drawing no:	description
	cover page
0001	location plan
0002	standard subdivision scenario
0003	site connections/site zones
0004	site opportunities
0005	heritage summary
0100	site analysis
0101	site/roof plan
0102	ground floor plan
0103	basement plan
0104	site elevations and sections
0105	dwelling typology
0106	photo montage
0107	photo montage
9101	POS solar access 01
9102	POS solar access 02
9103	Apartment solar access
9104	Neighbouring solar access
9300	8.5m height plane
9301	area schedules
9302	waste management plan
9303	indicative subdivision plan
9304	staging plan
9600	finishes schedule
9901	notification plan
AD100	AD1,2,3
AD101	AD1 ground floor plan
AD102	AD1 elevations
AD103	AD2 ground floor plan
AD104	AD2 elevations
AD105	AD2 elevations
AD106	AD3 ground floor plan & elevations
AD107	AD3 elevations
AD108	AD1 & AD2 typical plan and section
AD109	AD3 typical plan and section
AD113	AD4 general arrangement
AD114	AD5 general arrangement
AD115	AD6 general arrangement
APT100	APT1,2
APT102	APT1 ground & typical floor plan
APT103	APT1 typical floor plan
APT104	APT1 elevations
APT105	APT1 elevations
APT106	APT1 basement plan
APT107	apartment section
APT108	view from neighbouring houses
APT109	view from park central
APT110	APT2 ground floor plan
APT111	APT2 general arrangement
APT112	APT2 elevations
APT113	APT2 elevations
R001	Raith House Precinct
R002	Raith floor plans
R003	Existing dwelling 01
R004	Existing dwelling 02



Raith amended DA

Capital Developments | Fern Ave, Bradbury

lot no | 101
dp no | 1168971
site area | 2.24ha

bathurst | 02 6332 6206
penrith | 02 4732 4430
sydney | 02 9764 6100

info@idgarchitects.com.au
www.idgarchitects.com.au

Member Australian Institute of Architects

integratedDESIGNgroup
architects | bathurst penrith sydney

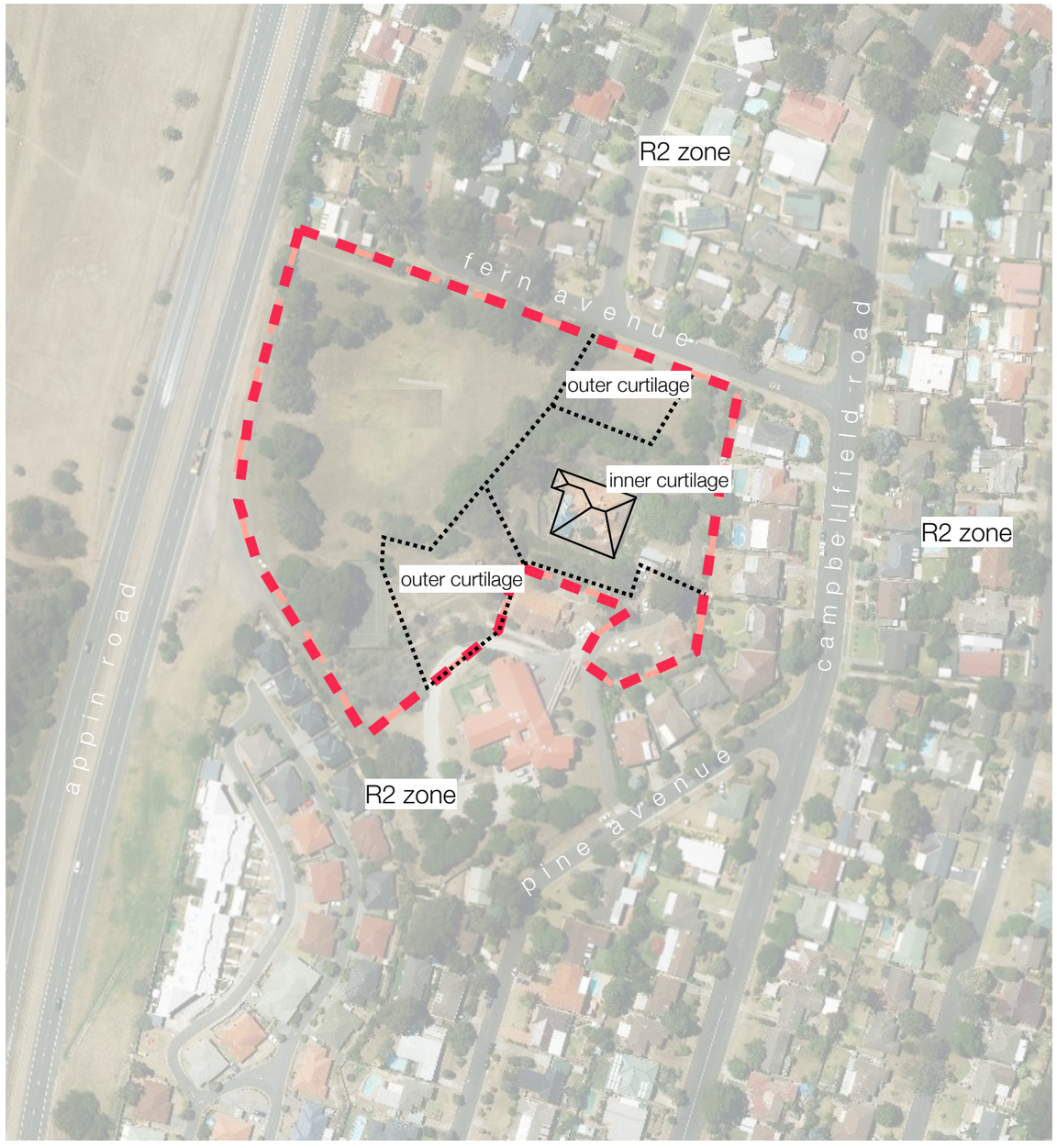
copyright
integratedDESIGNgroup p/l
abn 84 115 006 329
nominated architects tony mcburney reg. no. 5273 | simon thorne reg. no. 7093

CAP18075

DA

current issue

21/5/21



zone R2

(FSR 0.55:1 for single and/or dual occupancy)

Campbelltown draft LEP 2014

=12,348m^2 potential buit area

note:
Cambeltown Council witheld this site from zoning considerations during the 2014 LEP process pending sale from Government and in anticipation of considered and viable development proposal for the adaptive reuse of Raith house and its curtilage , foreshadowing development under discretionary heritage provisions. The R2 zoning is adopted from surrounding site use.

ARCHITECT

INTEGRATED DESIGN GROUP
ARCHITECTURE|MASTERPLANNING|INTERIORS

© Integrated Design Group Pty Ltd
ABN 84 115 006 329
Nominated Architect
Simon Thorne reg. no. 7093

info@idgarchitects.com.au
www.idgarchitects.com.au

NOTES

1. Figured dimensions take precedence over scaled drawings
2. Contractors to check and verify all levels datum and dimensions on site
3. All materials and workmanship to be in accordance with current written manufacturers instructions, local regulations and SAA codes
4. Conflicting information to be brought to notice of the architect and clarification sought before proceeding with any works
5. All drawings are not for construction and are subject to further design development, consultant input, council and legislative requirements.
6. Refer to General notes page for legend and abbreviations

DISCIPLINES

Access	#Access	Civil	####
Acoustic	#Acoustic	Electrical	####
Arborist	#Arborist	Geotech	#Geotech
BCA	#BCA	Hydraulic	####
Landscape	####	Mechanical	####
Planner	####	Structure	####
Surveyor	####		
Traffic	#Traffic	PCA	####
Waste	#Waste	Builder	####

PROJECT

Raith amended DA

SITE: Fern Ave Bradbury NSW
CLIENT: Capital Developments
REF: CAP18075

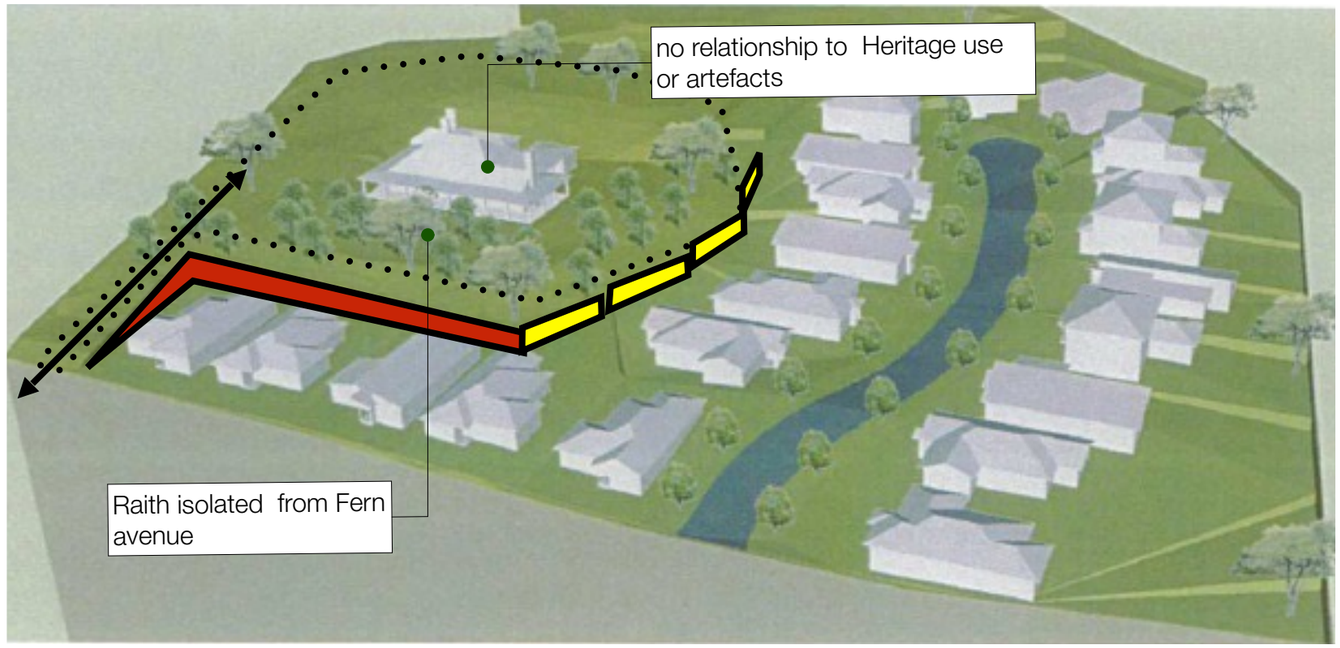
REVISION

17/12/20	A	issue for DA

DRAWING

location plan

DRAWING DA-0001
ISSUE A
DRAWN ####
CHECKED AMcB
SCALE @ a3





Source: Peter Andrews + Associates for NSW Government

STANDARD SUBDIVISION SCENARIO



Standard residential subdivision has the adverse effect of presenting back fences to Raith, and interrupting the permeability of the site. The 'zoning potential' indicates the risk of Raith being isolated within its curtilage as a battle-ax behind suburban fences of an unrelated and disinterested development. Low yield, low return, that does not provide to sustain Raith into the future, nor open it to public access, awareness or benefit, but restricts its use. Grass clippings over the back fence, multiple neighbours complaining about tree maintenance and risk. Outlook from Raith unmanaged.

ARCHITECT

INTEGRATED DESIGN GROUP
ARCHITECTURE|MASTERPLANNING|INTERIORS

© Integrated Design Group Pty Ltd
ABN 84 115 006 329
Nominated Architect
Simon Thorne reg. no. 7093

info@idgarchitects.com.au
www.idgarchitects.com.au

NOTES

1. Figured dimensions take precedence over scaled drawings
2. Contractors to check and verify all levels datum and dimensions on site
3. All materials and workmanship to be in accordance with current written manufacturers instructions, local regulations and SAA codes
4. Conflicting information to be brought to notice of the architect and clarification sought before proceeding with any works
5. All drawings are not for construction and are subject to further design development, consultant input, council and legislative requirements.
6. Refer to General notes page for legend and abbreviations

DISCIPLINES

Access	#Access	Civil	####
Acoustic	#Acoustic	Electrical	####
Arborist	#Arborist	Geotech	#Geotech
BCA	#BCA	Hydraulic	####
Landscape	####	Mechanical	####
Planner	####	Structure	####
Surveyor	####		
Traffic	#Traffic	PCA	####
Waste	#Waste	Builder	####

PROJECT

Raith amended DA

SITE: Fern Ave Bradbury NSW
CLIENT: Capital Developments
REF: CAP18075

REVISION

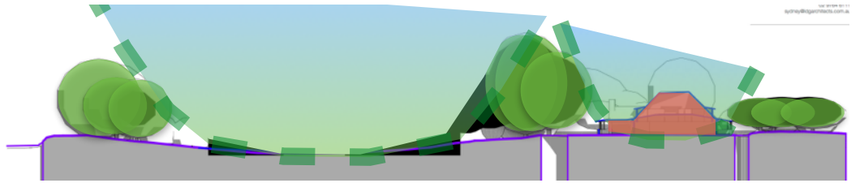
17/12/20	A	issue for DA

DRAWING

standard subdivision scenario

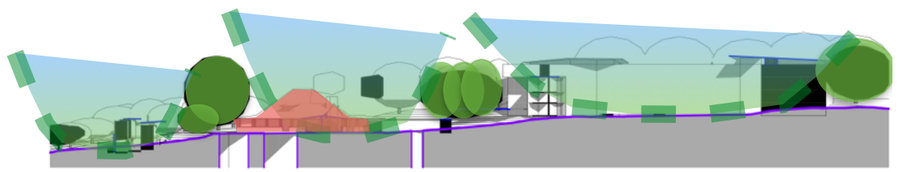
DRAWING	ISSUE		
DA-0002	A	DRAWN	####
		CHECKED	AMcB
		SCALE	@ a3

The landscape and topograhy of the site define 3 distinct 'site zones' in three dimensional cross section as well as in plan defining building envelope potential.



lower terrace

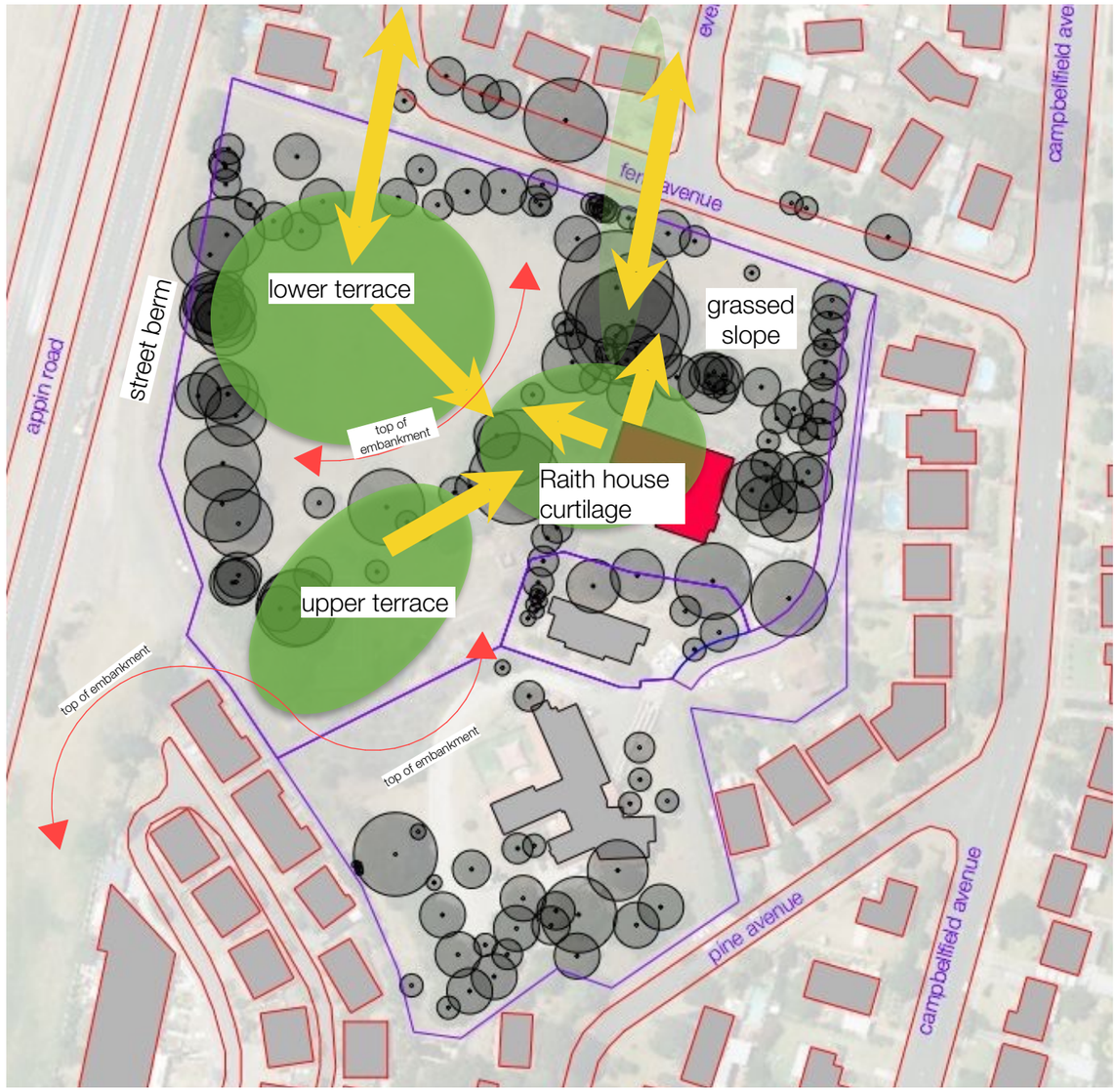
Raith House Curtilage



grassed slope

Raith house curtilage

upper terrace



ARCHITECT

INTEGRATED DESIGN GROUP
ARCHITECTURE|MASTERPLANNING|INTERIORS

© Integrated Design Group Pty Ltd
ABN 84 115 006 329
Nominated Architect
Simon Thorne reg. no. 7093

info@idgarchitects.com.au
www.idgarchitects.com.au

NOTES

1. Figured dimensions take precedence over scaled drawings
2. Contractors to check and verify all levels datum and dimensions on site
3. All materials and workmanship to be in accordance with current written manufacturers instructions, local regulations and SAA codes
4. Conflicting information to be brought to notice of the architect and clarification sought before proceeding with any works
5. All drawings are not for construction and are subject to further design development, consultant input, council and legislative requirements.
6. Refer to General notes page for legend and abbreviations

DISCIPLINES

Access	#Access	Civil	####
Acoustic	#Acoustic	Electrical	####
Arborist	#Arborist	Geotech	#Geotech
BCA	#BCA	Hydraulic	####
Landscape	####	Mechanical	####
Planner	####	Structure	####
Surveyor	####		
Traffic	#Traffic	PCA	####
Waste	#Waste	Builder	####

PROJECT

Raith amended DA

SITE: Fern Ave Bradbury NSW
CLIENT: Capital Developments
REF: CAP18075

REVISION

17/12/20	A	issue for DA

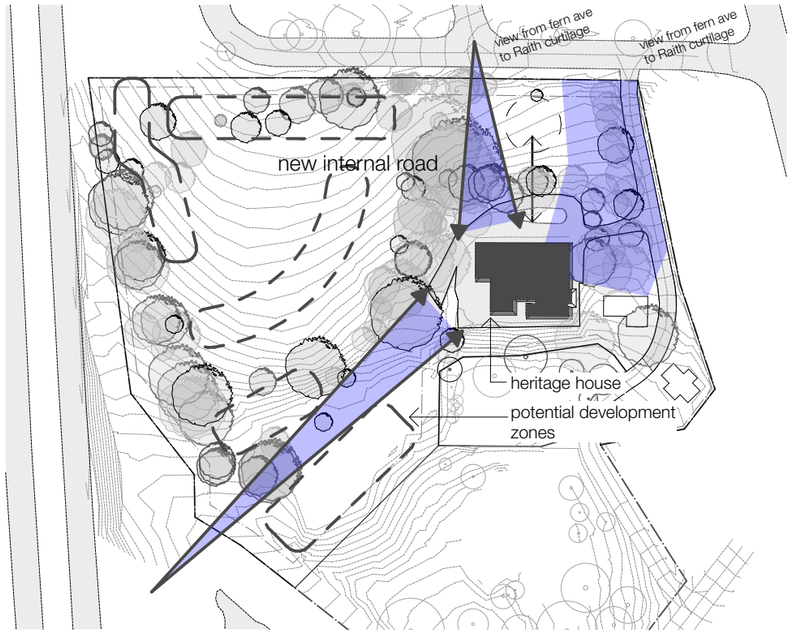
DRAWING

site connections/site zones

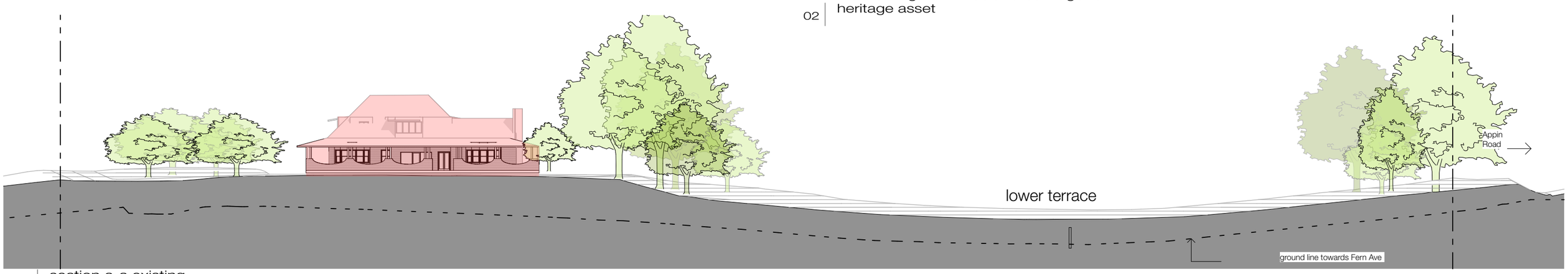
DRAWING DA-0003
ISSUE A
DRAWN ####
CHECKED AMcB
SCALE @ a3



01 | zones defined by existing vegetation



02 | maintaining view lines and curtilage to heritage asset



04 | section a-a existing
1:500



03 | section b-b existing
1:500

ARCHITECT

INTEGRATED DESIGN GROUP
ARCHITECTURE|MASTERPLANNING|INTERIORS

© Integrated Design Group Pty Ltd
ABN 84 115 006 329
Nominated Architect
Simon Thorne reg. no. 7093

info@idgarchitects.com.au
www.idgarchitects.com.au

NOTES

1. Figured dimensions take precedence over scaled drawings
2. Contractors to check and verify all levels datum and dimensions on site
3. All materials and workmanship to be in accordance with current written manufacturers instructions, local regulations and SAA codes
4. Conflicting information to be brought to notice of the architect and clarification sought before proceeding with any works
5. All drawings are not for construction and are subject to further design development, consultant input, council and legislative requirements.
6. Refer to General notes page for legend and abbreviations

DISCIPLINES

Access	#Access	Civil	####
Acoustic	#Acoustic	Electrical	####
Arborist	#Arborist	Geotech	#Geotech
BCA	#BCA	Hydraulic	####
Landscape	####	Mechanical	####
Planner	####	Structure	####
Surveyor	####		
Traffic	#Traffic	PCA	####
Waste	#Waste	Builder	####

