows for 49 Dwellings at Bersted
Outside Bognor Regis



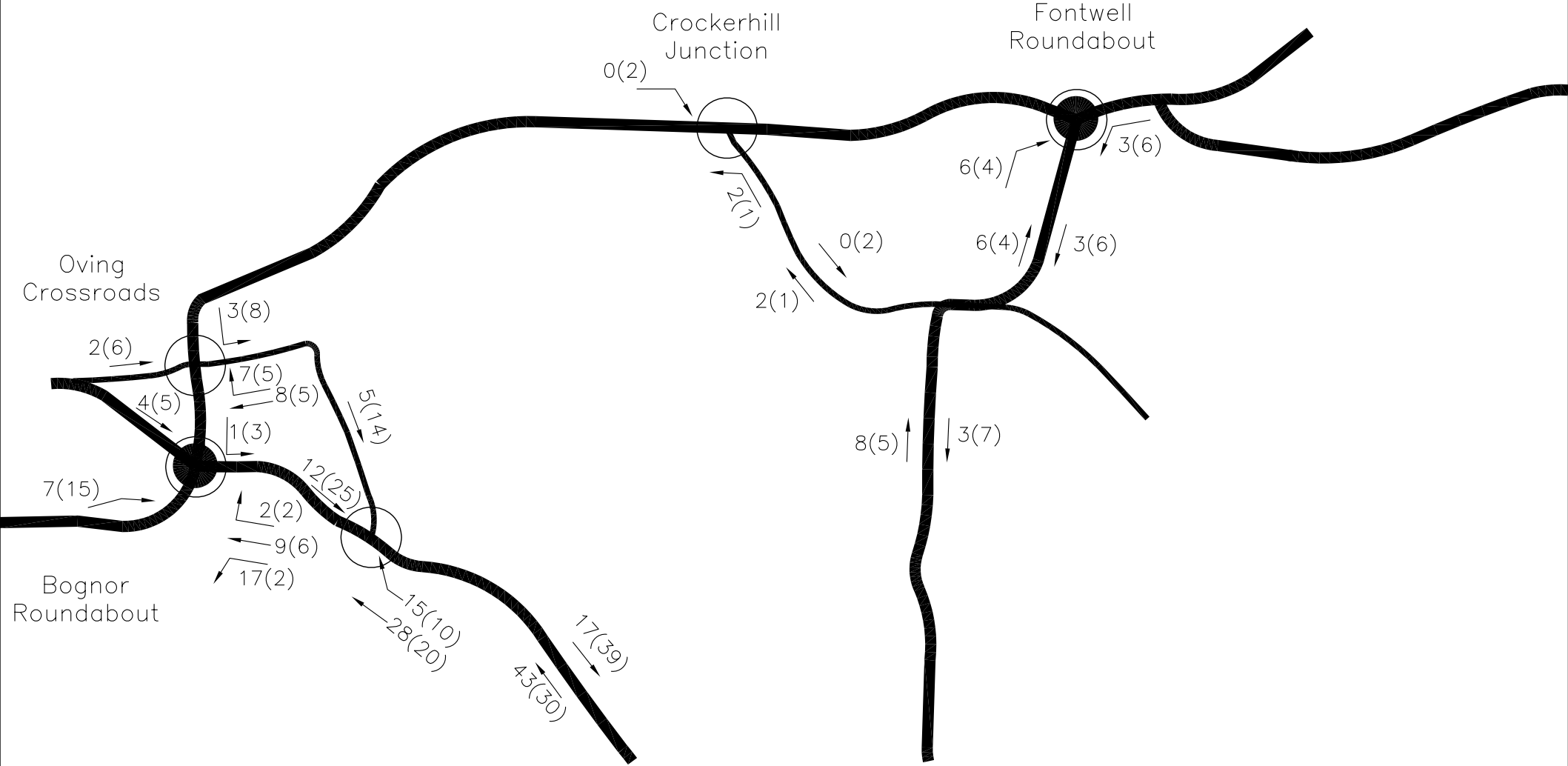
Flows for 142 Dwellings at Felpham
Outside Bognor Regis