PROJECT

Raith amended DA

SITE: Fern Ave Bradbury NSW
CLIENT: Capital Developments
REF: CAP18075

REVISION

24/1/19	01	Issue for information
18/2/19	B	Issue for consultants
4/3/19	C	Issue for consultants
5/4/19	D	Issue for DA
21/5/19	E	Issue for DA
12/7/19	F	council requested amendments
16/9/20	G	isssue for Council Review
17/12/20	H	issue for DA

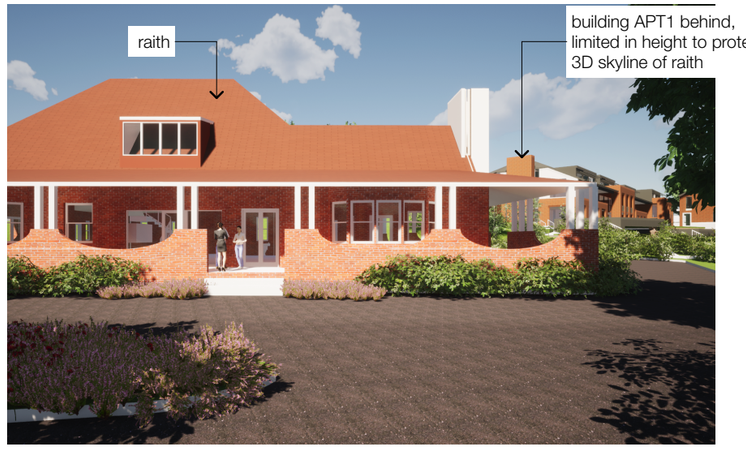
DRAWING

site opportunities

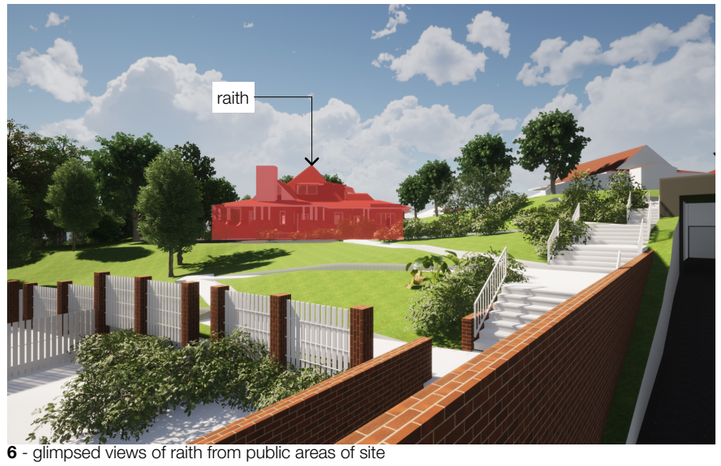
DRAWING DA-0004
ISSUE H
DRAWN ####
CHECKED AMcB
SCALE 1:500 @ a3



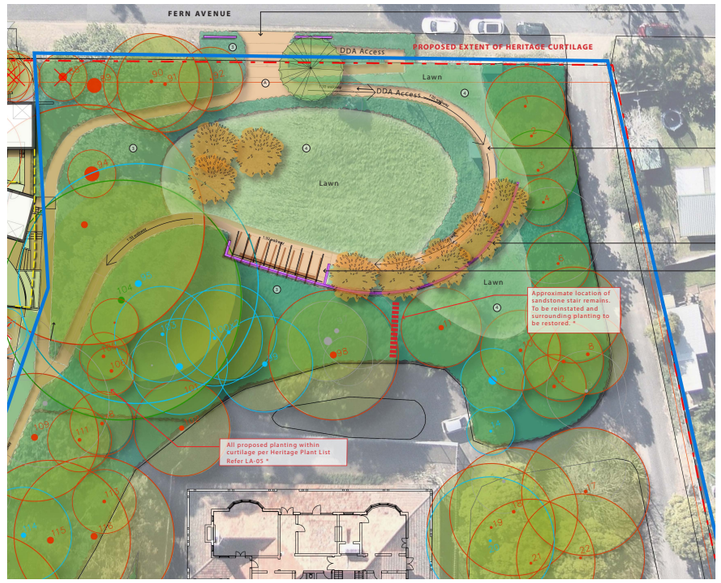








6 - glimpsed views of raith from public areas of site



1 - curtillage area to be reinstated into landscaped lawn/ terraces. refer landscape documentation

ARCHITECT

INTEGRATED DESIGN GROUP
ARCHITECTURE|MASTERPLANNING|INTERIORS

© Integrated Design Group Pty Ltd
ABN 84 115 006 329
Nominated Architect
Simon Thorne reg. no. 7093
info@idgarchitects.com.au
www.idgarchitects.com.au

NOTES

1. Figured dimensions take precedence over scaled drawings
2. Contractors to check and verify all levels datum and dimensions on site
3. All materials and workmanship to be in accordance with current written manufacturers instructions, local regulations and SAA codes
4. Conflicting information to be brought to notice of the architect and clarification sought before proceeding with any works
5. All drawings are not for construction and are subject to further design development, consultant input, council and legislative requirements.
6. Refer to General notes page for legend and abbreviations

DISCIPLINES

Access	#Access	Civil	####
Acoustic	#Acoustic	Electrical	####
Arborist	#Arborist	Geotech	#Geotech
BCA	#BCA	Hydraulic	####
Landscape	####	Mechanical	####
Planner	####	Structure	####
Surveyor	####		
Traffic	#Traffic	PCA	####
Waste	#Waste	Builder	####

PROJECT

Raith amended DA

SITE: Fern Ave Bradbury NSW
CLIENT: Capital Developments
REF: CAP18075

REVISION

24/1/19	A	Issue for information
18/2/19	B	Issue for consultants
4/3/19	C	Issue for consultants
5/4/19	D	Issue for DA
21/5/19	E	Issue for DA
12/7/19	F	council requested amendments
17/12/20	G	issue for DA

DRAWING

heritage summary

DRAWING DA-0005
ISSUE G
DRAWN ####
CHECKED AMcB
SCALE @ a3



ARCHITECT

INTEGRATED DESIGN GROUP
ARCHITECTURE|MASTERPLANNING|INTERIORS

© Integrated Design Group Pty Ltd
ABN 84 115 006 329
Nominated Architect
Simon Thorne reg. no. 7093

info@idgarchitects.com.au
www.idgarchitects.com.au

NO

1.
2.
3.
4.
5.

6. Refer to General notes page for legend and abbreviations

Waste #Waste Builder ####

REF: CAP18075

REVISION		
24/1/19	A	Issue for information
18/2/19	B	Issue for consultants
4/3/19	C	Issue for consultants
5/4/19	D	Issue for DA
21/5/19	E	Issue for DA
12/7/19	F	council requested amendments
16/9/20	G	isssue for Council Review
17/12/20	H	issue for DA

DRAWING

site analysis

DRAWING	ISSUE		
DA-0100	H	DRAWN	####
		CHECKED	AMcB
		SCALE	1:1000 @ a3

AD1, AD2 & AD3

	number of units	incl. number adaptable
1 BED	-	-
2 BED	-	-
3 BED	22	-

AD4

	number of units	incl. number adaptable
1 BED	-	-
2 BED	-	-
3 BED	5	-

AD5 & AD6

	number of units	incl. number adaptable
1 BED	-	-
2 BED	-	-
3 BED	3	-
4 BED	3	-

APT1 & APT2

	number of units	incl. number adaptable
1 BED	6	6
2 BED	12	6
3 BED	21	-

TOTAL

1 BED	6	6
2 BED	12	6
3 BED	51	
4 BED	3	-
	72	**12**

floor space ratio

APPROX GFA (m^2) 8966.11 NOTE: GFA according to the definition in the DCP and the LEP

building	**GFA**		
AD1	966.91m^2	APT1	1001.11m^2
AD2	1148.57m^2	APT2	3016.90m^2
AD3	900.45m^2		
AD4	546.91m^2	RAITH	463.10m^2
AD5	366.86m^2	OUTBUILDING 1	79.13m^2
AD6	399.20m^2	OUTBUILDING 2	76.97m^2
SITE AREA	22609		
FSR	1 : 0.36		

SEPP65 requirements - building APT1 & APT2

deep soil zone

target	7% total site area	
achieved	31% site area	**COMPLIES**

solar access (21st June)

target		70%
# units with 2hrs +	37	82%
units without direct access to sunlight		
maximum		15%
achieved	6	13.9%
		COMPLIES

ventilation

target	60%	
# units cross-ventilated	31/39	
%	**72%**	**COMPLIES**

parking

TOTAL PROVIDED 52 **COMPLIES**



ARCHITECT

INTEGRATED DESIGN GROUP
ARCHITECTURE|MASTERPLANNING|INTERIORS

© Integrated Design Group Pty Ltd
ABN 84 115 006 329
Nominated Architect
Simon Thorne reg. no. 7093

info@idgarchitects.com.au
www.idgarchitects.com.au

NOTES

1. Figured dimensions take precedence over scaled drawings
2. Contractors to check and verify all levels datum and dimensions on site
3. All materials and workmanship to be in accordance with current written manufacturers instructions, local regulations and SAA codes
4. Conflicting information to be brought to notice of the architect and clarification sought before proceeding with any works
5. All drawings are not for construction and are subject to further design development, consultant input, council and legislative requirements.
6. Refer to General notes page for legend and abbreviations

DISCIPLINES

Access	#Access	Civil	####
Acoustic	#Acoustic	Electrical	####
Arborist	#Arborist	Geotech	#Geotech
BCA	#BCA	Hydraulic	####
Landscape	####	Mechanical	####
Planner	####	Structure	####
Surveyor	####		
Traffic	#Traffic	PCA	####
Waste	#Waste	Builder	####

PROJECT

Raith amended DA

SITE: Fern Ave Bradbury NSW
CLIENT: Capital Developments
REF: CAP18075

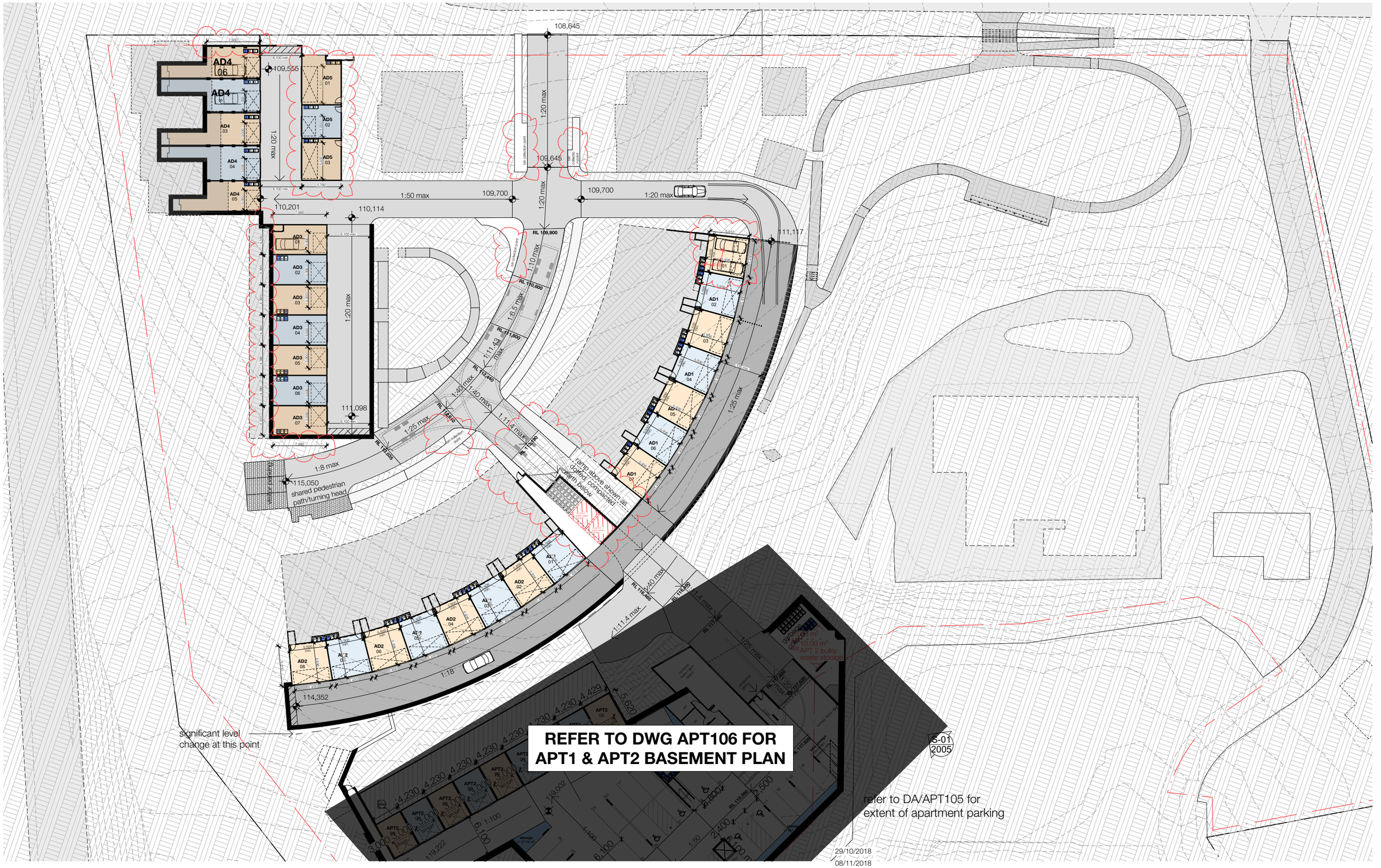
REVISION

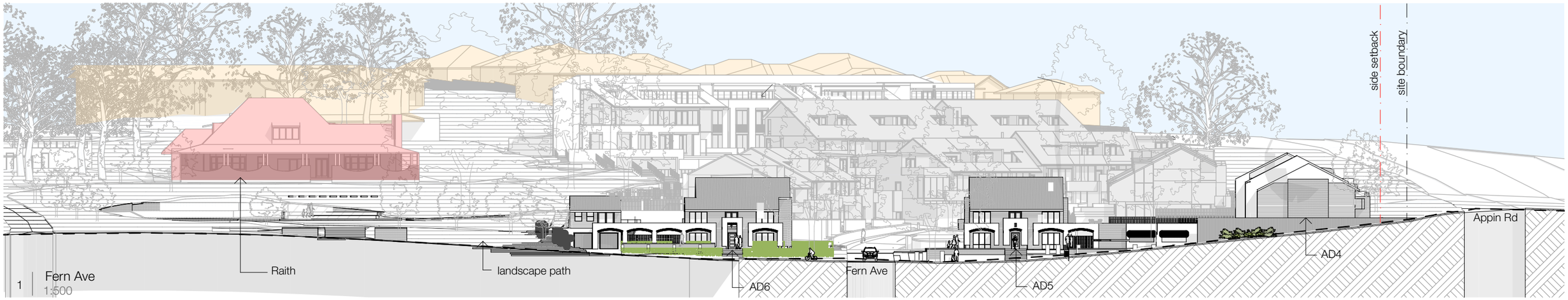
12/8/20	M	isssue for client review
1/9/20	N	isssue for review
16/9/20	O	isssue for Council Review
4/12/20	P	isssue for coordination
17/12/20	Q	issue for DA
18/3/21	R	issue for coordination
21/5/21	S	ISSUE FOR DA
24/6/21	T	ISSUE FOR DA

DRAWING

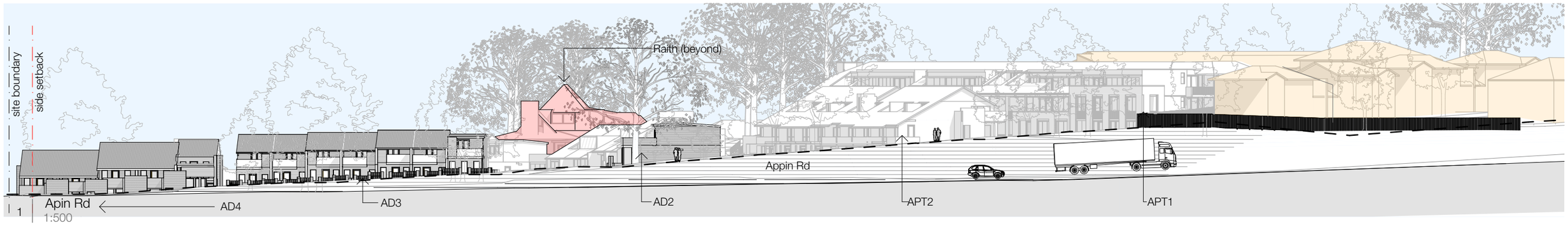
site/roof plan

DRAWING: DA-0101
ISSUE: T
DRAWN: ####
CHECKED: JA
SCALE: 1:1000 @ a3

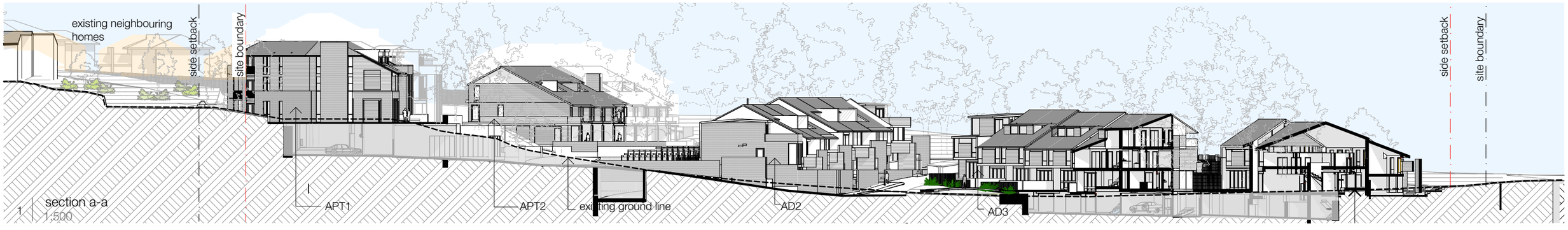

108,645
109,555
109,645
109,700
109,700
110,201
110,114
111,117
111,098
115,050
shared pedestrian path/turning head
114,352
1:20 max
1:50 max
1:10 max
1:6.5 max
1:11.43 max
1:40 max
1:40 max
1:25 max
1:11.4 max
1:8 max
1:18
1:25 max
1:11.4 max
1:40 max
1:11.4 max
1:25 max
ramp above shown as dotted (compacted earth below
bin collection point
electric collection point
RL 109,900
RL 110,600
RL 111,600
RL 112,440
RL 113,280
RL 114,120
RL 114,960
RL 115,800
RL 116,640
RL 117,480
RL 117,600
RL 117,820
AD4 06
AD4 05
AD4 04
AD4 03
AD4 02
AD4 01
AD5 01
AD5 02
AD5 03
AD3 01
AD3 02
AD3 03
AD3 04
AD3 05
AD3 06
AD3 07
AD1 01
AD1 02
AD1 03
AD1 04
AD1 05
AD1 06
AD2 01
AD2 02
AD2 03
AD2 04
AD2 05
AD2 06
AD2 07
AD2 08
APT2 00
APT2 01
APT2 02
APT2 03
APT2 04
APT2 05
APT2 06
APT2 07
APT2 08
APT2 09
APT2 10
APT2 11
APT2 12
APT2 13
APT2 14
APT2 15
APT2 16
APT2 17
APT2 18
APT2 19
APT2 20
APT2 21
APT2 22
APT2 23
APT2 24
APT2 25
APT2 26
APT2 27
APT2 28
APT2 29
APT2 30
APT2 31
APT2 32
APT2 33
APT2 34
APT2 35
APT2 36
APT2 37
APT2 38
APT2 39
APT2 40
APT2 41
APT2 42
APT2 43
APT2 44
APT2 45
APT2 46
APT2 47
APT2 48
APT2 49
APT2 50
APT2 51
APT2 52
APT2 53
APT2 54
APT2 55
APT2 56
APT2 57
APT2 58
APT2 59
APT2 60
APT2 61
APT2 62
APT2 63
APT2 64
APT2 65
APT2 66
APT2 67
APT2 68
APT2 69
APT2 70
APT2 71
APT2 72
APT2 73
APT2 74
APT2 75
APT2 76
APT2 77
APT2 78
APT2 79
APT2 80
APT2 81
APT2 82
APT2 83
APT2 84
APT2 85
APT2 86
APT2 87
APT2 88
APT2 89
APT2 90
APT2 91
APT2 92
APT2 93
APT2 94
APT2 95
APT2 96
APT2 97
APT2 98
APT2 99
APT2 100
APT2 101
APT2 102
APT2 103
APT2 104
APT2 105
APT2 106
APT2 107
APT2 108
APT2 109
APT2 110
APT2 111
APT2 112
APT2 113
APT2 114
APT2 115
APT2 116
APT2 117
APT2 118
APT2 119
APT2 120
APT2 121
APT2 122
APT2 123
APT2 124
APT2 125
APT2 126
APT2 127
APT2 128
APT2 129
APT2 130
APT2 131
APT2 132
APT2 133
APT2 134
APT2 135
APT2 136
APT2 137
APT2 138
APT2 139
APT2 140
APT2 141
APT2 142
APT2 143
APT2 144
APT2 145
APT2 146
APT2 147
APT2 148
APT2 149
APT2 150
APT2 151
APT2 152
APT2 153
APT2 154
APT2 155
APT2 156
APT2 157
APT2 158
APT2 159
APT2 160
APT2 161
APT2 162
APT2 163
APT2 164
APT2 165
APT2 166
APT2 167
APT2 168
APT2 169
APT2 170
APT2 171
APT2 172
APT2 173
APT2 174
APT2 175
APT2 176
APT2 177
APT2 178
APT2 179
APT2 180
APT2 181
APT2 182
APT2 183
APT2 184
APT2 185
APT2 186
APT2 187
APT2 188
APT2 189
APT2 190
APT2 191
APT2 192
APT2 193
APT2 194
APT2 195
APT2 196
APT2 197
APT2 198
APT2 199
APT2 200
APT2 201
APT2 202
APT2 203
APT2 204
APT2 205
APT2 206
APT2 207
APT2 208
APT2 209
APT2 210
APT2 211
APT2 212
APT2 213
APT2 214
APT2 215
APT2 216
APT2 217
APT2 218
APT2 219
APT2 220
APT2 221
APT2 222
APT2 223
APT2 224
APT2 225
APT2 226
APT2 227
APT2 228
APT2 229
APT2 230
APT2 231
APT2 232
APT2 233
APT2 234
APT2 235
APT2 236
APT2 237
APT2 238
APT2 239
APT2 240
APT2 241
APT2 242
APT2 243
APT2 244
APT2 245
APT2 246
APT2 247
APT2 248
APT2 249
APT2 250
APT2 251
APT2 252
APT2 253
APT2 254
APT2 255
APT2 256
APT2 257
APT2 258
APT2 259
APT2 260
APT2 261
APT2 262
APT2 263
APT2 264
APT2 265
APT2 266
APT2 267
APT2 268
APT2 269
APT2 270
APT2 271
APT2 272
APT2 273
APT2 274
APT2 275
APT2 276
APT2 277
APT2 278
APT2 279
APT2 280
APT2 281
APT2 282
APT2 283
APT2 284
APT2 285
APT2 286
APT2 287
APT2 288
APT2 289
APT2 290
APT2 291
APT2 292
APT2 293
APT2 294
APT2 295
APT2 296
APT2 297
APT2 298
APT2 299
APT2 300
APT2 301
APT2 302
APT2 303
APT2 304
APT2 305
APT2 306
APT2 307
APT2 308
APT2 309
APT2 310
APT2 311
APT2 312
APT2 313
APT2 314
APT2 315
APT2 316
APT2 317
APT2 318
APT2 319
APT2 320
APT2 321
APT2 322
APT2 323
APT2 324
APT2 325
APT2 326
APT2 327
APT2 328
APT2 329
APT2 330
APT2 331
APT2 332
APT2 333
APT2 334
APT2 335
APT2 336
APT2 337
APT2 338
APT2 339
APT2 340
APT2 341
APT2 342
APT2 343
APT2 344
APT2 345
APT2 346
APT2 347
APT2 348
APT2 349
APT2 350
APT2 351
APT2 352
APT2 353
APT2 354
APT2 355
APT2 356
APT2 357
APT2 358
APT2 359
APT2 360
APT2 361
APT2 362
APT2 363
APT2 364
APT2 365
APT2 366
APT2 367
APT2 368
APT2 369
APT2 370
APT2 371
APT2 372
APT2 373
APT2 374
APT2 375
APT2 376
APT2 377
APT2 378
APT2 379
APT2 380
APT2 381
APT2 382
APT2 383
APT2 384
APT2 385
APT2 386
APT2 387
APT2 388
APT2 389
APT2 390
APT2 391
APT2 392
APT2 393
APT2 394
APT2 395
APT2 396
APT2 397
APT2 398
APT2 399
APT2 400
APT2 401
APT2 402
APT2 403
APT2 404
APT2 405
APT2 406
APT2 407
APT2 408
APT2 409
APT2 410
APT2 411
APT2 412
APT2 413
APT2 414
APT2 415
APT2 416
APT2 417
APT2 418
APT2 419
APT2 420
APT2 421
APT2 422
APT2 423
APT2 424
APT2 425
APT2 426
APT2 427
APT2 428
APT2 429
APT2 430
APT2 431
APT2 432
APT2 433
APT2 434
APT2 435
APT2 436
APT2 437
APT2 438
APT2 439
APT2 440
APT2 441
APT2 442
APT2 443
APT2 444
APT2 445
APT2 446
APT2 447
APT2 448
APT2 449
APT2 450
APT2 451
APT2 452
APT2 453
APT2 454
APT2 455
APT2 456
APT2 457
APT2 458
APT2 459
APT2 460
APT2 461
APT2 462
APT2 463
APT2 464
APT2 465
APT2 466
APT2 467
APT2 468
APT2 469
APT2 470
APT2 471
APT2 472
APT2 473
APT2 474
APT2 475
APT2 476
APT2 477
APT2 478
APT2 479
APT2 480
APT2 481
APT2 482
APT2 483
APT2 484
APT2 485
APT2 486
APT2 487
APT2 488
APT2 489
APT2 490
APT2 491
APT2 492
APT2 493
APT2 494
APT2 495
APT2 496
APT2 497
APT2 498
APT2 499
APT2 500
APT2 501
APT2 502
APT2 503
APT2 504
APT2 505
APT2 506
APT2 507
APT2 508
APT2 509
APT2 510
APT2 511
APT2 512
APT2 513
APT2 514
APT2 515
APT2 516
APT2 517
APT2 518
APT2 519
APT2 520
APT2 521
APT2 522
APT2 523
APT2 524
APT2 525
APT2 526
APT2 527
APT2 528
APT2 529
APT2 530
APT2 531
APT2 532
APT2 533
APT2 534
APT2 535
APT2 536
APT2 537
APT2 538
APT2 539
APT2 540
APT2 541
APT2 542
APT2 543
APT2 544
APT2 545
APT2 546
APT2 547
APT2 548
APT2 549
APT2 550
APT2 551
APT2 552
APT2 553
APT2 554
APT2 555
APT2 556
APT2 557
APT2 558
APT2 559
APT2 560
APT2 561
APT2 562
APT2 563
APT2 564
APT2 565
APT2 566
APT2 567
APT2 568
APT2 569
APT2 570
APT2 571
APT2 572
APT2 573
APT2 574
APT2 575
APT2 576
APT2 577
APT2 578
APT2 579
APT2 580
APT2 581
APT2 582
APT2 583
APT2 584
APT2 585
APT2 586
APT2 587
APT2 588
APT2 589
APT2 590
APT2 591
APT2 592
APT2 593
APT2 594
APT2 595
APT2 596
APT2 597
APT2 598
APT2 599
APT2 600
APT2 601
APT2 602
APT2 603
APT2 604
APT2 605
APT2 606
APT2 607
APT2 608
APT2 609
APT2 610
APT2 611
APT2 612
APT2 613
APT2 614
APT2 615
APT2 616
APT2 617
APT2 618
APT2 619
APT2 620
APT2 621
APT2 622
APT2 623
APT2 624
APT2 625
APT2 626
APT2 627
APT2 628
APT2 629
APT2 630
APT2 631
APT2 632
APT2 633
APT2 634
APT2 635
APT2 636
APT2 637
APT2 638
APT2 639
APT2 640
APT2 641
APT2 642
APT2 643
APT2 644
APT2 645
APT2 646
APT2 647
APT2 648
APT2 649
APT2 650
APT2 651
APT2 652
APT2 653
APT2 654
APT2 655
APT2 656
APT2 657
APT2 658
APT2 659
APT2 660
APT2 661
APT2 662
APT2 663
APT2 664
APT2 665
APT2 666
APT2 667
APT2 668
APT2 669
APT2 670
APT2 671
APT2 672
APT2 673
APT2 674
APT2 675
APT2 676
APT2 677
APT2 678
APT2 679
APT2 680
APT2 681
APT2 682
APT2 683
APT2 684
APT2 685
APT2 686
APT2 687
APT2 688
APT2 689
APT2 690
APT2 691
APT2 692
APT2 693
APT2 694
APT2 695
APT2 696
APT2 697
APT2 698
APT2 699
APT2 700
APT2 701
APT2 702
APT2 703
APT2 704
APT2 705
APT2 706
APT2 707
APT2 708
APT2 709
APT2 710
APT2 711
APT2 712
APT2 713
APT2 714
APT2 715
APT2 716
APT2 717
APT2 718
APT2 719
APT2 720
APT2 721
APT2 722
APT2 723
APT2 724
APT2 725
APT2 726
APT2 727
APT2 728
APT2 729
APT2 730
APT2 731
APT2 732
APT2 733
APT2 734
APT2 735
APT2 736
APT2 737
APT2 738
APT2 739
APT2 740
APT2 741
APT2 742
APT2 743
APT2 744
APT2 745
APT2 746
APT2 747
APT2 748
APT2 749
APT2 750
APT2 751
APT2 752
APT2 753
APT2 754
APT2 755
APT2 756
APT2 757
APT2 758
APT2 759
APT2 760
APT2 761
APT2 762
APT2 763
APT2 764
APT2 765
APT2 766
APT2 767
APT2 768
APT2 769
APT2 770
APT2 771
APT2 772
APT2 773
APT2 774
APT2 775
APT2 776
APT2 777
APT2 778
APT2 779
APT2 780
APT2 781
APT2 782
APT2 783
APT2 784
APT2 785
APT2 786
APT2 787
APT2 788
APT2 789
APT2 790
APT2 791
APT2 792
APT2 793
APT2 794
APT2 795
APT2 796
APT2 797
APT2 798
APT2 799
APT2 800
APT2 801
APT2 802
APT2 803
APT2 804
APT2 805
APT2 806
APT2 807
APT2 808
APT2 809
APT2 810
APT2 811
APT2 812
APT2 813
APT2 814
APT2 815
APT2 816
APT2 817
APT2 818
APT2 819
APT2 820
APT2 821
APT2 822
APT2 823
APT2 824
APT2 825
APT2 826
APT2 827
APT2 828
APT2 829
APT2 830
APT2 831
APT2 832
APT2 833
APT2 834
APT2 835
APT2 836
APT2 837
APT2 838
APT2 839
APT2 840
APT2 841
APT2 842
APT2 843
APT2 844
APT2 845
APT2 846
APT2 847
APT2 848
APT2 849
APT2 850
APT2 851
APT2 852
APT2 853
APT2 854
APT2 855
APT2 856
APT2 857
APT2 858
APT2 859
APT2 860
APT2 861
APT2 862
APT2 863
APT2 864
APT2 865
APT2 866
APT2 867
APT2 868
APT2 869
APT2 870
APT2 871
APT2 872
APT2 873
APT2 874
APT2 875
APT2 876
APT2 877
APT2 878
APT2 879
APT2 880
APT2 881
APT2 882
APT2 883
APT2 884
APT2 885
APT2 886
APT2 887
APT2 888
APT2 889
APT2 890
APT2 891
APT2 892
APT2 893
APT2 894
APT2 895
APT2 896
APT2 897
APT2 898
APT2 899
APT2 900
APT2 901
APT2 902
APT2 903
APT2 904
APT2 905
APT2 906
APT2 907
APT2 908
APT2 909
APT2 910
APT2 911
APT2 912
APT2 913
APT2 914
APT2 915
APT2 916
APT2 917
APT2 918
APT2 919
APT2 920
APT2 921
APT2 922
APT2 923
APT2 924
APT2 925
APT2 926
APT2 927
APT2 928
APT2 929
APT2 930
APT2 931
APT2 932
APT2 933
APT2 934
APT2 935
APT2 936
APT2 937
APT2 938
APT2 939
APT2 940
APT2 941
APT2 942
APT2 943
APT2 944
APT2 945
APT2 946
APT2 947
APT2 948
APT2 949
APT2 950
APT2 951
APT2 952
APT2 953
APT2 954
APT2 955
APT2 956
APT2 957
APT2 958
APT2 959
APT2 960
APT2 961
APT2 962
APT2 963
APT2 964
APT2 965
APT2 966
APT2 967
APT2 968
APT2 969
APT2 970
APT2 971
APT2 972
APT2 973
APT2 974
APT2 975
APT2 976
APT2 977
APT2 978
APT2 979
APT2 980
APT2 981
APT2 982
APT2 983
APT2 984
APT2 985
APT2 986
APT2 987
APT2 988
APT2 989
APT2 990
APT2 991
APT2 992
APT2 993
APT2 994
APT2 995
APT2 996
APT2 997
APT2 998
APT2 999
APT2 1000
APT2 1001
APT2 1002
APT2 1003
APT2 1004
APT2 1005
APT2 1006
APT2 1007
APT2 1008
APT2 1009
APT2 1010
APT2 1011
APT2 1012
APT2 1013
APT2 1014
APT2 1015
APT2 1016
APT2 1017
APT2 1018
APT2 1019
APT2 1020
APT2 1021
APT2 1022
APT2 1023
APT2 1024
APT2 1025
APT2 1026
APT2 1027
APT2 1028
APT2 1029
APT2 1030
APT2 1031
APT2 1032
APT2 1033
APT2 1034
APT2 1035
APT2 1036
APT2 1037
APT2 1038
APT2 1039
APT2 1040
APT2 1041
APT2 1042
APT2 1043
APT2 1044
APT2 1045
APT2 1046
APT2 1047
APT2 1048
APT2 1049
APT2 1050
APT2 1051
APT2 1052
APT2 1053
APT2 1054
APT2 1055
APT2 1056
APT2 1057
APT2 1058
APT2 1059
APT2 1060
APT2 1061
APT2 1062
APT2 1063
APT2 1064
APT2 1065
APT2 1066
APT2 1067
APT2 1068
APT2 1069
APT2 1070
APT2 1071
APT2 1072
APT2 1073
APT2 1074
APT2 1075
APT2 1076
APT2 1077
APT2 1078
APT2 1079
APT2 1080
APT2 1081
APT2 1082
APT2 1083
APT2 1084
APT2 1085
APT2 1086
APT2 1087
APT2 1088
APT2 1089
APT2 1090
APT2 1091
APT2 1092
APT2 1093
APT2 1094
APT2 1095
APT2 1096
APT2 1097
APT2 1098
APT2 1099
APT2 1100
APT2 1101
APT2 1102
APT2 1103
APT2 1104
APT2 1105
APT2 1106
APT2 1107
APT2 1108
APT2 1109
APT2 1110
APT2 1111
APT2 1112
APT2 1113
APT2 1114
APT2 1115
APT2 1116
APT2 1117
APT2 1118
APT2 1119
APT2 1120
APT2 1121
APT2 1122
APT2 1123
APT2 1124
APT2 1125
APT2 1126
APT2 1127
APT2 1128
APT2 1129
APT2 1130
APT2 1131
APT2 1132
APT2 1133
APT2 1134
APT2 1135
APT2 1136
APT2 1137
APT2 1138
APT2 1139
APT2 1140
APT2 1141
APT2 1142
APT2 1143
APT2 1144
APT2 1145
APT2 1146
APT2 1147
APT2 1148
APT2 1149
APT2 1150
APT2 1151
APT2 1152
APT2 1153
APT2 1154
APT2 1155
APT2 1156
APT2 1157
APT2 1158
APT2 1159
APT2 1160
APT2 1161
APT2 1162
APT2 1163
APT2 1164
APT2 1165
APT2 1166
APT2 1167
APT2 1168
APT2 1169
APT2 1170
APT2 1171
APT2 1172
APT2 1173
APT2 1174
APT2 1175
APT2 1176
APT2 1177
APT2 1178
APT2 1179
APT2 1180
APT2 1181
APT2 1182
APT2 1183
APT2 1184
APT2 1185
APT2 1186
APT2 1187
APT2 1188
APT2 1189
APT2 1190
APT2 1191
APT2 1192
APT2 1193
APT2 1194
APT2 1195
APT2 1196
APT2 1197
APT2 1198
APT2 1199
APT2 1200
APT2 1201
APT2 1202
APT2 1203
APT2 1204
APT2 1205
APT2 1206
APT2 1207
APT2 1208
APT2 1209
APT2 1210
APT2 1211
APT2 1212
APT2 1213
APT2 1214
APT2 1215
APT2 1216
APT2 1217
APT2 1218
APT2 1219
APT2 1220
APT2 1221
APT2 1222
APT2 1223
APT2 1224
APT2 1225
APT2 1226
APT2 1227
APT2 1228
APT2 1229
APT2 1230
APT2 1231
APT2 1232
APT2 1233
APT2 1234
APT2 1235
APT2 1236
APT2 1237
APT2 1238
APT2 1239
APT2 1240
APT2 1241
APT2 1242
APT2 1243
APT2 1244
APT2 1245
APT2 1246
APT2 1247
APT2 1248
APT2 1249
APT2 1250
APT2 1251
APT2 1252
APT2 1253
APT2 1254
APT2 1255
APT2 1256
APT2 1257
APT2 1258
APT2 1259
APT2 1260
APT2 1261
APT2 1262
APT2 1263
APT2 1264
APT2 1265
APT2 1266
APT2 1267
APT2 1268
APT2 1269
APT2 1270
APT2 1271
APT2 1272
APT2 1273
APT2 1274
APT2 1275
APT2 1276
APT2 1277
APT2 1278
APT2 1279
APT2 1280
APT2 1281
APT2 1282
APT2 1283
APT2 1284
APT2 1285
APT2 1286
APT2 1287
APT2 1288
APT2 1289
APT2 1290
APT2 1291
APT2 1292
APT2 1293
APT2 1294
APT2 1295
APT2 1296
APT2 1297
APT2 1298
APT2 1299
APT2 1300
APT2 1301
APT2 1302
APT2 1303
APT2 1304
APT2 1305
APT2 1306
APT2 1307
APT2 1308
APT2 1309
APT2 1310
APT2 1311
APT2 1312
APT2 1313
APT2 1314
APT2 1315
APT2 1316
APT2 1317
APT2 1318
APT2 1319
APT2 1320
APT2 1321
APT2 1322
APT2 1323
APT2 1324
APT2 1325
APT2 1326
APT2 1327
APT2 1328
APT2 1329
APT2 1330
APT2 1331
APT2 1332
APT2 1333
APT2 1334
APT2 1335
APT2 1336
APT2 1337
APT2 1338
APT2 1339
APT2 1340
APT2 1341
APT2 1342
APT2 1343
APT2 1344
APT2 1345
APT2 1346
APT2 1347
APT2 1348
APT2 1349
APT2 1350
APT2 1351
APT2 1352
APT2 1353
APT2 1354
APT2 1355
APT2 1356
APT2 1357
APT2 1358
APT2 1359
APT2 1360
APT2 1361
APT2 1362
APT2 1363
APT2 1364
APT2 1365
APT2 1366
APT2 1367
APT2 1368
APT2 1369
APT2 1370
APT2 1371
APT2 1372
APT2 1373
APT2 1374
APT2 1375
APT2 1376
APT2 1377
APT2 1378
APT2 1379
APT2 1380
APT2 1381
APT2 1382
APT2 1383
APT2 1384
APT2 1385
APT2 1386
APT2 1387
APT2 1388
APT2 1389
APT2 1390
APT2 1391
APT2 1392
APT2 1393
APT2 1394
APT2 1395
APT2 1396
APT2 1397
APT2 1398
APT2 1399
APT2 1400
APT2 1401
APT2 1402
APT2 1403
APT2 1404
APT2 1405
APT2 1406
APT2 1407
APT2 1408
APT2 1409
APT2 1410
APT2 1411
APT2 1412
APT2 1413
APT2 1414
APT2 1415
APT2 1416
APT2 1417
APT2 1418
APT2 1419
APT2 1420
APT2 1421
APT2 1422
APT2 1423
APT2 1424
APT2 1425
APT2 1426
APT2 1427
APT2 1428
APT2 1429
APT2 1430
APT2 1431
APT2 1432
APT2 1433
APT2 1434
APT2 1435
APT2 1436
APT2 1437
APT2 1438
APT2 1439
APT2 1440
APT2 1441
APT2 1442
APT2 1443
APT2 1444
APT2 1445
APT2 1446
APT2 1447
APT2 1448
APT2 1449
APT2 1450
APT2 1451
APT2 1452
APT2 1453
APT2 1454
APT2 1455
APT2 1456
APT2 1457
APT2 1458
APT2 1459
APT2 1460
APT2 1461
APT2 1462
APT2 1463
APT2 1464
APT2 1465
APT2 1466
APT2 1467
APT2 1468
APT2 1469
APT2 1470
APT2 1471
APT2 1472
APT2 1473
APT2 1474
APT2 1475
APT2 1476
APT2 1477
APT2 1478
APT2 1479
APT2 1480
APT2 1481
APT2 1482
APT2 1483
APT2 1484
APT2 1485
APT2 1486
APT2 1487
APT2 1488
APT2 1489
APT2 1490
APT2 1491
APT2 1492
APT2 1493
APT2 1494
APT2 1495
APT2 1496
APT2 1497
APT2 1498
APT2 1499
APT2 1500
APT2 1501
APT2 1502
APT2 1503
APT2 1504
APT2 1505
APT2 1506
APT2 1507
APT2 1508
APT2 1509
APT2 1510
APT2 1511
APT2 1512
APT2 1513
APT2 1514
APT2 1515
APT2 1516
APT2 1517
APT2 1518
APT2 1519
APT2 1520
APT2 1521
APT2 1522
APT2 1523
APT2 1524
APT2 1525
APT2 1526
APT2 1527
APT2 1528
APT2 1529
APT2 1530
APT2 1531
APT2 1532
APT2 1533
APT2 1534
APT2 1535
APT2 1536
APT2 1537
APT2 1538
APT2 1539
APT2 1540
APT2 1541
APT2 1542
APT2 1543
APT2 1544
APT2 1545
APT2 1546
APT2 1547
APT2 1548
APT2 1549
APT2 1550
APT2 1551
APT2 1552
APT2 1553
APT2 1554
APT2 1555
APT2 1556
APT2 1557
APT2 1558
APT2 1559
APT2 1560
APT2 1561
APT2 1562
APT2 1563
APT2 1564
APT2 1565
APT2 1566
APT2 1567
APT2 1568
APT2 1569
APT2 1570
APT2 1571
APT2 1572
APT2 1573
APT2 1574
APT2 1575
APT2 1576
APT2 1577
APT2 1578
APT2 1579
APT2 1580
APT2 1581
APT2 1582
APT2 1583
APT2 1584
APT2 1585
APT2 1586
APT2 1587
APT2 1588
APT2 1589
APT2 1590
APT2 1591
APT2 1592
APT2 1593
APT2 1594
APT2 1595
APT2 1596
APT2 1597
APT2 1598
APT2 1599
APT2 1600
APT2 1601
APT2 1602
APT2 1603
APT2 1604
APT2 1605
APT2 1606
APT2 1607
APT2 1608
APT2 1609
APT2 1610
APT2 1611
APT2 1612
APT2 1613
APT2 1614
APT2 1615
APT2 1616
APT2 1617
APT2 1618
APT2 1619
APT2 1620
APT2 1621
APT2 1622
APT2 1623
APT2 1624
APT2 1625
APT2 1626
APT2 1627
APT2 1628
APT2 1629
APT2 1630
APT2 1631
APT2 1632
APT2 1633
APT2 1634
APT2 1635
APT2 1636
APT2 1637
APT2 1638
APT2 1639
APT2 1640
APT2 1641
APT2 1642
APT2 1643
APT2 1644
APT2 1645
APT2 1646
APT2 1647
APT2 1648
APT2 1649
APT2 1650
APT2 1651
APT2 1652
APT2 1653
APT2 1654
APT2 1655
APT2 1656
APT2 1657
APT2 1658
APT2 1659
APT2 1660
APT2 1661
APT2 1662
APT2 1663
APT2 1664
APT2 1665
APT2 1666
APT2 1667
APT2 1668
APT2 1669
APT2 1670
APT2 1671
APT2 1672
APT2 1673
APT2 1674
APT2 1675
APT2 1676
APT2 1677
APT2 1678
APT2 1679
APT2 1680
APT2 1681
APT2 1682
APT2 1683
APT2 1684
APT2 1685
APT2 1686
APT2 1687
APT2 1688
APT2 1689
APT2 1690
APT2 1691
APT2 1692
APT2 1693
APT2 1694
APT2 1695
APT2 1696
APT2 1697
APT2 1698
APT2 1699
APT2 1700
APT2 1701
APT2 1702
APT2 1703
APT2 1704
APT2 1705
APT2 1706
APT2 1707
APT2 1708
APT2 1709
APT2 1710
APT2 1711
APT2 1712
APT2 1713
APT2 1714
APT2 1715
APT2 1716
APT2 1717
APT2 1718
APT2 1719
APT2 1720
APT2 1721
APT2 1722
APT2 1723
APT2 1724
APT2 1725
APT2 1726
APT2 1727
APT2 1728
APT2 1729
APT2 1730
APT2 1731
APT2 1732
APT2 1733
APT2 1734
APT2 1735
APT2 1736
APT2 1737
APT2 1738
APT2 1739
APT2 1740
APT2 1741
APT2 1742
APT2 1743
APT2 1744
APT2 1745
APT2 1746
APT2 1747
APT2 1748
APT2 1749
APT2 1750
APT2 1751
APT2 1752
APT2 1753
APT2 1754
APT2 1755
APT2 1756
APT2 1757
APT2 1758
APT2 1759
APT2 1760
APT2 1761
APT2 1762
APT2 1763
APT2 1764
APT2 1765
APT2 1766
APT2 1767
APT2 1768
APT2 1769
APT2 1770
APT2 1771
APT2 1772
APT2 1773
APT2 1774
APT2 1775
APT2 1776
APT2 1777
APT2 1778
APT2 1779
APT2 1780
APT2 1781
APT2 1782
APT2 1783
APT2 1784
APT2 1785
APT2 1786
APT2 1787
APT2 1788
APT2 1789
APT2 1790
APT2 1791
APT2 1792
APT2 1793
APT2 1794
APT2 1795
APT2 1796
APT2 1797
APT2 1798
APT2 1799
APT2 1800
APT2 1801
APT2 1802
APT2 1803
APT2 1804
APT2 1805
APT2 1806
APT2 1807
APT2 1808
APT2 1809
APT2 1810
APT2 1811
APT2 1812
APT2 1813
APT2 1814
APT2 1815
APT2 1816
APT2 1817
APT2 1818
APT2 1819
APT2 1820
APT2 1821
APT2 1822
APT2 1823
APT2 1824
APT2 1825
APT2 1826
APT2 1827
APT2 1828
APT2 1829
APT2 1830
APT2 1831
APT2 1832
APT2 1833
APT2 1834
APT2 1835
APT2 1836
APT2 1837
APT2 1838
APT2 1839
APT2 1840
APT2 1841
APT2 1842
APT2 1843
APT2 1844
APT2 1845
APT2 1846
APT2 1847
APT2 1848
APT2 1849
APT2 1850
APT2 1851
APT2 1852
APT2 1853
APT2 1854
APT2 1855
APT2 1856
APT2 1857
APT2 1858
APT2 1859
APT2 1860
APT2 1861
APT2 1862
APT2 1863
APT2 1864
APT2 1865
APT2 1866
APT2 1867
APT2 1868
APT2 1869
APT2 1870
APT2 1871
APT2 1872
APT2 1873
APT2 1874
APT2 1875
APT2 1876
APT2 1877
APT2 1878
APT2 1879
APT2 1880
APT2 1881
APT2 1882
APT2 1883
APT2 1884
APT2 1885
APT2 1886
APT2 1887
APT2 1888
APT2 1889
APT2 1890
APT2 1891
APT2 1892
APT2 1893
APT2 1894
APT2 1895
APT2 1896
APT2 1897
APT2 1898
APT2 1899
APT2 1900
APT2 1901
APT2 1902
APT2 1903
APT2 1904
APT2 1905
APT2 1906
APT2 1907
APT2 1908
APT2 1909
APT2 1910
APT2 1911
APT2 1912
APT2 1913
APT2 1914
APT2 1915
APT2 1916
APT2 1917
APT2 1918
APT2 1919
APT2 1920
APT2 1921
APT2 1922
APT2 1923
APT2 1924
APT2 1925
APT2 1926
APT2 1927
APT2 1928
APT2 1929
APT2 1930
APT2 1931
APT2 1932
APT2 1933
APT2 1934
APT2 1935
APT2 1936
APT2 1937
APT2 1938
APT2 1939
APT2 1940
APT2 1941
APT2 1942
APT2 1943
APT2 1944
APT2 1945
APT2 1946
APT2 1947
APT2 1948
APT2 1949
APT2 1950
APT2 1951
APT2 1952
APT2 1953
APT2 1954
APT2 1955
APT2 1956
APT2 1957
APT2 1958
APT2 1959
APT2 1960
APT2 1961
APT2 1962
APT2 1963
APT2 1964
APT2 1965
APT2 1966
APT2 1967
APT2 1968
APT2 1969
APT2 1970
APT2 1971
APT2 1972
APT2 1973
APT2 1974
APT2 1975
APT2 1976
APT2 1977
APT2 1978
APT2 1979
APT2 1980
APT2 1981
APT2 1982
APT2 1983
APT2 1984
APT2 1985
APT2 1986
APT2 1987
APT2 1988
APT2 1989
APT2 1990
APT2 1991
APT2 1992
APT2 1993
APT2 1994
APT2 1995
APT2 1996
APT2 1997
APT2 1998
APT2 1999
APT2 2000
APT2 2001
APT2 2002
APT2 2003
APT2 2004
APT2 2005
APT2 2006
APT2 2007
APT2 2008
APT2 2009
APT2 2010
APT2 2011
APT2 2012
APT2 2013
APT2 2014
APT2 2015
APT2 2016
APT2 2017
APT2 2018
APT2 2019
APT2 2020
APT2 2021
APT2 2022
APT2 2023
APT2 2024
APT2 2025
APT2 2026
APT2 2027
APT2 2028
APT2 2029
APT2 2030
APT2 2031
APT2 2032
APT2 2033
APT2 2034
APT2 2035
APT2 2036
APT2 2037
APT2 2038
APT2 2039
APT2 2040
APT2 2041
APT2 2042
APT2 2043
APT2 2044
APT2 2045
APT2 2046
APT2 2047
APT2 2048
APT2 2049
APT2 2050
APT2 2051
APT2 2052
APT2 2053
APT2 2054
APT2 2055
APT2 2056
APT2 2057
APT2 2058
APT2 2059
APT2 2060
APT2 2061
APT2 2062
APT2 2063
APT2 2064
APT2 2065
APT2 2066
APT2 2067
APT2 2068
APT2 2069
APT2 2070
APT2 2071
APT2 2072
APT2 2073
APT2 2074
APT2 2075
APT2 2076
APT2 2077
APT2 2078
APT2 2079
APT2 2080
APT2 2081
APT2 2082
APT2 2083
APT2 2084
APT2 2085
APT2 2086
APT2 2087
APT2 2088
APT2 2089
APT2 2090
APT2 2091
APT2 2092
APT2 2093
APT2 2094
APT2 2095
APT2 2096
APT2 2097
APT2 2098
APT2 2099
APT2 2100
APT2 2101
APT2 2102
APT2 2103
APT2 2104
APT2 2105
APT2 2106
APT2 2107
APT2 2108
APT2 2109
APT2 2110
APT2 2111
APT2 2112
APT2 2113
APT2 2114
APT2 2115
APT2 2116
APT2 2117
APT2 2118
APT2 2119
APT2 2120
APT2 2121
APT2 2122
APT2 2123
APT2 2124
APT2 2125
APT2 2126
APT2 2127
APT2 2128
APT2 2129
APT2 2130
APT2 2131
APT2 2132
APT2 2133
APT2 2134
APT2 2135
APT2 2136
APT2 2137
APT2 2138
APT2 2139
APT2 2140
APT2 2141
APT2 2142
APT2 2143
APT2 2144
APT2 2145
APT2 2146
APT2 2147
APT2 2148
APT2 2149
APT2 2150
APT2 2151
APT2 2152
APT2 2153
APT2 2154
APT2 2155
APT2 2156
APT2 2157
APT2 2158
APT2 2159
APT2 2160
APT2 2161
APT2 2162
APT2 2163
APT2 2164
APT2 2165
APT2 2166
APT2 2167
APT2 2168
APT2 2169
APT2 2170
APT2 2171
APT2 2172
APT2 2173
APT2 2174
APT2 2175
APT2 2176
APT2 2177
APT2 2178
APT2 2179
APT2 2180
APT2 2181
APT2 2182
APT2 2183
APT2 2184
APT2 2185
APT2 2186
APT2 2187
APT2 2188
APT2 2189
APT2 2190
APT2 2191
APT2 2192
APT2 2193
APT2 2194
APT2 2195
APT2 2196
APT2 2197
APT2 2198
APT2 2199
APT2 2200
APT2 2201
APT2 2202
APT2 2203
APT2 2204
APT2 2205
APT2 2206
APT2 2207
APT2 2208
APT2 2209
APT2 2210
APT2 2211
APT2 2212
APT2 2213
APT2 2214
APT2 2215
APT2 2216
APT2 2217
APT2 2218
APT2 2219
APT2 2220
APT2 2221
APT2 2222
APT2 2223
APT2 2224
APT2 2225
APT2 2226
APT2 2227
APT2 2228
APT2 2229
APT2 2230
APT2 2231
APT2 2232
APT2 2233
APT2 2234
APT2 2235
APT2 2236
APT2 2237
APT2 2238
APT2 2239
APT2 2240
APT2 2241
APT2 2242
APT2 2243
APT2 2244
APT2 2245
APT2 2246
APT2 2247
APT2 2248
APT2 2249
APT2 2250
APT2 2251
APT2 2252
APT2 2253
APT2 2254
APT2 2255
APT2 2256
APT2 2257
APT2 2258
APT2 2259
APT2 2260
APT2 2261
APT2 2262
APT2 2263
APT2 2264
APT2 2265
APT2 2266
APT2 2267
APT2 2268
APT2 2269
APT2 2270
APT2 2271
APT2 2272
APT2 2273
APT2 2274
APT2 2275
APT2 2276
APT2 2277
APT2 2278
APT2 2279
APT2 2280
APT2 2281
APT2 2282
APT2 2283
APT2 2284
APT2 2285
APT2 2286
APT2 2287
APT2 2288
APT2 2289
APT2 2290
APT2 2291
APT2 2292
APT2 2293
APT2 2294
APT2 2295
APT2 2296
APT2 2297
APT2 2298
APT2 2299
APT2 2300
APT2 2301
APT2 2302
APT2 2303
APT2 2304
APT2 2305
APT2 2306
APT2 2307
APT2 2308
APT2 2309
APT2 2310
APT2 2311
APT2 2312
APT2 2313
APT2 2314
APT2 2315
APT2 2316
APT2 2317
APT2 2318
APT2 2319
APT2 2320
APT2 2321
APT2 2322
APT2 2323
APT2 2324
APT2 2325
APT2 2326
APT2 2327
APT2 2328
APT2 2329
APT2 2330
APT2 2331
APT2 2332
APT2 2333
APT2 2334
APT2 2335
APT2 2336
APT2 2337
APT2 2338
APT2 2339
APT2 2340
APT2 2341
APT2 2342
APT2 2343
APT2 2344
APT2 2345
APT2 2346
APT2 2347
APT2 2348
APT2 2349
APT2 2350
APT2 2351
APT2 2352
APT2 2353
APT2