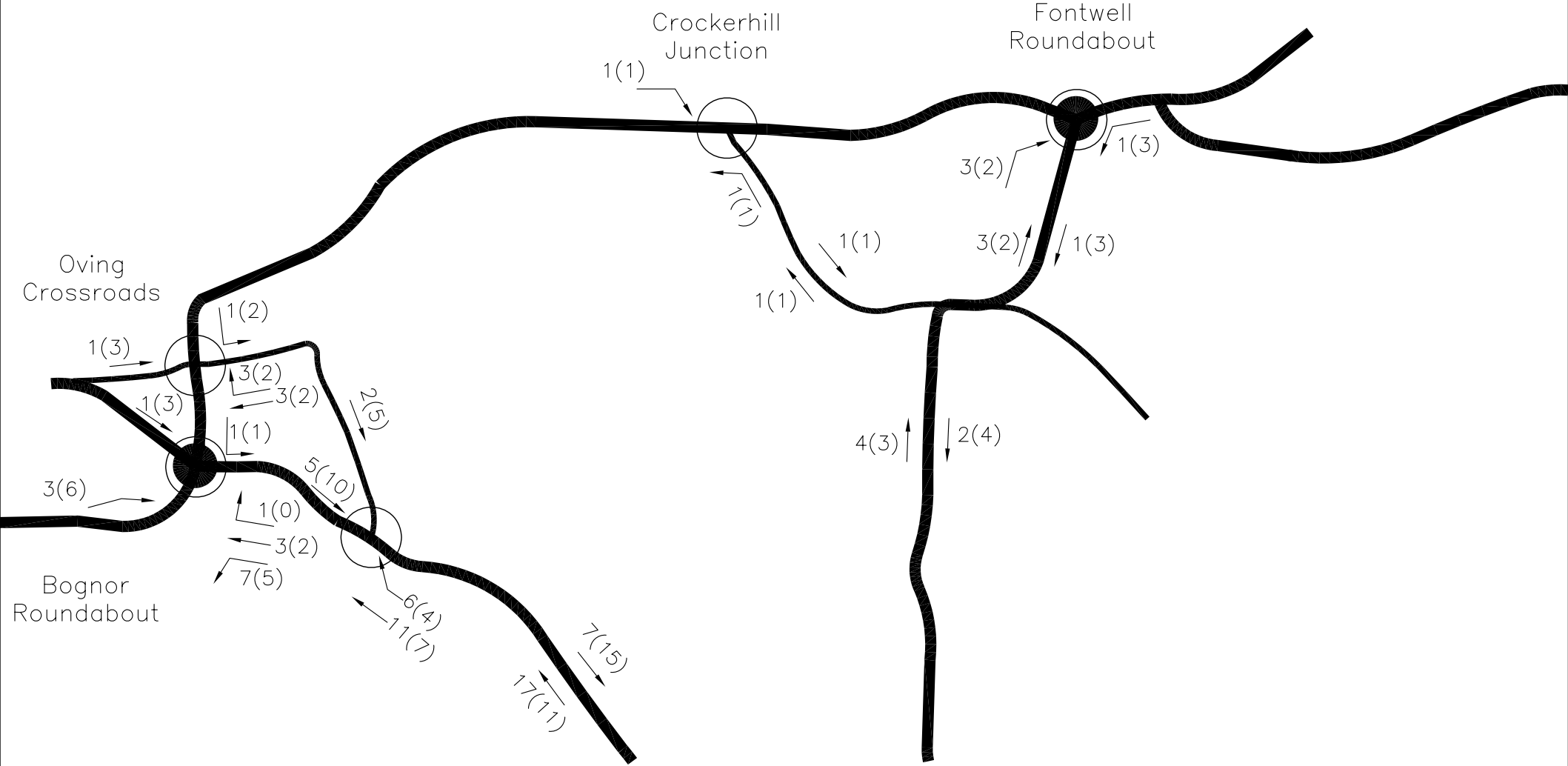
Flows for 142 Dwellings at Bersted
Outside Bognor Regis



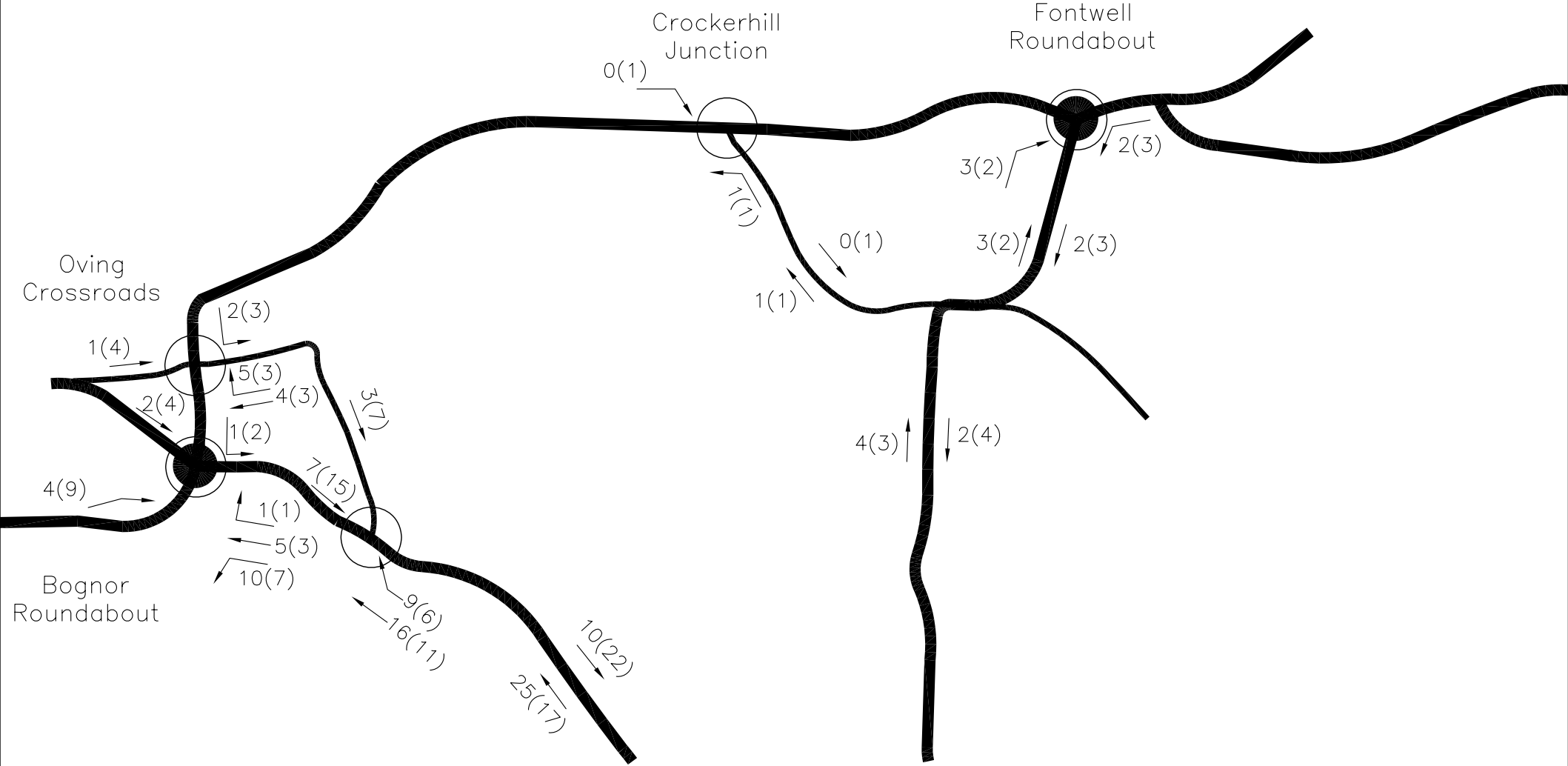
Flows for 49 Dwellings at Felpham
& 142 Dwellings at Bersted
Outside Bognor Regis