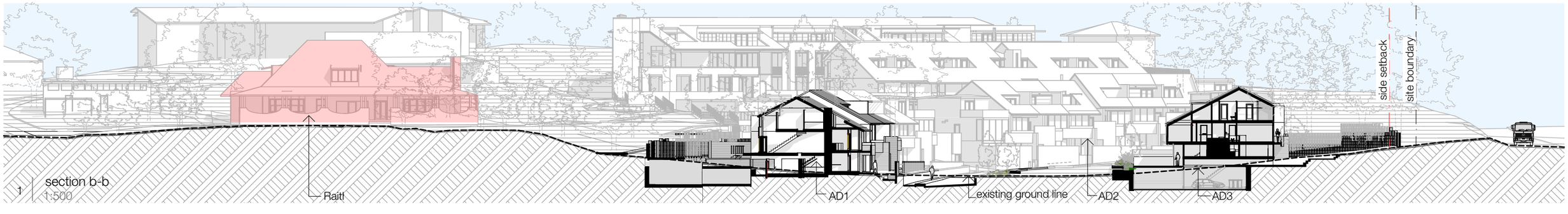
1 Fern Ave
1:500



1 Apin Rd
1:500



1 section a-a
1:500



1 section b-b
1:500

ARCHITECT

INTEGRATED DESIGN GROUP
ARCHITECTURE|MASTERPLANNING|INTERIORS

© Integrated Design Group Pty Ltd
ABN 84 115 006 329
Nominated Architect
Simon Thorne reg. no. 7093

info@idgarchitects.com.au
www.idgarchitects.com.au

NOTES

1. Figured dimensions take precedence over scaled drawings
2. Contractors to check and verify all levels datum and dimensions on site
3. All materials and workmanship to be in accordance with current written manufacturers instructions, local regulations and SAA codes
4. Conflicting information to be brought to notice of the architect and clarification sought before proceeding with any works
5. All drawings are not for construction and are subject to further design development, consultant input, council and legislative requirements.
6. Refer to General notes page for legend and abbreviations

DISCIPLINES

Access	#Access	Civil	####
Acoustic	#Acoustic	Electrical	####
Arborist	#Arborist	Geotech	#Geotech
BCA	#BCA	Hydraulic	####
Landscape	####	Mechanical	####
Planner	####	Structure	####
Surveyor	####		
Traffic	#Traffic	PCA	####
Waste	#Waste	Builder	####

PROJECT

Raith amended DA

SITE: Fern Ave Bradbury NSW
CLIENT: Capital Developments
REF: CAP18075

REVISION

4/3/19	G	Issue for consultants
5/4/19	H	Issue for DA
21/5/19	I	Issue for DA
12/7/19	J	council requested amendments
1/9/20	K	isssue for review
16/9/20	L	isssue for Council Review
17/12/20	M	issue for DA
17/5/21	N	ISSUE FOR DA

DRAWING

site elevations an ions

DRAWING DA-0104
ISSUE N

DRAWN ####
CHECKED JA
SCALE 1:500 @ a3



ARCHITECT

INTEGRATED DESIGN GROUP
ARCHITECTURE|MASTERPLANNING|INTERIORS

© Integrated Design Group Pty Ltd
ABN 84 115 006 329
Nominated Architect
Simon Thorne reg. no. 7093

info@idgarchitects.com.au
www.idgarchitects.com.au

NOTES

1. Figured dimensions take precedence over scaled drawings
2. Contractors to check and verify all levels datum and dimensions on site
3. All materials and workmanship to be in accordance with current written manufacturers instructions, local regulations and SAA codes
4. Conflicting information to be brought to notice of the architect and clarification sought before proceeding with any works
5. All drawings are not for construction and are subject to further design development, consultant input, council and legislative requirements.
6. Refer to General notes page for legend and abbreviations

DISCIPLINES

Access	#Access	Civil	####
Acoustic	#Acoustic	Electrical	####
Arborist	#Arborist	Geotech	#Geotech
BCA	#BCA	Hydraulic	####
Landscape	####	Mechanical	####
Planner	####	Structure	####
Surveyor	####		
Traffic	#Traffic	PCA	####
Waste	#Waste	Builder	####

PROJECT

Raith amended DA

SITE: Fern Ave Bradbury NSW
CLIENT: Capital Developments
REF: CAP18075

REVISION

4/3/19	B	Issue for consultants
5/4/19	C	Issue for DA
21/5/19	D	Issue for DA
12/7/19	E	council requested amendments
16/9/20	F	isssue for Council Review
17/12/20	G	issue for DA
21/5/21	H	ISSUE FOR DA
8/7/21	I	ISSUE FOR DA

DRAWING

dwelling typology

DRAWING	ISSUE		
DA-0105	I	DRAWN	####
		CHECKED	JA
		SCALE	@ a3



aerial view of Raith curtilage



view of Raith curtilage from Fern Avenue



view of attached dwellings from fern avenue



internal view of landscaped Raith curtilage

ARCHITECT

INTEGRATED DESIGN GROUP
ARCHITECTURE|MASTERPLANNING|INTERIORS

© Integrated Design Group Pty Ltd
ABN 84 115 006 329
Nominated Architect
Simon Thorne reg. no. 7093

info@idgarchitects.com.au
www.idgarchitects.com.au

NOTES

1. Figured dimensions take precedence over scaled drawings
2. Contractors to check and verify all levels datum and dimensions on site
3. All materials and workmanship to be in accordance with current written manufacturers instructions, local regulations and SAA codes
4. Conflicting information to be brought to notice of the architect and clarification sought before proceeding with any works
5. All drawings are not for construction and are subject to further design development, consultant input, council and legislative requirements.
6. Refer to General notes page for legend and abbreviations

DISCIPLINES

Access	#Access	Civil	####
Acoustic	#Acoustic	Electrical	####
Arborist	#Arborist	Geotech	#Geotech
BCA	#BCA	Hydraulic	####
Landscape	####	Mechanical	####
Planner	####	Structure	####
Surveyor	####		
Traffic	#Traffic	PCA	####
Waste	#Waste	Builder	####

PROJECT

Raith amended DA

SITE: Fern Ave Bradbury NSW
CLIENT: Capital Developments
REF: CAP18075

REVISION

18/2/19	A	Issue for consultants
4/3/19	B	Issue for consultants
5/4/19	C	Issue for DA
21/5/19	D	Issue for DA
12/7/19	E	council requested amendments
17/12/20	F	issue for DA
17/5/21	G	ISSUE FOR DA

DRAWING

photo montage

DRAWING DA-0106

ISSUE G

DRAWN ####
CHECKED JA
SCALE @ a3



view of new landscaped curtilage



view of neighbouring buildings to the rear of APT1



view corridors to and from Raith maintained towards Appin Road



view of attached dwellings from Fern avenue

ARCHITECT

INTEGRATED DESIGN GROUP
ARCHITECTURE|MASTERPLANNING|INTERIORS

© Integrated Design Group Pty Ltd
ABN 84 115 006 329
Nominated Architect
Simon Thorne reg. no. 7093

info@idgarchitects.com.au
www.idgarchitects.com.au

NOTES

1. Figured dimensions take precedence over scaled drawings
2. Contractors to check and verify all levels datum and dimensions on site
3. All materials and workmanship to be in accordance with current written manufacturers instructions, local regulations and SAA codes
4. Conflicting information to be brought to notice of the architect and clarification sought before proceeding with any works
5. All drawings are not for construction and are subject to further design development, consultant input, council and legislative requirements.
6. Refer to General notes page for legend and abbreviations

DISCIPLINES

Access	#Access	Civil	####
Acoustic	#Acoustic	Electrical	####
Arborist	#Arborist	Geotech	#Geotech
BCA	#BCA	Hydraulic	####
Landscape	####	Mechanical	####
Planner	####	Structure	####
Surveyor	####		
Traffic	#Traffic	PCA	####
Waste	#Waste	Builder	####

PROJECT

Raith amended DA

SITE: Fern Ave Bradbury NSW
CLIENT: Capital Developments
REF: CAP18075

REVISION

17/5/21	A	ISSUE FOR DA

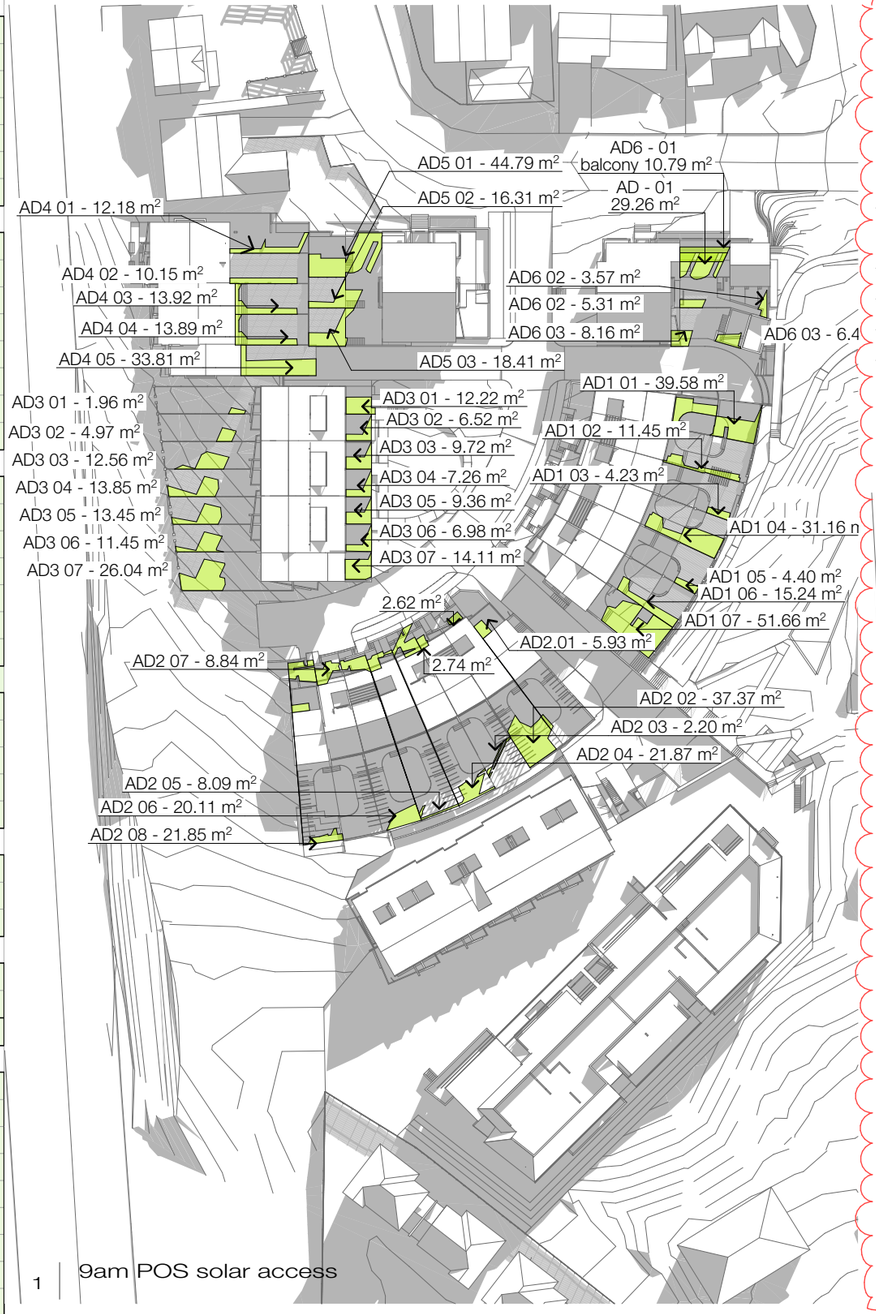
DRAWING

photo montage

DRAWING	ISSUE		
DA-0107	A	DRAWN	####
		CHECKED	JA
		SCALE	@ a3

Solar Access to 20m2 Private Open Space 21st June

Unit Number	9.00	10.00	11.00	12.00	13.00	14.00	15.00	complies
AD1.01		✓	✓	✓	✓	✓		✓
AD1.02	✓	✓	✓	✓	✓	✓		✓
AD1.03		✓	✓	✓	✓	✓		✓
AD1.04	✓	✓	✓	✓	✓	✓		✓
AD1.05		✓	✓	✓	✓	✓		✓
AD1.06	15.24	✓	✓	✓	✓	✓		✓
AD1.07	✓	✓	✓	✓	✓	✓		✓
AD2.01		✓	✓	✓	✓	✓	✓	✓
AD2.02	✓	✓	✓		✓	✓		✓
AD2.03		✓	✓	✓	✓	✓		✓
AD2.04	✓	✓	✓	✓	✓	✓		✓
AD2.05		✓	✓	✓	✓	✓		✓
AD2.06	✓	✓	✓	✓	✓	✓		✓
AD2.07		✓	✓	✓	✓	✓	✓	✓
AD2.08	✓	✓		✓	✓	✓	✓	✓
AD3.01			✓	✓	✓	✓		✓
AD3.02			✓	✓	✓	✓		✓
AD3.03		✓	✓	✓	✓	✓		✓
AD3.04	✓	✓	✓	✓	✓	✓	✓	✓
AD3.05	✓	✓	✓	✓	✓	✓		✓
AD3.06	✓	✓	✓	✓	✓	✓		✓
AD3.07	✓	✓	✓	✓	✓	✓	✓	✓
AD4.01		✓	✓	✓	✓	✓	16.4	✓
AD4.02		✓	✓	✓	✓	✓		✓
AD4.03		✓	✓	✓	✓	✓		✓
AD4.04		✓	✓	✓	✓			✓
AD4.05	✓	✓	✓	✓	✓	✓		✓
AD5.01	✓	✓	✓	✓	✓	✓	✓	✓
AD5.02		✓	✓	✓	✓	✓		✓
AD5.03	18.41	✓	✓	✓	✓	✓		✓
AD6.01	✓	✓	✓	✓	✓	✓		✓
AD6.02		17.22	✓		✓	✓		✓
AD6.03		✓	✓	✓	✓	✓		✓
APT2.01	✓	✓	✓	✓	✓	✓	✓	✓
APT2.02		19.47		✓	✓	✓	16.26	✓
APT2.03		✓	✓	✓	✓	✓	16.43	✓
APT2.04	17.03	✓	✓	✓	19.30	✓	✓	✓
APT2.05		✓	✓	✓	✓	✓	✓	✓
APT2.06	✓	18.79	✓	✓	✓	✓	✓	✓
APT2.07	✓	19.55	✓	✓	✓	✓	✓	✓
APT2.08	✓	✓	✓	✓	✓	✓	✓	✓
APT2.09	✓	✓	✓	✓	✓	✓	✓	✓