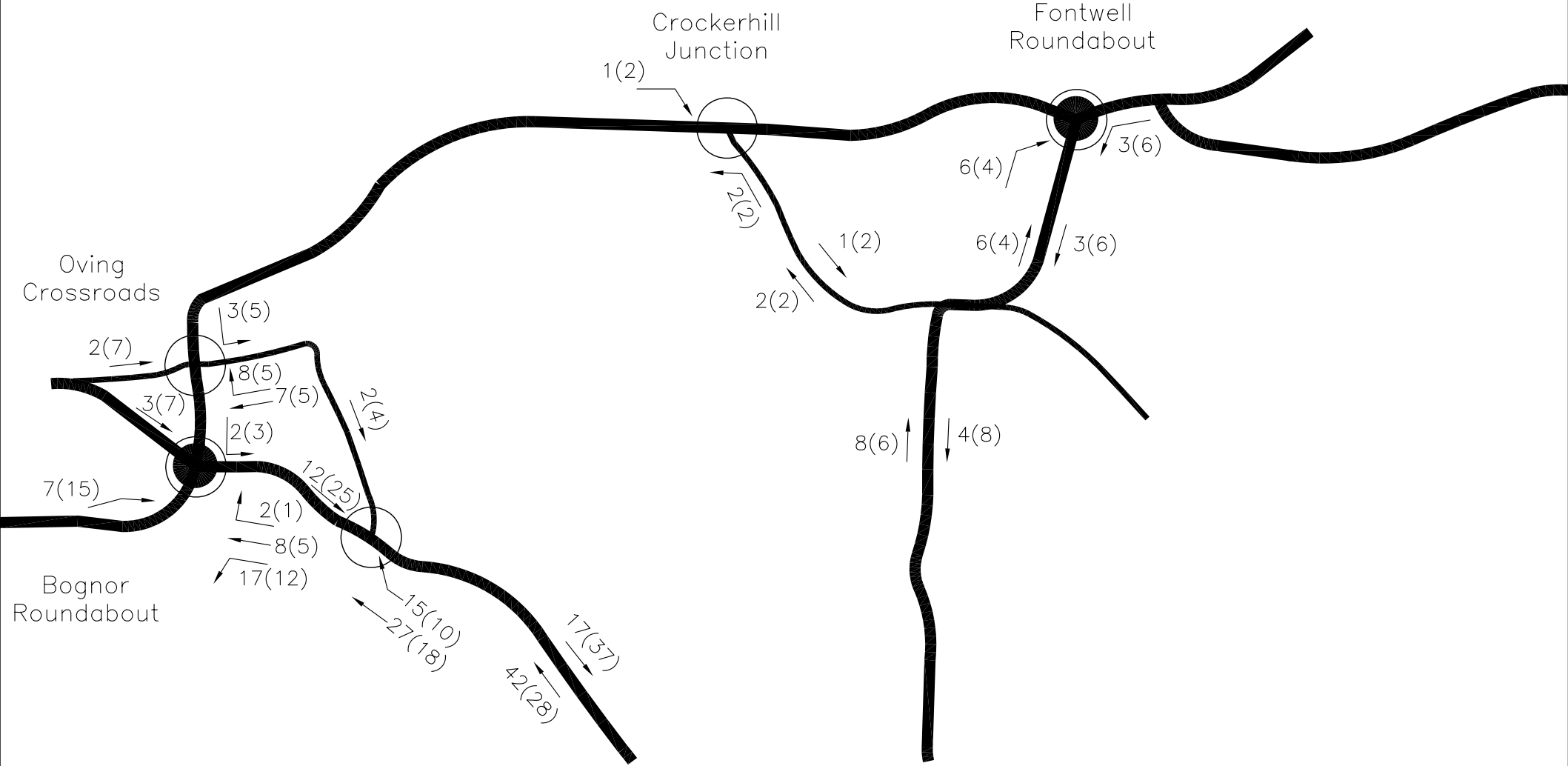
Flows for 100 Dwellings at Felpham
Outside Bognor Regis



Flows for 100 Dwellings at Bersted
Outside Bognor Regis



Flows for 100 Dwellings at Felpham
& 100 Dwellings at Bersted
Outside Bognor Regis



RESIDENTIAL FLOWS THROUGH A27 JUNCTIONS [AM (PM)]

Scenario	Bognor Roundabout	Oving Crossroads	Crockerhill Junction	Fontwell Roundabout
49 Dwellings @ Bersted	11 (13)	6 (6)	1 (1)	2 (3)
49 Dwellings @ Felpham	8 (9)	4 (4)	1 (1)	2 (3)
142 Dwellings @ Bersted	33 (37)	16 (19)	2 (2)	7 (7)
142 Dwellings @ Felpham	22 (25)	11 (12)	2 (2)	7 (7)
49 Dwellings @ Felpham & 142 Dwellings @ Bersted	41 (46)	20 (23)	3 (3)	9 (10)
100 Dwellings @ Bersted	23 (26)	12 (13)	1 (1)	5 (5)
100 Dwellings @ Felpham	16 (18)	8 (8)	1 (1)	5 (5)
100 Dwellings @ Bersted & 100 Dwellings @ Felpham	39 (44)	20 (21)	2 (2)	10 (10)

Table 1.