1 | 9am POS solar access

2 | 10am POS solar access

ARCHITECT

INTEGRATED DESIGN GROUP
ARCHITECTURE|MASTERPLANNING|INTERIORS

© Integrated Design Group Pty Ltd
ABN 84 115 006 329
Nominated Architect
Simon Thorne reg. no. 7093

info@idgarchitects.com.au
www.idgarchitects.com.au

NOTES

1. Figured dimensions take precedence over scaled drawings
2. Contractors to check and verify all levels datum and dimensions on site
3. All materials and workmanship to be in accordance with current written manufacturers instructions, local regulations and SAA codes
4. Conflicting information to be brought to notice of the architect and clarification sought before proceeding with any works
5. All drawings are not for construction and are subject to further design development, consultant input, council and legislative requirements.
6. Refer to General notes page for legend and abbreviations

DISCIPLINES

Access	#Access	Civil	####
Acoustic	#Acoustic	Electrical	####
Arborist	#Arborist	Geotech	#Geotech
BCA	#BCA	Hydraulic	####
Landscape	####	Mechanical	####
Planner	####	Structure	####
Surveyor	####		
Traffic	#Traffic	PCA	####
Waste	#Waste	Builder	####

PROJECT

Raith amended DA

SITE: Fern Ave Bradbury NSW
CLIENT: Capital Developments
REF: CAP18075

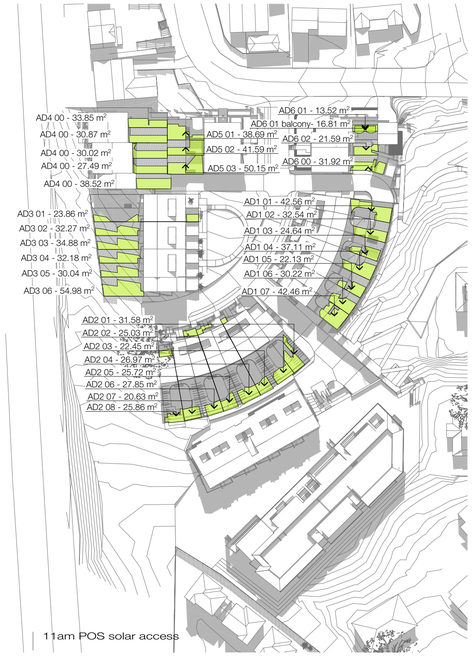
REVISION

18/2/19	A	Issue for consultants
4/3/19	B	Issue for consultants
5/4/19	C	Issue for DA
21/5/19	D	Issue for DA
12/7/19	E	council requested amendments
16/9/20	F	isssue for Council Review
17/12/20	G	issue for DA
17/5/21	H	ISSUE FOR DA

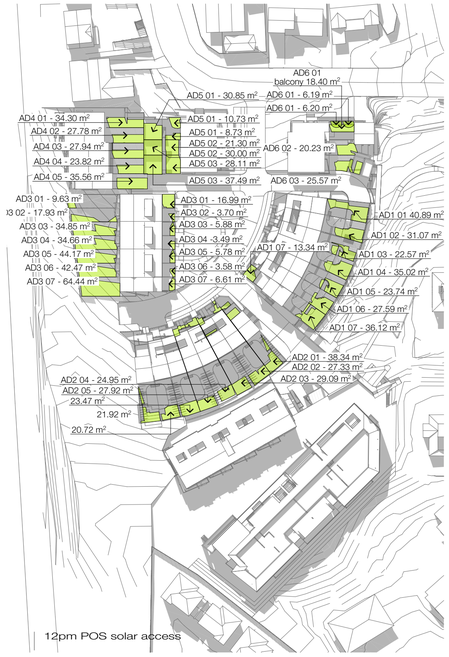
DRAWING

POS solar access 01

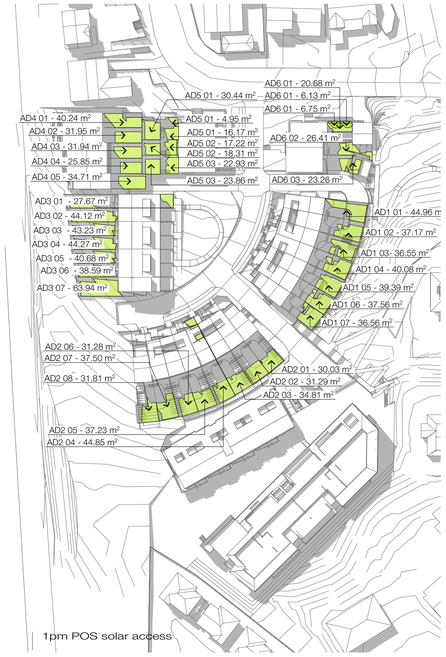
DRAWING	ISSUE		
DA-9101	H	DRAWN	####
		CHECKED	JA
		SCALE	1:1.71 @ a3



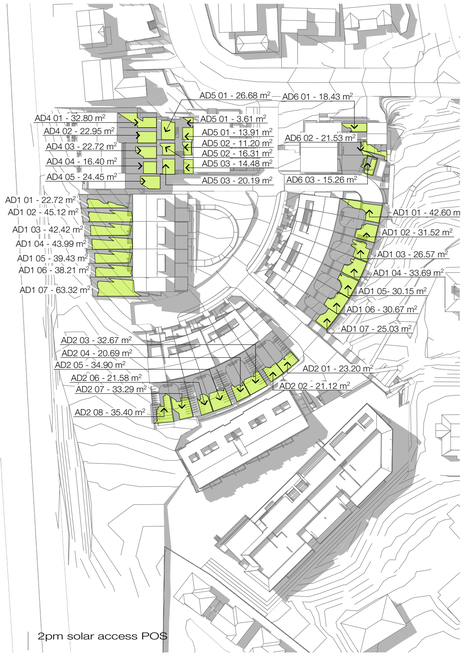
11am POS solar access



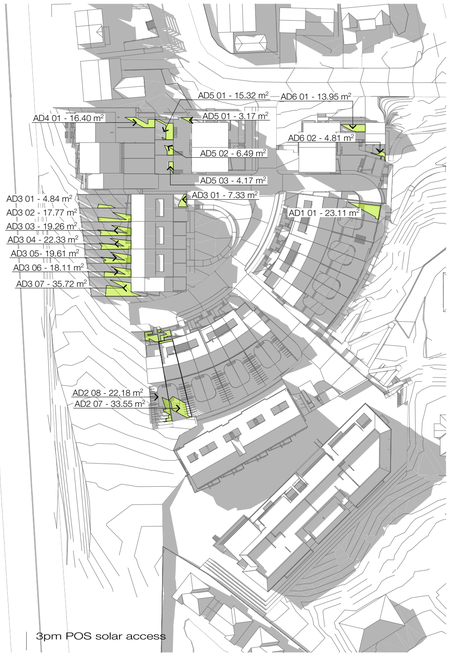
12pm POS solar access



1pm POS solar access



2pm solar access POS



3pm POS solar access

ARCHITECT

INTEGRATED DESIGN GROUP
ARCHITECTURE|MASTERPLANNING|INTERIORS

© Integrated Design Group Pty Ltd
ABN 84 115 006 329
Nominated Architect
Simon Thorne reg. no. 7093
info@idgarchitects.com.au
www.idgarchitects.com.au

NOTES
1. Figured dimensions take precedence over scaled drawings
2. Contractors to check and verify all levels datum and dimensions on site
3. All materials and workmanship to be in accordance with current written manufacturers instructions, local regulations and SAA codes
4. Conflicting information to be brought to notice of the architect and clarification sought before proceeding with any works
5. All drawings are not for construction and are subject to further design development, consultant input, council and legislative requirements.
6. Refer to General notes page for legend and abbreviations

DISCIPLINES

Access	#Access (name/contact)
Acoustic	#Acoustic (name/contact)
Arborist	#Arborist (name/contact)
BCA	#BCA (name/contact)
Landscape	#### (name/contact)
Surveyor	#### (name/contact)
Planner	#### (name/contact)
Traffic	#Traffic (name/contact)
Waste	#Waste (name/contact)

DISCIPLINES

Civil	#### (name/contact)
Electrical	#### (name/contact)
Geotech	#Geotech (name/contact)
Hydraulic	#### (name/contact)
Mechanical	#### (name/contact)
Structure	#### (name/contact)
Builder	#### (name/contact)
PCA	#### (name/contact)

CLIENT
Capital Developments
Fern Ave Bradbury

PROJECT
Raith amended DA
SITE: Fern Ave Bradbury NSW
REF: CAP18075

REVISION

18/2/19	A	Issue for consultants
4/3/19	B	Issue for consultants
5/4/19	C	Issue for DA
21/5/19	D	Issue for DA
12/7/19	E	council requested amendments
16/9/20	F	issue for Council Review
17/12/2	G	
0		issue for DA
17/5/21	H	ISSUE FOR DA

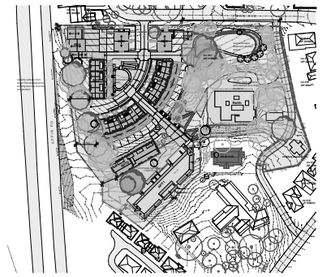
DRAWING
POS solar access 02

DRAWING: DA-9102
ISSUE: H
DRAWN: ####
CHECKED: JA
SCALE: @ a1

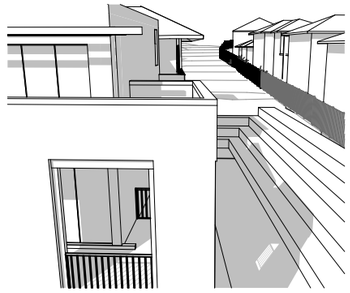
Solar Access to Living Areas 21st June

Unit Number	9.00	10.00	11.00	12.00	13.00	14.00	15.00	complies
APT1.01	✓	✓	✓	✓				✓
APT1.02	✓	✓	✓	✓	✓	✓	✓	✓
APT1.03	✓	✓	✓	✓	✓	✓	✓	✓
APT1.04								SOUTH UNIT
APT1.05						✓	✓	DOESN'T COMPLY
APT1.06				✓	✓	✓	✓	✓
APT1.07								SOUTH UNIT
APT1.08							✓	DOESN'T COMPLY
APT1.09	✓	✓	✓	✓	✓	✓	✓	✓
APT1.10	✓	✓	✓	✓	✓	✓	✓	✓
APT1.11	✓	✓	✓	✓				✓
APT1.12	✓	✓	✓	✓	✓	✓	✓	✓
APT1.13	✓	✓	✓	✓	✓	✓	✓	✓
APT1.14								SOUTH UNIT
APT1.15						✓	✓	DOESN'T COMPLY
APT1.16				✓	✓	✓	✓	✓
APT1.17								SOUTH UNIT
APT1.18							✓	DOESN'T COMPLY
APT1.19	✓	✓	✓	✓	✓	✓	✓	✓
APT1.20	✓	✓	✓	✓	✓	✓	✓	✓
APT1.21	✓	✓	✓	✓				✓
APT1.22	✓	✓	✓	✓	✓	✓	✓	✓
APT1.23	✓	✓	✓	✓	✓	✓	✓	✓
APT1.24								SOUTH UNIT
APT1.25				✓	✓	✓	✓	✓
APT1.26				✓	✓	✓	✓	✓
APT1.27								SOUTH UNIT
APT1.28							✓	DOESN'T COMPLY
APT1.29	✓	✓	✓	✓	✓	✓	✓	✓
APT1.30	✓	✓	✓	✓	✓	✓	✓	✓
								28/39 (71%)

unit number	9.00	10.00	11.00	12.00	13.00	14.00	15.00	complies
APT2.01		✓	✓	✓	✓	✓	✓	✓
APT2.02		✓	✓	✓	✓	✓	✓	✓
APT2.03		✓	✓	✓	✓	✓	✓	✓
APT2.04		✓	✓	✓	✓	✓	✓	✓
APT2.05	✓	✓	✓	✓	✓	✓	✓	✓
APT2.06		✓	✓	✓	✓	✓	✓	✓
APT2.07		✓	✓	✓	✓	✓	✓	✓
APT2.08		✓	✓	✓	✓	✓	✓	✓
APT2.09		✓	✓	✓	✓	✓	✓	✓
								28/39 (71%)



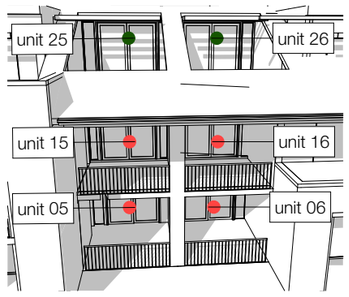
01 | apartment building
1:5000



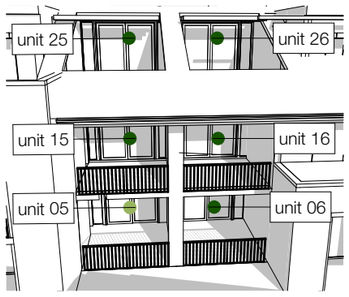
02 | 12pm solar access



03 | 3pm solar access



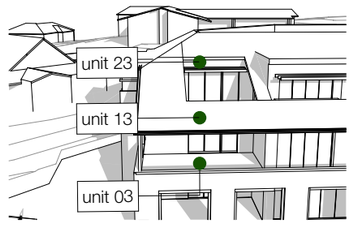
04 | 12pm solar access



05 | 3pm solar access



06 | 9am solar access



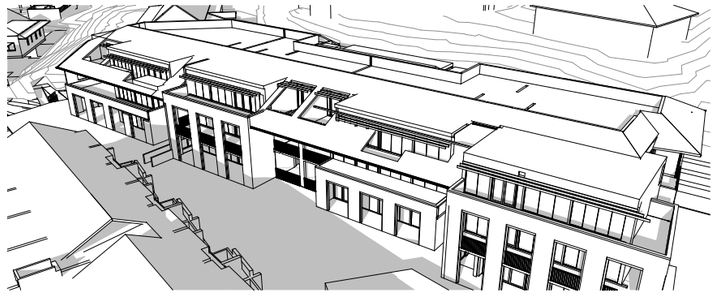
07 | 3pm solar access



08 | 9am solar access



09 | 12pm solar access



10 | 3pm solar access

ARCHITECT

INTEGRATED DESIGN GROUP
ARCHITECTURE|MASTERPLANNING|INTERIORS

© Integrated Design Group Pty Ltd
ABN 84 115 006 329
Nominated Architect
Simon Thorne reg. no. 7093

info@idgarchitects.com.au
www.idgarchitects.com.au

NOTES

1. Figured dimensions take precedence over scaled drawings
2. Contractors to check and verify all levels datum and dimensions on site
3. All materials and workmanship to be in accordance with current written manufacturers instructions, local regulations and SAA codes
4. Conflicting information to be brought to notice of the architect and clarification sought before proceeding with any works
5. All drawings are not for construction and are subject to further design development, consultant input, council and legislative requirements.
6. Refer to General notes page for legend and abbreviations

DISCIPLINES

Access	#Access	Civil	####
Acoustic	#Acoustic	Electrical	####
Arborist	#Arborist	Geotech	#Geotech
BCA	#BCA	Hydraulic	####
Landscape	####	Mechanical	####
Planner	####	Structure	####
Surveyor	####		
Traffic	#Traffic	PCA	####
Waste	#Waste	Builder	####

PROJECT

Raith amended DA

SITE: Fern Ave Bradbury NSW
CLIENT: Capital Developments
REF: CAP18075

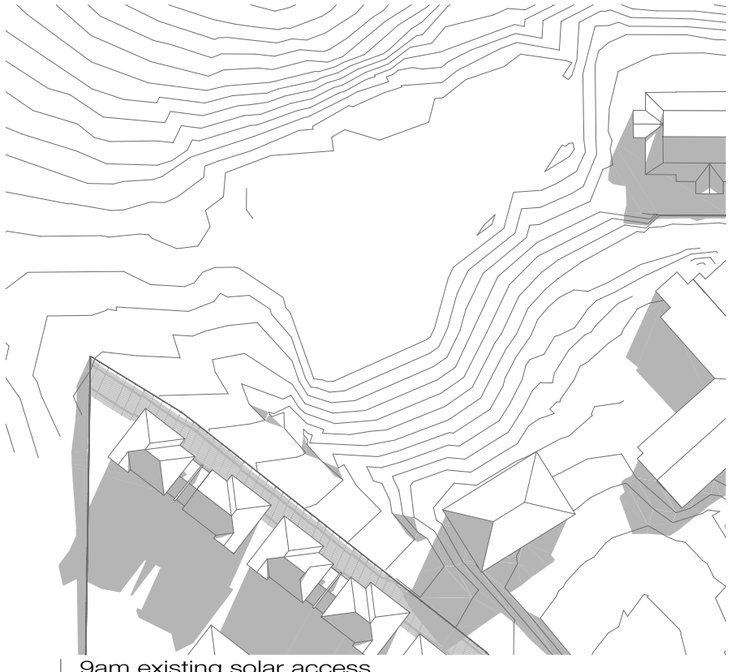
REVISION

4/3/19	A	Issue for consultants
5/4/19	B	Issue for DA
21/5/19	C	Issue for DA
12/7/19	D	council requested amendments
16/9/20	E	isssue for Council Review
17/12/20	F	issue for DA

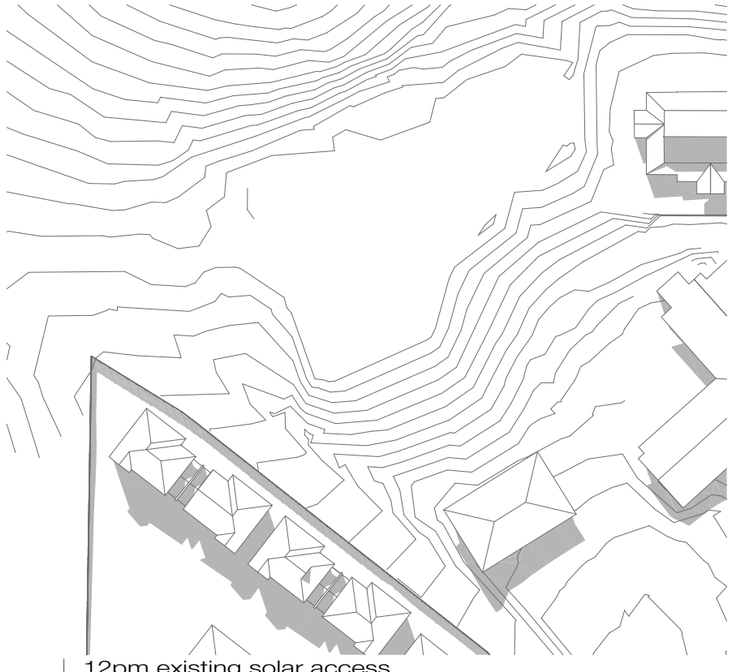
DRAWING

Apartment solar access

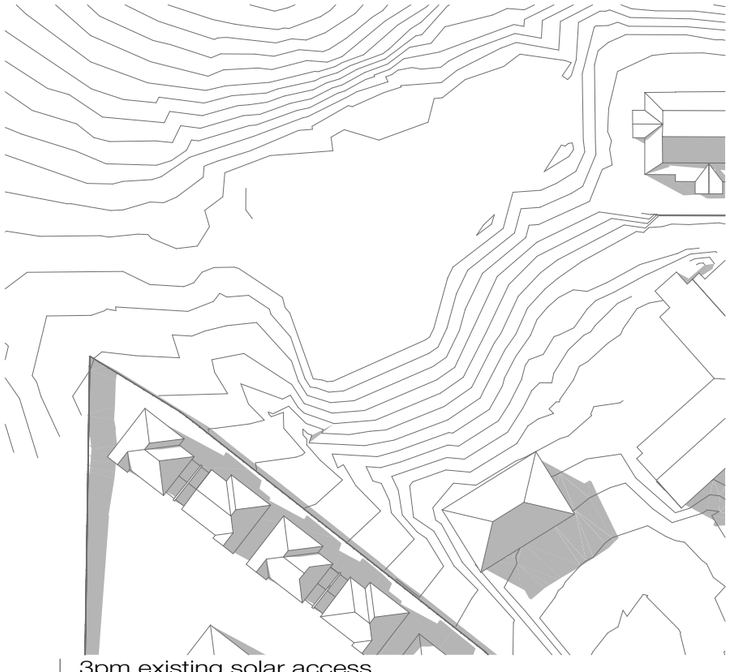
DRAWING: DA-9103
ISSUE: F
DRAWN: ####
CHECKED: AMcB
SCALE: 1:5000 @ a3



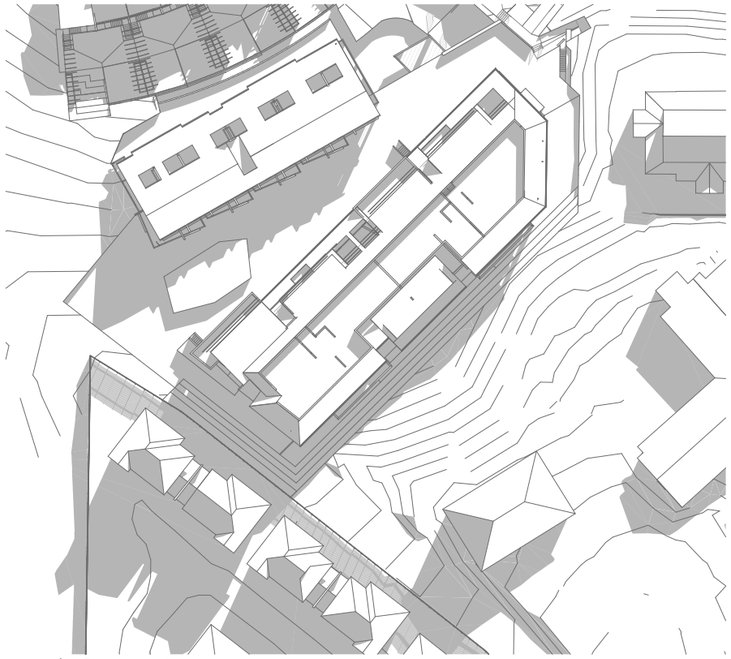
01 | 9am existing solar access



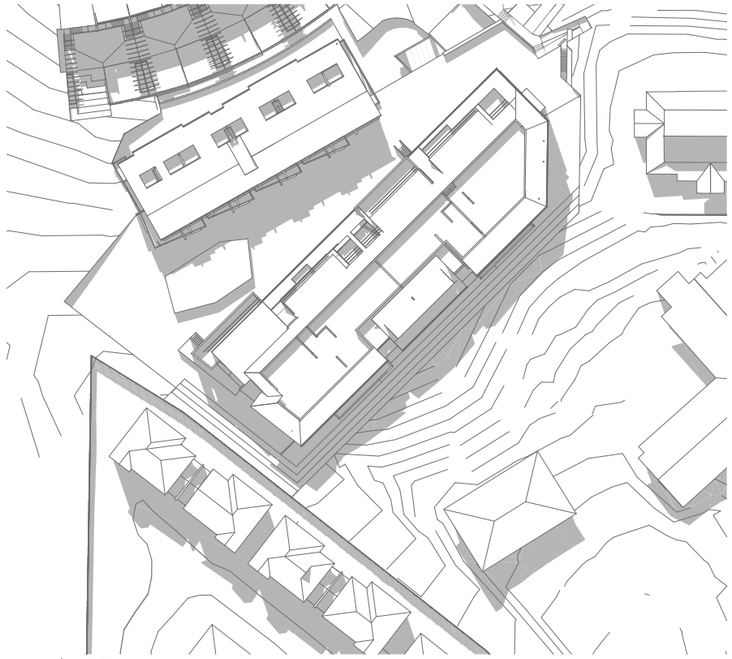
02 | 12pm existing solar access



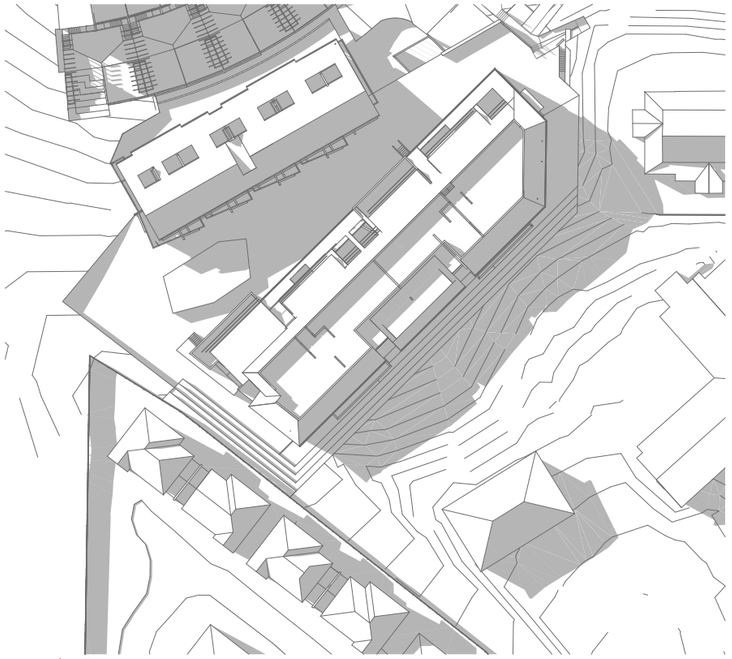
03 | 3pm existing solar access



04 | 9am solar access



05 | 12pm solar access



06 | 3pm solar access

ARCHITECT

INTEGRATED DESIGN GROUP
ARCHITECTURE|MASTERPLANNING|INTERIORS

© Integrated Design Group Pty Ltd
ABN 84 115 006 329
Nominated Architect
Simon Thorne reg. no. 7093

info@idgarchitects.com.au
www.idgarchitects.com.au

NOTES

1. Figured dimensions take precedence over scaled drawings
2. Contractors to check and verify all levels datum and dimensions on site
3. All materials and workmanship to be in accordance with current written manufacturers instructions, local regulations and SAA codes
4. Conflicting information to be brought to notice of the architect and clarification sought before proceeding with any works
5. All drawings are not for construction and are subject to further design development, consultant input, council and legislative requirements.
6. Refer to General notes page for legend and abbreviations

DISCIPLINES

Access	#Access	Civil	####
Acoustic	#Acoustic	Electrical	####
Arborist	#Arborist	Geotech	#Geotech
BCA	#BCA	Hydraulic	####
Landscape	####	Mechanical	####
Planner	####	Structure	####
Surveyor	####		
Traffic	#Traffic	PCA	####
Waste	#Waste	Builder	####

PROJECT

Raith amended DA

SITE: Fern Ave Bradbury NSW
CLIENT: Capital Developments
REF: CAP18075

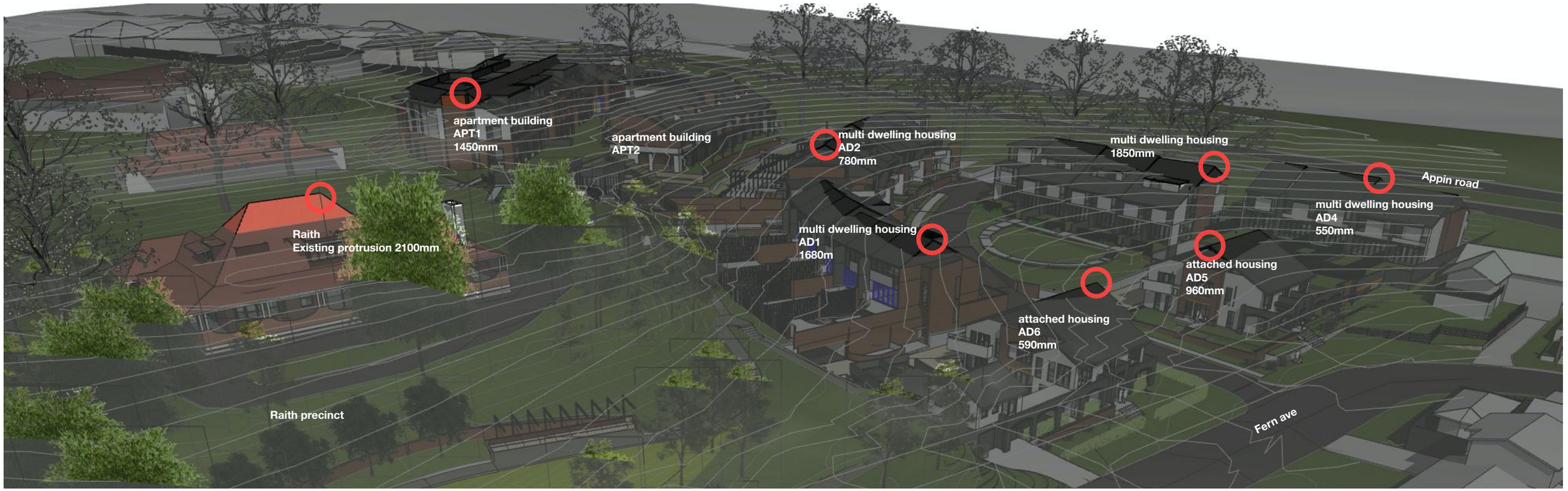
REVISION

7/8/19	A	council requested amendments
16/9/20	B	isssue for Council Review
17/12/20	C	issue for DA

DRAWING

Neighbouring solar access

DRAWING	ISSUE		
DA-9104	C	DRAWN	####
		CHECKED	AMcB
		SCALE	@ a3



ARCHITECT

INTEGRATED DESIGN GROUP
ARCHITECTURE|MASTERPLANNING|INTERIORS

© Integrated Design Group Pty Ltd
ABN 84 115 006 329
Nominated Architect
Simon Thorne reg. no. 7093

info@idgarchitects.com.au
www.idgarchitects.com.au

NOTES

1. Figured dimensions take precedence over scaled drawings
2. Contractors to check and verify all levels datum and dimensions on site
3. All materials and workmanship to be in accordance with current written manufacturers instructions, local regulations and SAA codes
4. Conflicting information to be brought to notice of the architect and clarification sought before proceeding with any works
5. All drawings are not for construction and are subject to further design development, consultant input, council and legislative requirements.
6. Refer to General notes page for legend and abbreviations

DISCIPLINES

Access	#Access	Civil	####
Acoustic	#Acoustic	Electrical	####
Arborist	#Arborist	Geotech	#Geotech
BCA	#BCA	Hydraulic	####
Landscape	####	Mechanical	####
Planner	####	Structure	####
Surveyor	####		
Traffic	#Traffic	PCA	####
Waste	#Waste	Builder	####

PROJECT

Raith amended DA

SITE: Fern Ave Bradbury NSW
CLIENT: Capital Developments
REF: CAP18075

REVISION

4/3/19	B	Issue for consultants
5/4/19	C	Issue for DA
21/5/19	D	Issue for DA
12/7/19	E	council requested amendments
16/9/20	F	isssue for Council Review
17/12/20	G	issue for DA
22/4/21	H	issue for coordination
17/5/21	I	ISSUE FOR DA

DRAWING

8.5m height plane

DRAWING: DA-9300
ISSUE: I

DRAWN ####
CHECKED JA
SCALE 1:177.35 @ a3

Waste Management recommendations

Construction Waste
Waste generated during construction will be limited as the proposal does not include any demolition of existing structures. In addition, it is expected that construction materials will be carefully managed to ensure efficient management and use in order to reduce wastage. Where waste does occur, this will be collected on site and separated into the various waste streams for disposal at licensed disposal and recycling centres.

Operational Waste
The residential apartments will be serviced by a centrally located garbage enclosures located on each level, with bins for recycled garbage and for general waste.
Each residence will be provided with a waste cupboard space within their apartment for the storage of general and recyclable waste until it is disposed of. Tenants are responsible to remove all waste from their residence to the garbage enclosure provided for each building.
Campbelltown Council will collect general and recyclable waste from the street facing unit of AD6 on a weekly basis from Fern Ave. The proposed driveway off Fern Ave will provide access for garbage trucks to the garbage collection points for buildings AD1, AD2, AD3, AD4, AD5, APT1 & APT2. Management will provide access into garbage collection/holding room.

Waste Maintenance recommendations

It is recommended that a building maintenance manager to be employed to oversee the garbage disposal process during occupation of this development. Furthermore, it is also recommended that a part time care taker be employed to manage the system in the regular caretakers absence, i.e. on weekends and public holidays when the waste generation is expected to peak. The caretaker's duties would include the following:
• Generally maintaining and cleaning the garbage enclosures. (Recommended at least once per week)
• Organising, maintaining and cleaning the general and recycled waste holding areas.
Due to the nature of the waste it is recommended that in addition to cleaning, the garbage rooms be deodorised (recommended at least once per week).
• Organising for both Garbage and Recycled Waste pick-ups as required.

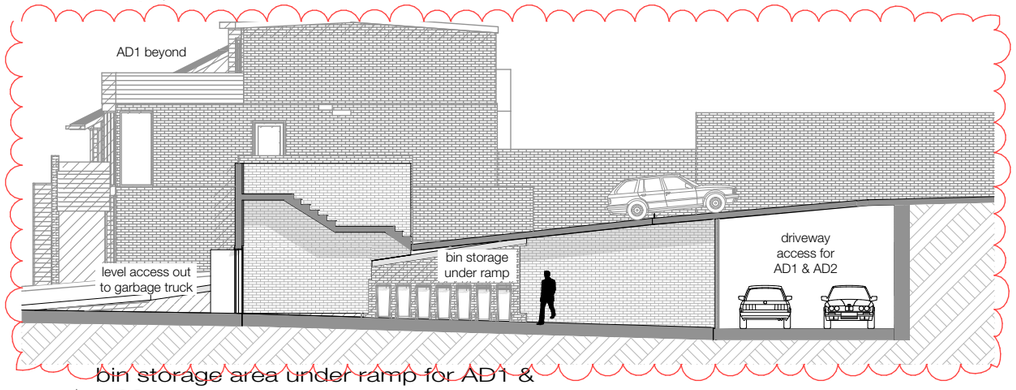
Generated Waste Volumes

Section 3.7.1 and Section 3.7.2 of Campbelltown DCP 2015 requires provision of space for 3 bins per dwelling for attached dwellings and multi-dwelling residences.
All dwellings in buildings AD1, AD2, AD3, AD4, AD5, AD6 & APT2 each contain space for 3 bins in each allocated garage, complying with DCP requirements. Garbage spaces for dwellings in building MD3 are provided forward of the building.

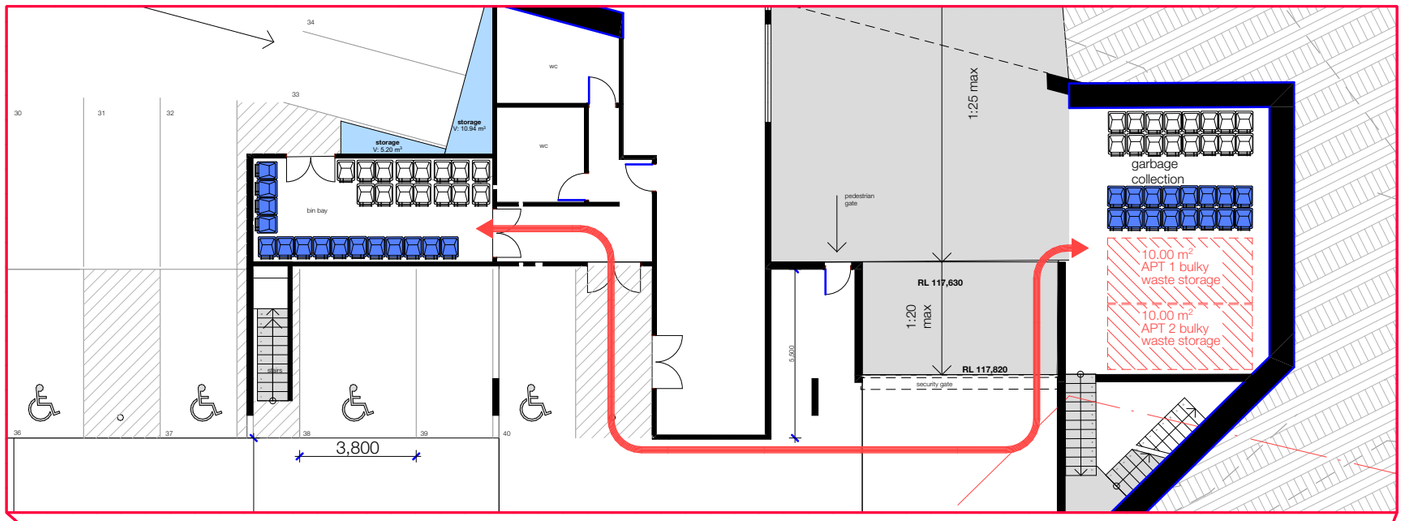
Section 5.4.8.1 of the DCP (General Requirements for Residential Flat Buildings & Mixed Use Development) requires developments to provide for bin storage within the building at the following rates:
1x 240L general waste bin per 2.5 dwellings, or
1x1100L bulk bin per 10 dwellings, and
1x240L recycling bin per 2.5 dwellings

The minimum requirements for building APT1 (30 dwellings) can be calculated as follows:
- 12x240 L general waste bins, or 3x1100L bulk bins; and
- 12x240L recycling bins

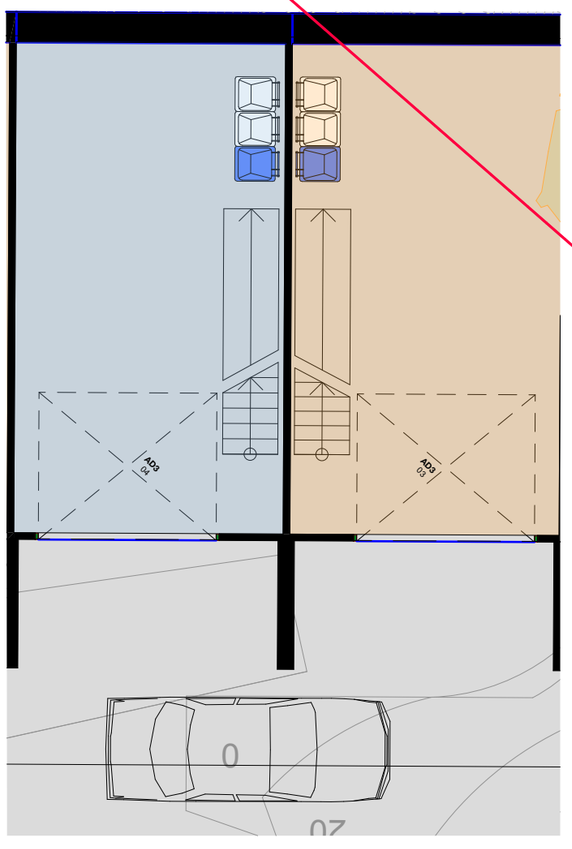
Building APT1 contains a communally-accessed bin storage room, with spaces for 28x240-litre bins, complying with the DCP requirements.

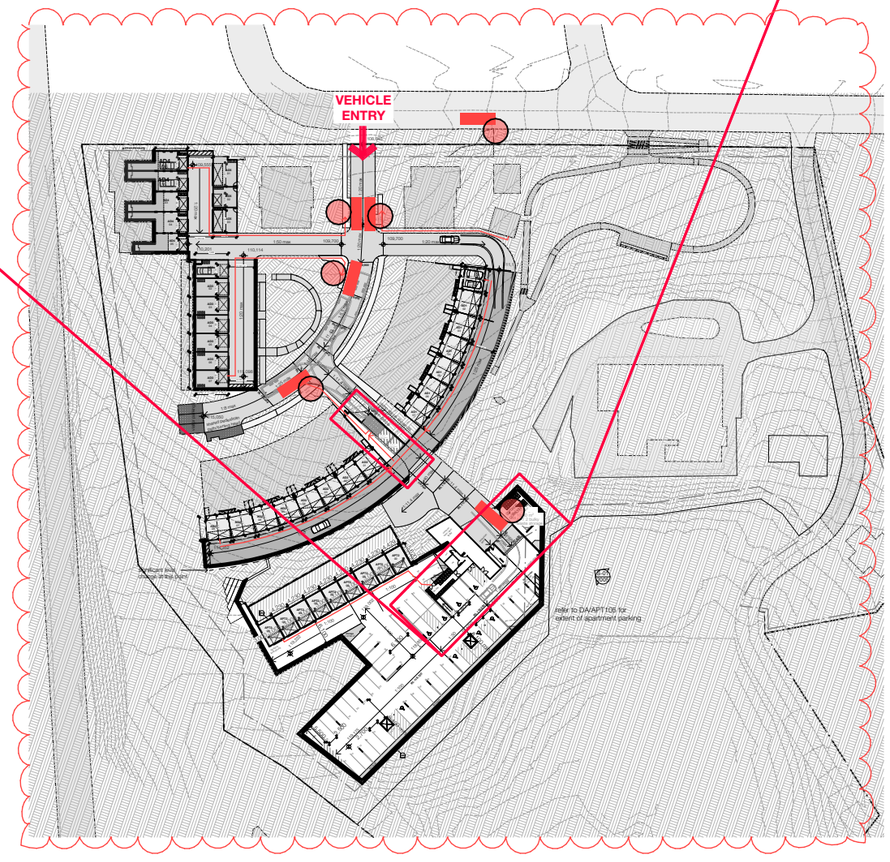


bin storage area under ramp for AD1 & AD2



building APT1 garbage storage room





ARCHITECT
INTEGRATED DESIGN GROUP
ARCHITECTURE | MASTERPLANNING | INTERIORS

© Integrated Design Group Pty Ltd
ABN 84 115 006 329
Nominated Architect
Simon Thorne reg. no. 7093

info@idgarchitects.com.au
www.idgarchitects.com.au

NOTES
1. Figured dimensions take precedence over scaled drawings
2. Contractors to check and verify all levels datum and dimensions on site
3. All materials and workmanship to be in accordance with current written manufacturers instructions, local regulations and SAA codes
4. Conflicting information to be brought to notice of the architect and clarification sought before proceeding with any works
5. All drawings are not for construction and are subject to further design development, consultant input, council and legislative requirements.
6. Refer to General notes page for legend and abbreviations

DISCIPLINES

Access	#Access	Civil	####
Acoustic	#Acoustic	Electrical	####
Arborist	#Arborist	Geotech	#Geotech
BCA	#BCA	Hydraulic	####
Landscape	####	Mechanical	####
Planner	####	Structure	####
Surveyor	####		
Traffic	#Traffic	PCA	####
Waste	#Waste	Builder	####

PROJECT
Raith amended DA

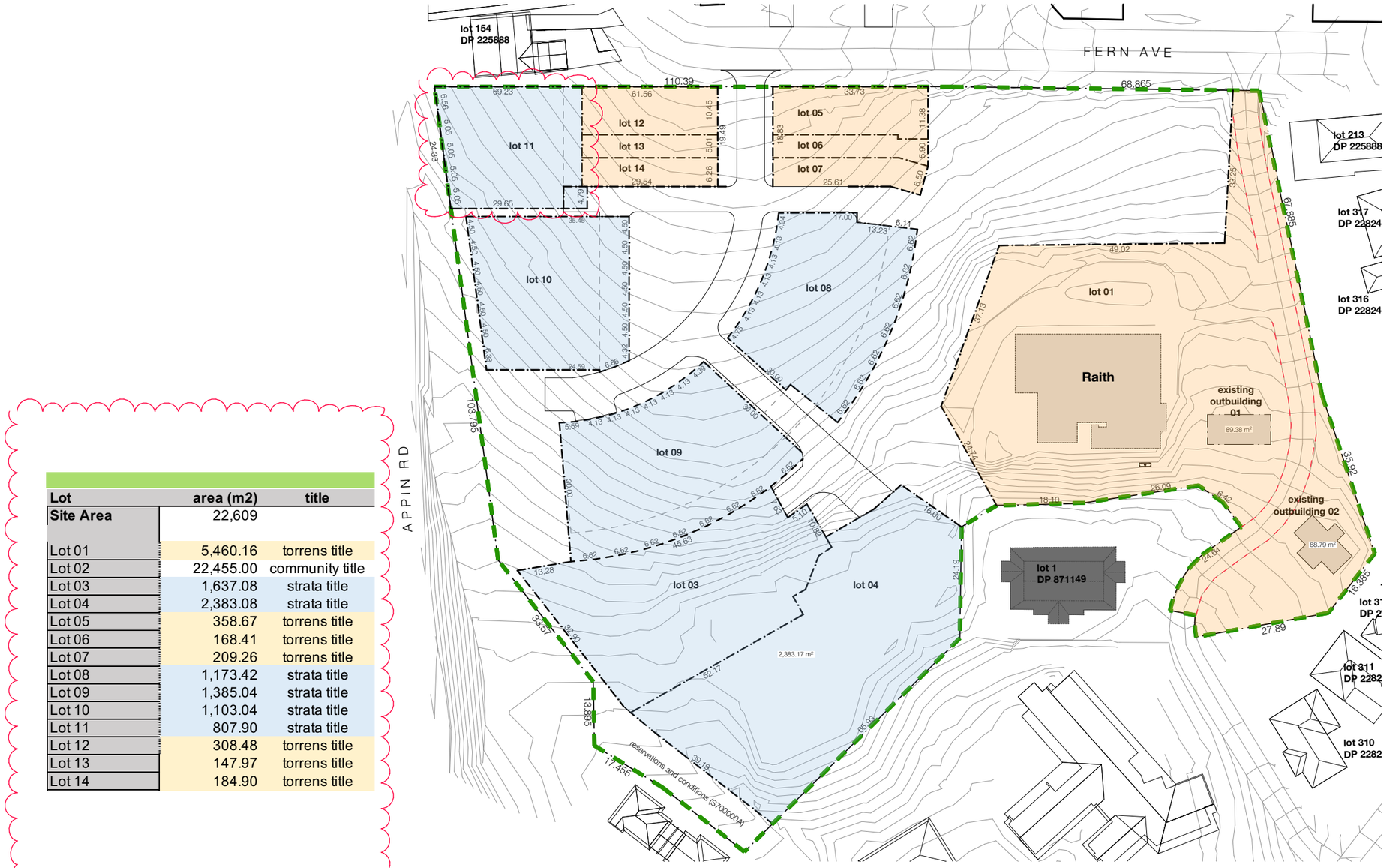
SITE: Fern Ave Bradbury NSW
CLIENT: Capital Developments
REF: CAP18075