BASELINE FLOWS ON A259 APPROACH TO BOGNOR ROUNDABOUT & B2144 APPROACH TO Oving CROSSROADS

Baseline Flows	AM	PM
A259 @ Bognor	1695	1795
B2144 @ Oving	539	801

Table 2.

DEVELOPMENT SCENARIOS & % INCREASE OVER BASELINE FLOWS [AM (PM)]

Scenario	A259		B2144	
	Increase	% Increase	Increase	% Increase
49 Dwellings @ Bersted	11 (13)	0.65 (0.72)	6 (6)	1.11 (0.75)
49 Dwellings @ Felpham	8 (9)	0.47 (0.50)	4 (4)	0.74 (0.50)
142 Dwellings @ Bersted	33 (37)	1.95 (2.10)	16 (19)	2.96 (2.37)
142 Dwellings @ Felpham	22 (25)	1.29 (1.39)	11 (12)	2.04 (1.50)
49 Dwellings @ Felpham & 142 Dwellings @ Bersted	41 (46)	2.41 (2.56)	20 (23)	3.71 (2.87)
100 Dwellings @ Bersted	23 (26)	1.36 (1.45)	12 (13)	2.23 (1.62)
100 Dwellings @ Felpham	16 (18)	0.94 (1.00)	8 (8)	1.48 (1.00)
100 Dwellings @ Bersted & 100 Dwellings @ Felpham	39 (44)	2.30 (2.45)	20 (21)	3.71 (2.62)

Table 3.

DEVELOPMENT SCENARIOS & DWELLINGS FOR A 5% INCREASE OVER BASELINE FLOWS [AM (PM)]

Scenario	A259		B2144	
	Units	% Increase	Units	% Increase
Dwellings @ Bersted (49)	379 (339)	5.00	221 (327)	5.00
Dwellings @ Felpham (49)	521 (490)	5.00	331 (490)	5.00
Dwellings @ Bersted (142)	366 (345)	5.00	240 (299)	5.00
Dwellings @ Felpham (142)	549 (511)	5.00	348 (473)	5.00
Dwellings @ Felpham & (49) Dwellings @ Bersted (142)	396 (374)	5.00	258 (332)	5.00
Dwellings @ Bersted (100)	370 (346)	5.00	225 (308)	5.00
Dwellings @ Felpham (100)	531 (500)	5.00	338 (500)	5.00
Dwellings @ Bersted (100) & Dwellings @ Felpham (100)	436 (409)	5.00	270 (381)	5.00

(Figures in brackets are scenario used to obtain number of dwellings)

Table 4.

Appendix (iii)

A259 & B2144 Traffic Counts

A259 Traffic Survey

Date : 24th July 2008

AM PEAK

Period Start	To Roundabout		From Roundabout	
	Total	HGV	Total	HGV
7.30	244	3	136	11
7.45	320	10	167	8
8.00	232	4	158	12
8.15	262	10	172	9
8.30	221	6	163	10
8.45	206	4	175	13
9.00	186	4	138	6
9.15	222	17	176	11

PM PEAK

Period Start	To Roundabout		From Roundabout	
	Total	HGV	Total	HGV
16.30	215	4	227	4
16.45	208	2	220	2
17.00	223	3	242	4
17.15	228	6	232	7
17.30	207	3	214	5
17.45	172	0	242	3
18.00	176	4	236	8
18.15	174	4	216	3

Oving Road Traffic Survey

Date : 23rd July 2008

AM PEAK

Period Start	To Crossroads		From Crossroads	
	Total	HGV	Total	HGV
7.30	89	2	27	0
7.45	111	2	42	0
8.00	93	1	42	0
8.15	94	2	41	0
8.30	59	1	42	0
8.45	87	0	47	1
9.00	79	1	48	2
9.15	75	1	51	1

PM PEAK

Period Start	To Crossroads		From Crossroads	
	Total	HGV	Total	HGV
16.30	77	0	145	1
16.45	46	1	139	0
17.00	47	0	130	0
17.15	50	0	167	0
17.30	42	0	115	1
17.45	36	0	116	0
18.00	45	0	69	0
18.15	41	0	69	0