REVISION

4/3/19	C	Issue for consultants
5/4/19	D	Issue for DA
21/5/19	E	Issue for DA
12/7/19	F	council requested amendments
17/12/20	G	issue for DA
21/4/21	H	issue for coordination
26/4/21	I	issue for coordination
17/5/21	J	ISSUE FOR DA

DRAWING
waste management plan

DRAWING DA-9302
ISSUE J
DRAWN ####
CHECKED JA
SCALE 1:1500 @ a3



Lot	area (m2)	title
Site Area	22,609	
Lot 01	5,460.16	torrens title
Lot 02	22,455.00	community title
Lot 03	1,637.08	strata title
Lot 04	2,383.08	strata title
Lot 05	358.67	torrens title
Lot 06	168.41	torrens title
Lot 07	209.26	torrens title
Lot 08	1,173.42	strata title
Lot 09	1,385.04	strata title
Lot 10	1,103.04	strata title
Lot 11	807.90	strata title
Lot 12	308.48	torrens title
Lot 13	147.97	torrens title
Lot 14	184.90	torrens title

ARCHITECT

INTEGRATED DESIGN GROUP
ARCHITECTURE|MASTERPLANNING|INTERIORS

© Integrated Design Group Pty Ltd
ABN 84 115 006 329
Nominated Architect
Simon Thorne reg. no. 7093

info@idgarchitects.com.au
www.idgarchitects.com.au

NOTES

1. Figured dimensions take precedence over scaled drawings
2. Contractors to check and verify all levels datum and dimensions on site
3. All materials and workmanship to be in accordance with current written manufacturers instructions, local regulations and SAA codes
4. Conflicting information to be brought to notice of the architect and clarification sought before proceeding with any works
5. All drawings are not for construction and are subject to further design development, consultant input, council and legislative requirements.
6. Refer to General notes page for legend and abbreviations

DISCIPLINES

Access	#Access	Civil	####
Acoustic	#Acoustic	Electrical	####
Arborist	#Arborist	Geotech	#Geotech
BCA	#BCA	Hydraulic	####
Landscape	####	Mechanical	####
Planner	####	Structure	####
Surveyor	####		
Traffic	#Traffic	PCA	####
Waste	#Waste	Builder	####

PROJECT

Raith amended DA

SITE: Fern Ave Bradbury NSW
CLIENT: Capital Developments
REF: CAP18075

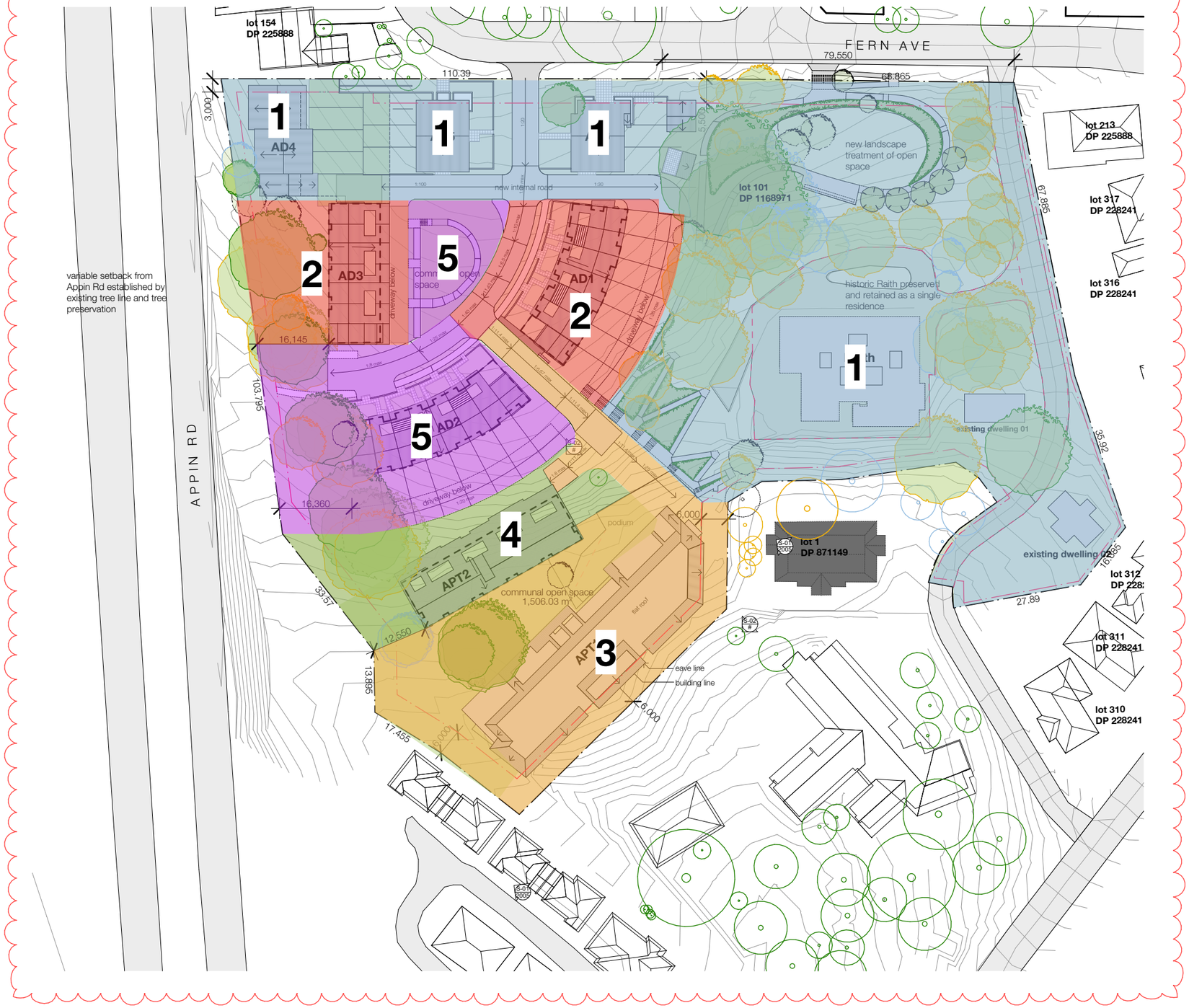
REVISION

5/4/19	A	Issue for DA
21/5/19	B	Issue for DA
12/7/19	C	council requested amendments
25/7/19	D	council requested amendments
7/8/19	E	council requested amendments
17/12/20	F	issue for DA
10/2/21	G	issue for DA
9/6/21	H	ISSUE FOR DA

DRAWING

indicative subdivision plan

DRAWING: DA-9303
ISSUE: H
DRAWN: ####
CHECKED: JA
SCALE: 1:1000 @ a3



ARCHITECT

INTEGRATED
DESIGN
GROUP
ARCHITECTURE|MASTERPLANNING|INTERIORS

© Integrated Design Group Pty Ltd
ABN 84 115 006 329
Nominated Architect
Simon Thorne reg. no. 7093

info@idgarchitects.com.au
www.idgarchitects.com.au

NOTES

1. Figured dimensions take precedence over scaled drawings
2. Contractors to check and verify all levels datum and dimensions on site
3. All materials and workmanship to be in accordance with current written manufacturers instructions, local regulations and SAA codes
4. Conflicting information to be brought to notice of the architect and clarification sought before proceeding with any works
5. All drawings are not for construction and are subject to further design development, consultant input, council and legislative requirements.
6. Refer to General notes page for legend and abbreviations

DISCIPLINES

Access	#Access	Civil	####
Acoustic	#Acoustic	Electrical	####
Arborist	#Arborist	Geotech	#Geotech
BCA	#BCA	Hydraulic	####
Landscape	####	Mechanical	####
Planner	####	Structure	####
Surveyor	####		
Traffic	#Traffic	PCA	####
Waste	#Waste	Builder	####

PROJECT

Raith amended DA

SITE: Fern Ave Bradbury NSW
CLIENT: Capital Developments
REF: CAP18075

REVISION

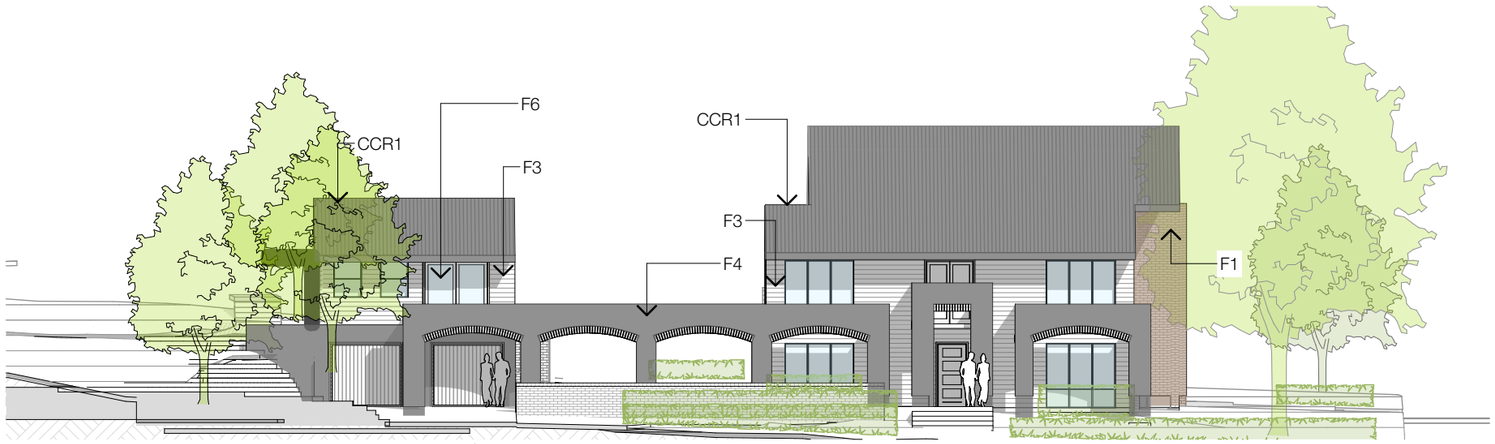
5/4/19	A	Issue for DA
21/5/19	B	Issue for DA
12/7/19	C	council requested amendments
16/9/20	D	isssue for Council Review
17/12/20	E	issue for DA
16/3/21	F	issue for client review
17/5/21	G	ISSUE FOR DA

DRAWING

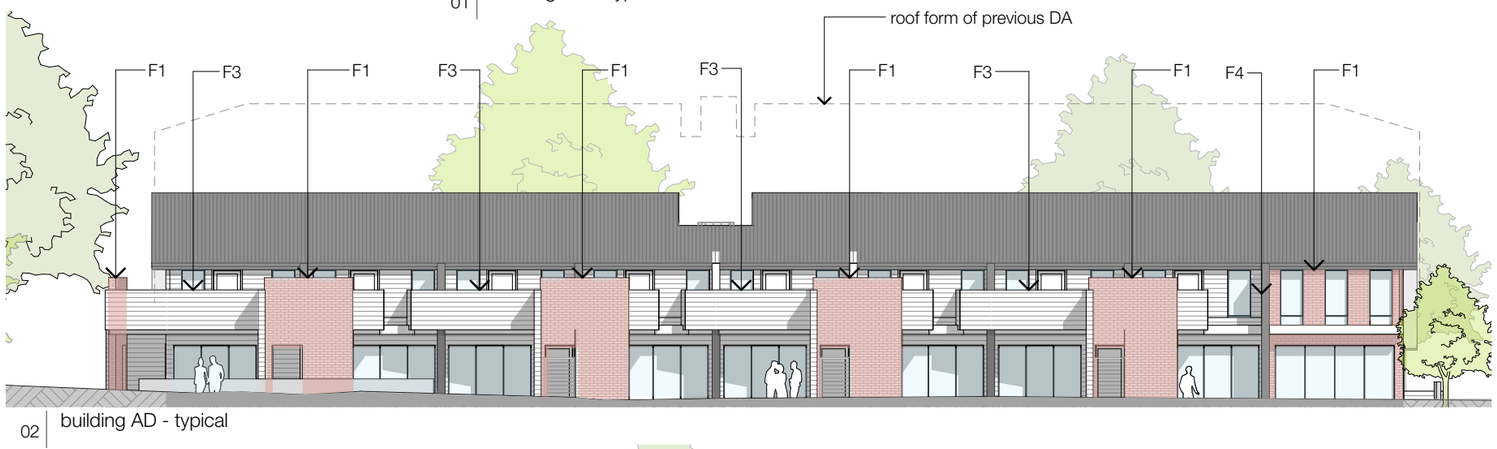
staging plan

DRAWING: DA-9304
ISSUE: G

DRAWN ####
CHECKED JA
SCALE 1:1000 @ a3



01 building MD - typical



02 building AD - typical



03 building APT - typical



F1 - face brick to complement Raith



F2 - sheet metal facade

F3 - light/white finish weatherboard



F4 - woodland grey or similar



F5 - windspray or similar



F6 - glass



F7 - light masonry wall



CCR1 - corrugated roof

ARCHITECT

INTEGRATED DESIGN GROUP
ARCHITECTURE|MASTERPLANNING|INTERIORS

© Integrated Design Group Pty Ltd
ABN 84 115 006 329
Nominated Architect
Simon Thorne reg. no. 7093

info@idgarchitects.com.au
www.idgarchitects.com.au

NOTES

1. Figured dimensions take precedence over scaled drawings
2. Contractors to check and verify all levels datum and dimensions on site
3. All materials and workmanship to be in accordance with current written manufacturers instructions, local regulations and SAA codes
4. Conflicting information to be brought to notice of the architect and clarification sought before proceeding with any works
5. All drawings are not for construction and are subject to further design development, consultant input, council and legislative requirements.
6. Refer to General notes page for legend and abbreviations

DISCIPLINES

Access	#Access	Civil	####
Acoustic	#Acoustic	Electrical	####
Arborist	#Arborist	Geotech	#Geotech
BCA	#BCA	Hydraulic	####
Landscape	####	Mechanical	####
Planner	####	Structure	####
Surveyor	####		
Traffic	#Traffic	PCA	####
Waste	#Waste	Builder	####

PROJECT

Raith amended DA

SITE: Fern Ave Bradbury NSW
CLIENT: Capital Developments
REF: CAP18075

REVISION

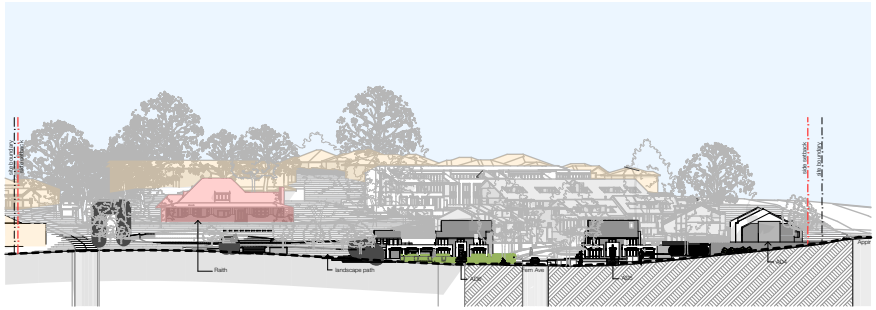
18/2/19	A	Issue for consultants
4/3/19	B	Issue for consultants
5/4/19	C	Issue for DA
21/5/19	D	Issue for DA
12/7/19	E	council requested amendments
16/9/20	F	isssue for Council Review
17/12/20	G	issue for DA

DRAWING

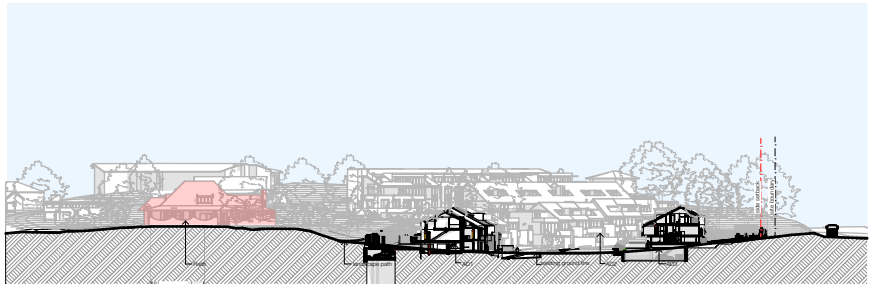
finishes schedule

DRAWING DA-9600
ISSUE G
DRAWN ####
CHECKED AMcB
SCALE @ a3





01 | Fern Ave elevation



03 | section a-a



02 | Appin Rd elevation

notification plan

Raith amended DA

CAP18075 | Capital Developments | Bradbury

all drawings are not for construction and are subject to further design development, consultant input, council and legislative requirements.

integrated DESIGN group
architects | bathurst penrith sydney

copyright integratedDESIGNgroup p/l abn 84 115 006 329
nominated architects tony mcburney reg. no. 5273 | simon thorne reg. no. 7093

true north

DA 9901

@ a4

issue D

7/6/21



attached dwellings

ARCHITECT

INTEGRATED DESIGN GROUP
ARCHITECTURE|MASTERPLANNING|INTERIORS

© Integrated Design Group Pty Ltd
ABN 84 115 006 329
Nominated Architect
Simon Thorne reg. no. 7093

info@idgarchitects.com.au
www.idgarchitects.com.au

NOTES

1. Figured dimensions take precedence over scaled drawings
2. Contractors to check and verify all levels datum and dimensions on site
3. All materials and workmanship to be in accordance with current written manufacturers instructions, local regulations and SAA codes
4. Conflicting information to be brought to notice of the architect and clarification sought before proceeding with any works
5. All drawings are not for construction and are subject to further design development, consultant input, council and legislative requirements.
6. Refer to General notes page for legend and abbreviations

DISCIPLINES

Access	#Access	Civil	####
Acoustic	#Acoustic	Electrical	####
Arborist	#Arborist	Geotech	#Geotech
BCA	#BCA	Hydraulic	####
Landscape	####	Mechanical	####
Planner	####	Structure	####
Surveyor	####		
Traffic	#Traffic	PCA	####
Waste	#Waste	Builder	####

PROJECT

Raith amended DA

SITE: Fern Ave Bradbury NSW
CLIENT: Capital Developments
REF: CAP18075

REVISION

5/4/19	C	Issue for DA
21/5/19	D	Issue for DA
12/7/19	E	council requested amendments
1/9/20	F	isssue for review
16/9/20	G	isssue for Council Review
17/12/20	H	issue for DA
21/5/21	I	ISSUE FOR DA
9/7/21	J	ISSUE FOR DA

DRAWING

AD1,2,3

DRAWING: DA-AD100
ISSUE: J
DRAWN: ####
CHECKED: JA
SCALE: @ a3



ARCHITECT

INTEGRATED DESIGN GROUP
ARCHITECTURE|MASTERPLANNING|INTERIORS

© Integrated Design Group Pty Ltd
ABN 84 115 006 329
Nominated Architect
Simon Thorne reg. no. 7093

info@idgarchitects.com.au
www.idgarchitects.com.au

NOTES

1. Figured dimensions take precedence over scaled drawings
2. Contractors to check and verify all levels datum and dimensions on site
3. All materials and workmanship to be in accordance with current written manufacturers instructions, local regulations and SAA codes
4. Conflicting information to be brought to notice of the architect and clarification sought before proceeding with any works
5. All drawings are not for construction and are subject to further design development, consultant input, council and legislative requirements.
6. Refer to General notes page for legend and abbreviations

DISCIPLINES

Access	#Access	Civil	####
Acoustic	#Acoustic	Electrical	####
Arborist	#Arborist	Geotech	#Geotech
BCA	#BCA	Hydraulic	####
Landscape	####	Mechanical	####
Planner	####	Structure	####
Surveyor	####		
Traffic	#Traffic	PCA	####
Waste	#Waste	Builder	####

PROJECT

Raith amended DA

SITE: Fern Ave Bradbury NSW
CLIENT: Capital Developments
REF: CAP18075

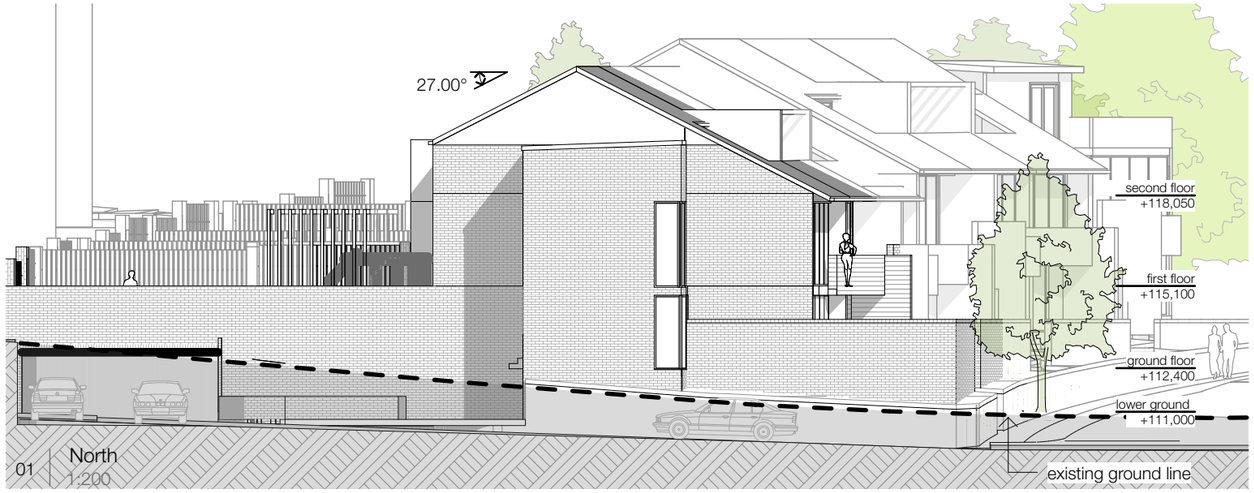
REVISION

12/7/19	I	council requested amendments
1/9/20	J	isssue for review
16/9/20	K	isssue for Council Review
17/12/20	L	issue for DA
3/2/21	M	issue for review
15/3/21	N	issue for consultant coordination
29/3/21	O	issue for coordination
17/5/21	P	ISSUE FOR DA

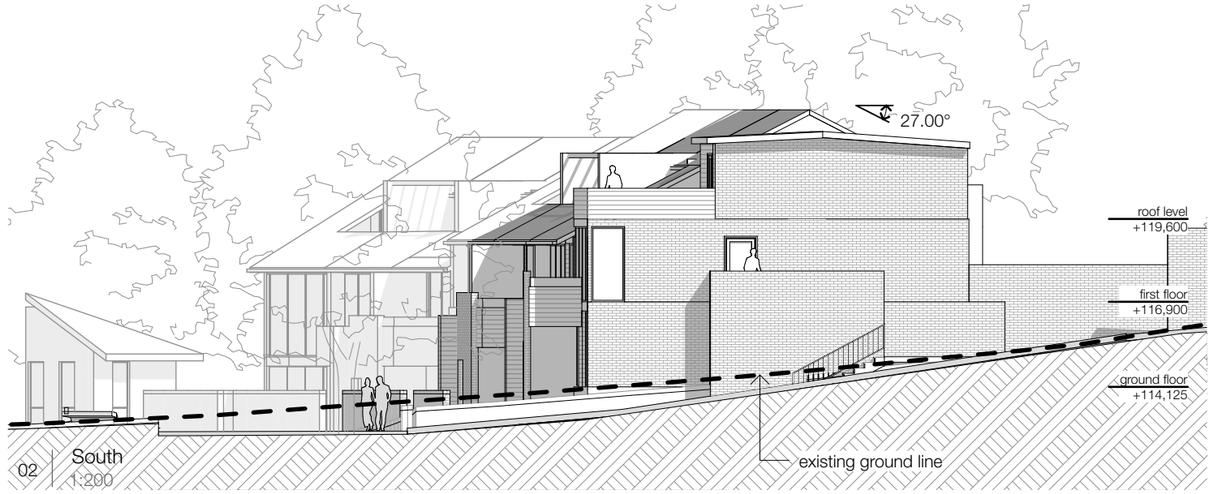
DRAWING

AD1 ground floor plan

DRAWING: DA-AD101
ISSUE: P
DRAWN: ####
CHECKED: JA
SCALE: 1:200 @ a3



01 North
1:200



02 South
1:200



03 East
1:200



04 West
1:200

due to complex topography refer height plane model view DA/9300 showing compliance.

ARCHITECT

INTEGRATED DESIGN GROUP
ARCHITECTURE|MASTERPLANNING|INTERIORS

© Integrated Design Group Pty Ltd
ABN 84 115 006 329
Nominated Architect
Simon Thorne reg. no. 7093

info@idgarchitects.com.au
www.idgarchitects.com.au

NOTES

1. Figured dimensions take precedence over scaled drawings
2. Contractors to check and verify all levels datum and dimensions on site
3. All materials and workmanship to be in accordance with current written manufacturers instructions, local regulations and SAA codes
4. Conflicting information to be brought to notice of the architect and clarification sought before proceeding with any works
5. All drawings are not for construction and are subject to further design development, consultant input, council and legislative requirements.
6. Refer to General notes page for legend and abbreviations

DISCIPLINES

Access	#Access	Civil	####
Acoustic	#Acoustic	Electrical	####
Arborist	#Arborist	Geotech	#Geotech
BCA	#BCA	Hydraulic	####
Landscape	####	Mechanical	####
Planner	####	Structure	####
Surveyor	####		
Traffic	#Traffic	PCA	####
Waste	#Waste	Builder	####

PROJECT

Raith amended DA

SITE: Fern Ave Bradbury NSW
CLIENT: Capital Developments
REF: CAP18075

REVISION

5/4/19	F	Issue for DA
21/5/19	G	Issue for DA
12/7/19	H	council requested amendments
1/9/20	I	isssue for review
16/9/20	J	isssue for Council Review
17/12/20	K	issue for DA
29/3/21	L	issue for coordination
17/5/21	M	ISSUE FOR DA

DRAWING

AD1 elevations

DRAWING DA-AD102
ISSUE M
DRAWN ####
CHECKED JA
SCALE 1:200 @ a3



ARCHITECT

INTEGRATED DESIGN GROUP
ARCHITECTURE|MASTERPLANNING|INTERIORS

© Integrated Design Group Pty Ltd
ABN 84 115 006 329
Nominated Architect
Simon Thorne reg. no. 7093

info@idgarchitects.com.au
www.idgarchitects.com.au

NOTES

1. Figured dimensions take precedence over scaled drawings
2. Contractors to check and verify all levels datum and dimensions on site
3. All materials and workmanship to be in accordance with current written manufacturers instructions, local regulations and SAA codes
4. Conflicting information to be brought to notice of the architect and clarification sought before proceeding with any works
5. All drawings are not for construction and are subject to further design development, consultant input, council and legislative requirements.
6. Refer to General notes page for legend and abbreviations

DISCIPLINES

Access	#Access	Civil	####
Acoustic	#Acoustic	Electrical	####
Arborist	#Arborist	Geotech	#Geotech
BCA	#BCA	Hydraulic	####
Landscape	####	Mechanical	####
Planner	####	Structure	####
Surveyor	####		
Traffic	#Traffic	PCA	####
Waste	#Waste	Builder	####

PROJECT

Raith amended DA

SITE: Fern Ave Bradbury NSW
CLIENT: Capital Developments
REF: CAP18075

REVISION

12/7/19	I	council requested amendments
1/9/20	J	isssue for review
16/9/20	K	isssue for Council Review
17/12/20	L	issue for DA
3/2/21	M	issue for review
15/3/21	N	issue for consultant coordination
29/3/21	O	issue for coordination
17/5/21	P	ISSUE FOR DA

DRAWING

AD2 ground floor plan

DRAWING: DA-AD103
ISSUE: P

DRAWN: ####
CHECKED: JA
SCALE: 1:200 @ a3

preliminary not for construction



01 North
1:200



due to complex topography refer height plane model view DA9300 showing compliance.

02 South
1:200

ARCHITECT

INTEGRATED DESIGN GROUP
ARCHITECTURE|MASTERPLANNING|INTERIORS

© Integrated Design Group Pty Ltd
ABN 84 115 006 329
Nominated Architect
Simon Thorne reg. no. 7093

info@idgarchitects.com.au
www.idgarchitects.com.au

NOTES

1. Figured dimensions take precedence over scaled drawings
2. Contractors to check and verify all levels datum and dimensions on site
3. All materials and workmanship to be in accordance with current written manufacturers instructions, local regulations and SAA codes
4. Conflicting information to be brought to notice of the architect and clarification sought before proceeding with any works
5. All drawings are not for construction and are subject to further design development, consultant input, council and legislative requirements.
6. Refer to General notes page for legend and abbreviations

DISCIPLINES

Access	#Access	Civil	####
Acoustic	#Acoustic	Electrical	####
Arborist	#Arborist	Geotech	#Geotech
BCA	#BCA	Hydraulic	####
Landscape	####	Mechanical	####
Planner	####	Structure	####
Surveyor	####		
Traffic	#Traffic	PCA	####
Waste	#Waste	Builder	####

PROJECT

Raith amended DA

SITE: Fern Ave Bradbury NSW
CLIENT: Capital Developments
REF: CAP18075

REVISION

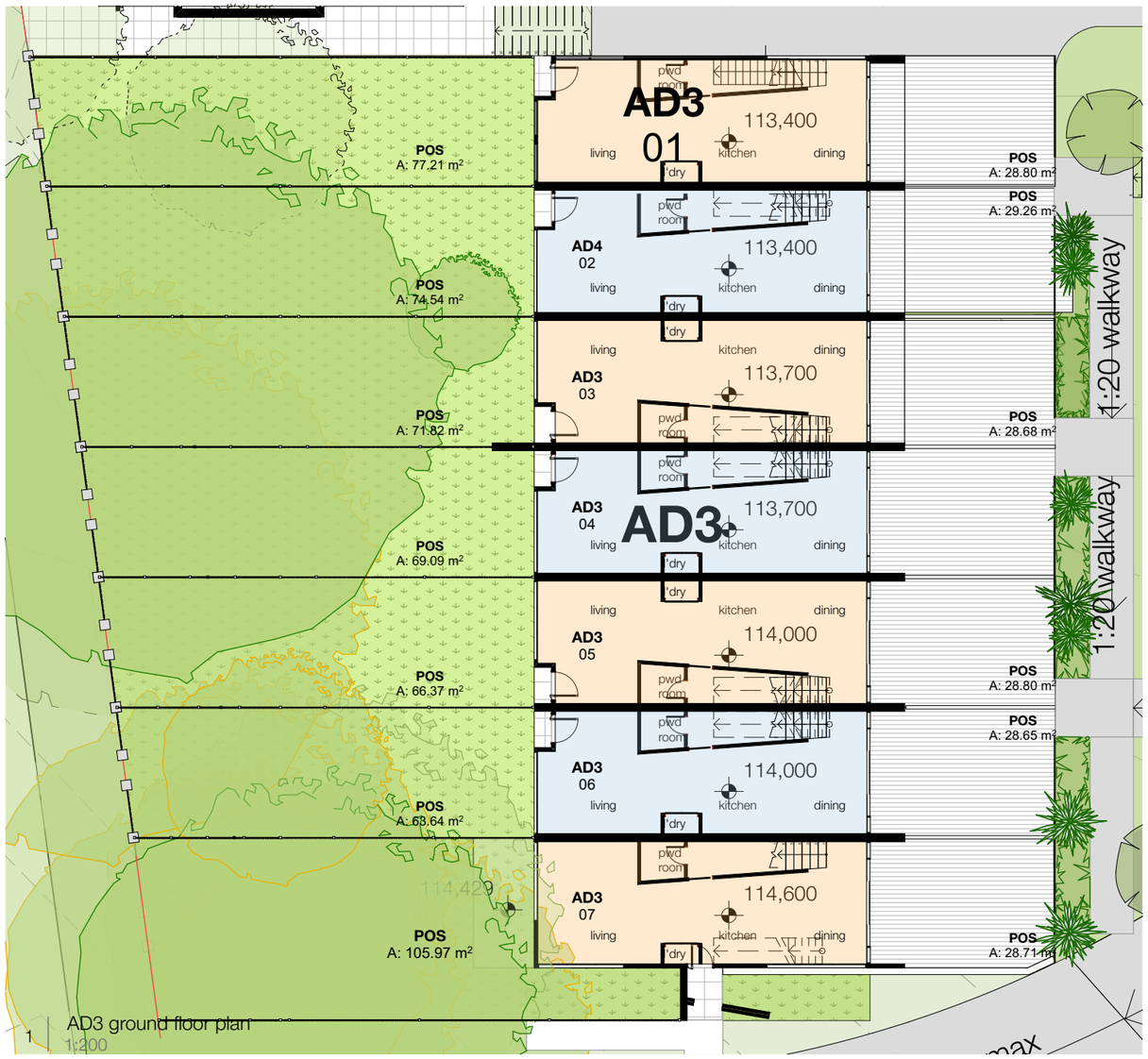
5/4/19	F	Issue for DA
21/5/19	G	Issue for DA
12/7/19	H	council requested amendments
1/9/20	I	isssue for review
16/9/20	J	isssue for Council Review
17/12/20	K	issue for DA
29/3/21	L	issue for coordination
17/5/21	M	ISSUE FOR DA

DRAWING

AD2 elevations

DRAWING DA-AD104
ISSUE M

DRAWN ####
CHECKED JA
SCALE 1:200 @ a3



1 AD3 ground floor plan
1:200



02 1:200



03 1:200

ARCHITECT

INTEGRATED DESIGN GROUP
ARCHITECTURE|MASTERPLANNING|INTERIORS

© Integrated Design Group Pty Ltd
ABN 84 115 006 329
Nominated Architect
Simon Thorne reg. no. 7093

info@idgarchitects.com.au
www.idgarchitects.com.au

NOTES

1. Figured dimensions take precedence over scaled drawings
2. Contractors to check and verify all levels datum and dimensions on site
3. All materials and workmanship to be in accordance with current written manufacturers instructions, local regulations and SAA codes
4. Conflicting information to be brought to notice of the architect and clarification sought before proceeding with any works
5. All drawings are not for construction and are subject to further design development, consultant input, council and legislative requirements.
6. Refer to General notes page for legend and abbreviations

DISCIPLINES

Access	#Access	Civil	####
Acoustic	#Acoustic	Electrical	####
Arborist	#Arborist	Geotech	#Geotech
BCA	#BCA	Hydraulic	####
Landscape	####	Mechanical	####
Planner	####	Structure	####
Surveyor	####		
Traffic	#Traffic	PCA	####
Waste	#Waste	Builder	####

PROJECT

Raith amended DA

SITE: Fern Ave Bradbury NSW
CLIENT: Capital Developments
REF: CAP18075

REVISION

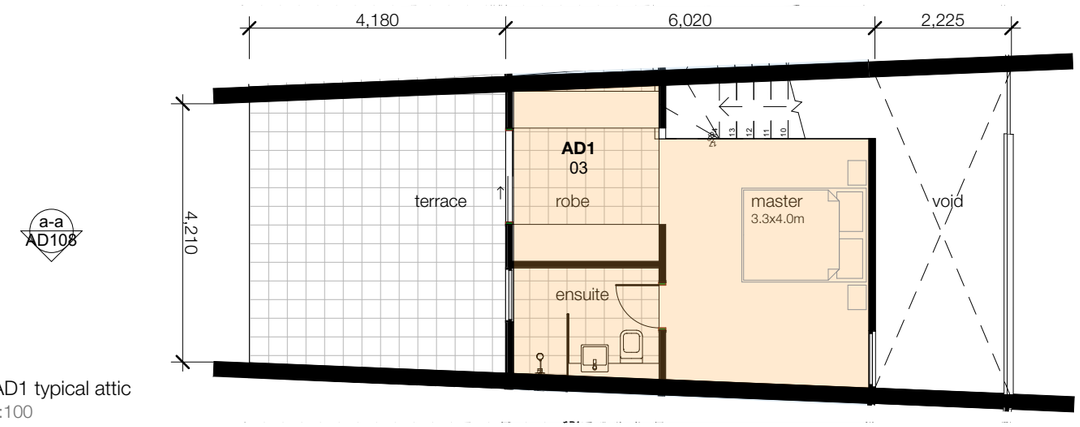
5/4/19	F	Issue for DA
21/5/19	G	Issue for DA
12/7/19	H	council requested amendments
1/9/20	I	isssue for review
16/9/20	J	isssue for Council Review
17/12/20	K	issue for DA
29/3/21	L	issue for coordination
17/5/21	M	ISSUE FOR DA

DRAWING

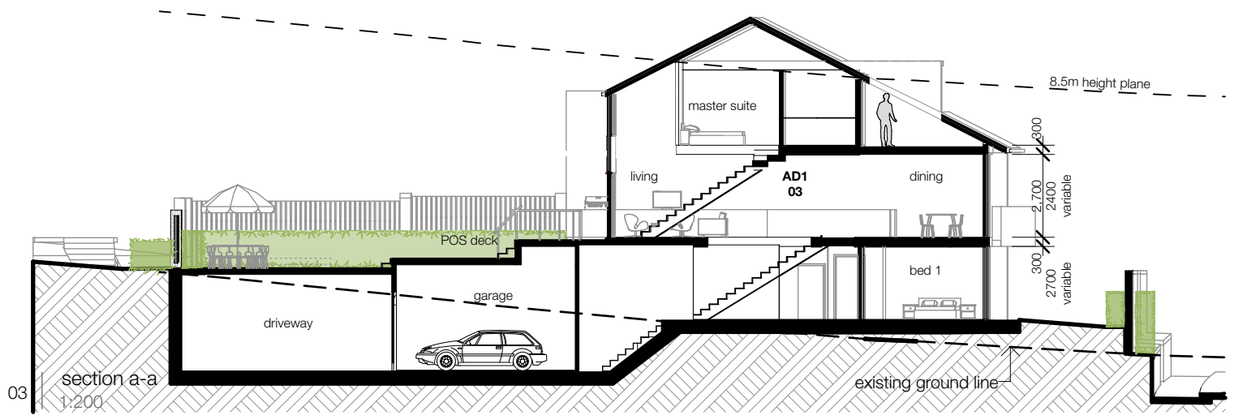
AD3 ground floor plan & elevations

DRAWING DA-AD106
ISSUE M

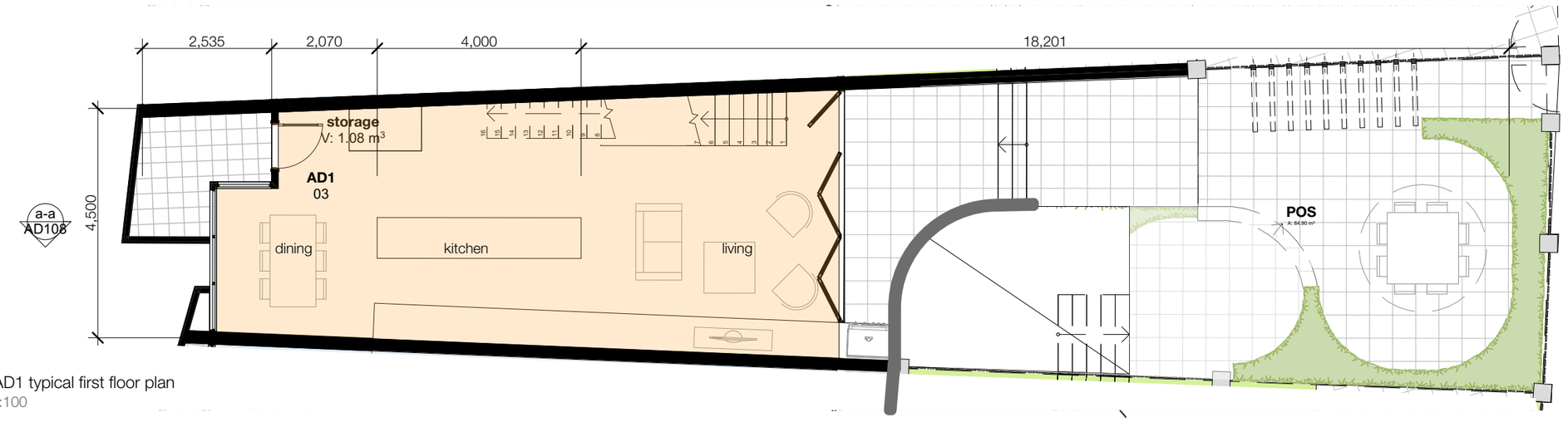
DRAWN ####
CHECKED JA
SCALE 1:200 @ a3



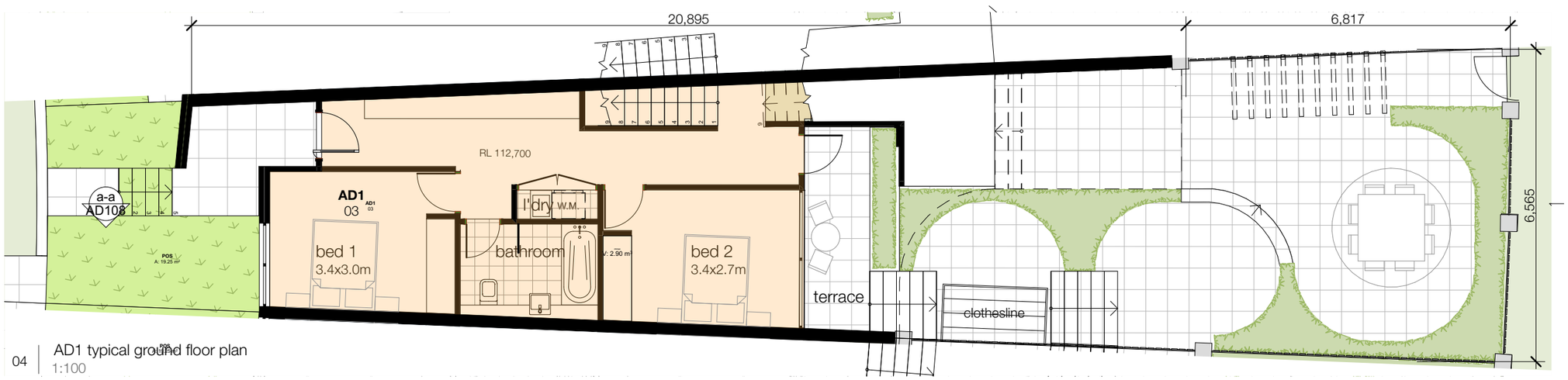
01 | AD1 typical attic
1:100



03 | section a-a
1:200



02 | AD1 typical first floor plan
1:100



04 | AD1 typical ground floor plan
1:100

ARCHITECT

INTEGRATED DESIGN GROUP
ARCHITECTURE|MASTERPLANNING|INTERIORS

© Integrated Design Group Pty Ltd
ABN 84 115 006 329
Nominated Architect
Simon Thorne reg. no. 7093

info@idgarchitects.com.au
www.idgarchitects.com.au

NOTES

1. Figured dimensions take precedence over scaled drawings
2. Contractors to check and verify all levels datum and dimensions on site
3. All materials and workmanship to be in accordance with current written manufacturers instructions, local regulations and SAA codes
4. Conflicting information to be brought to notice of the architect and clarification sought before proceeding with any works
5. All drawings are not for construction and are subject to further design development, consultant input, council and legislative requirements.
6. Refer to General notes page for legend and abbreviations

DISCIPLINES

Access	#Access	Civil	####
Acoustic	#Acoustic	Electrical	####
Arborist	#Arborist	Geotech	#Geotech
BCA	#BCA	Hydraulic	####
Landscape	####	Mechanical	####
Planner	####	Structure	####
Surveyor	####		
Traffic	#Traffic	PCA	####
Waste	#Waste	Builder	####

PROJECT

Raith amended DA

SITE: Fern Ave Bradbury NSW
CLIENT: Capital Developments
REF: CAP18075

REVISION

4/3/19	E	Issue for consultants
5/4/19	F	Issue for DA
21/5/19	G	Issue for DA
12/7/19	H	council requested amendments
1/9/20	I	isssue for review
16/9/20	J	isssue for Council Review
17/12/20	K	issue for DA
17/5/21	L	ISSUE FOR DA

DRAWING

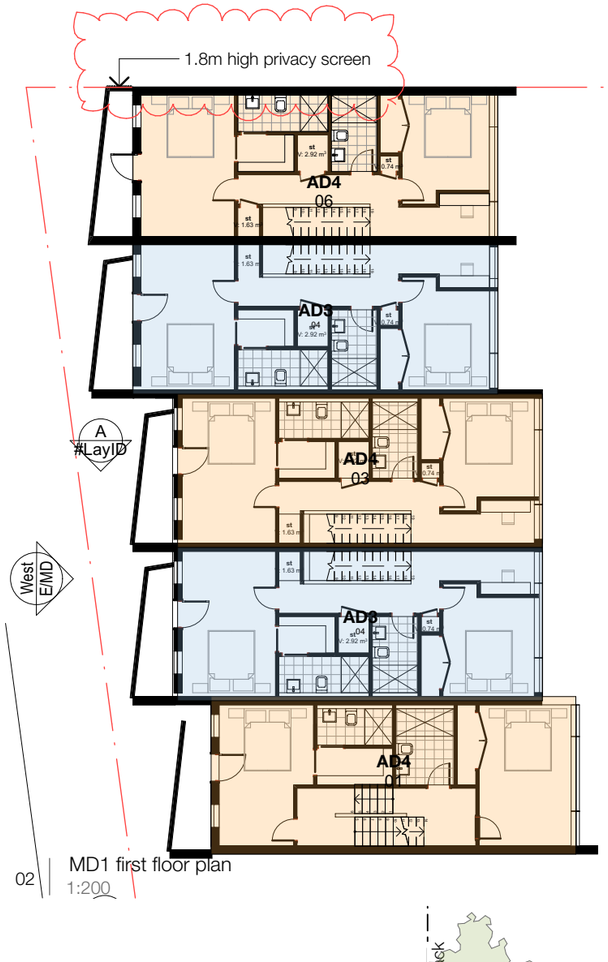
AD1 & AD2 typical and section

DRAWING DA-AD108 | ISSUE L

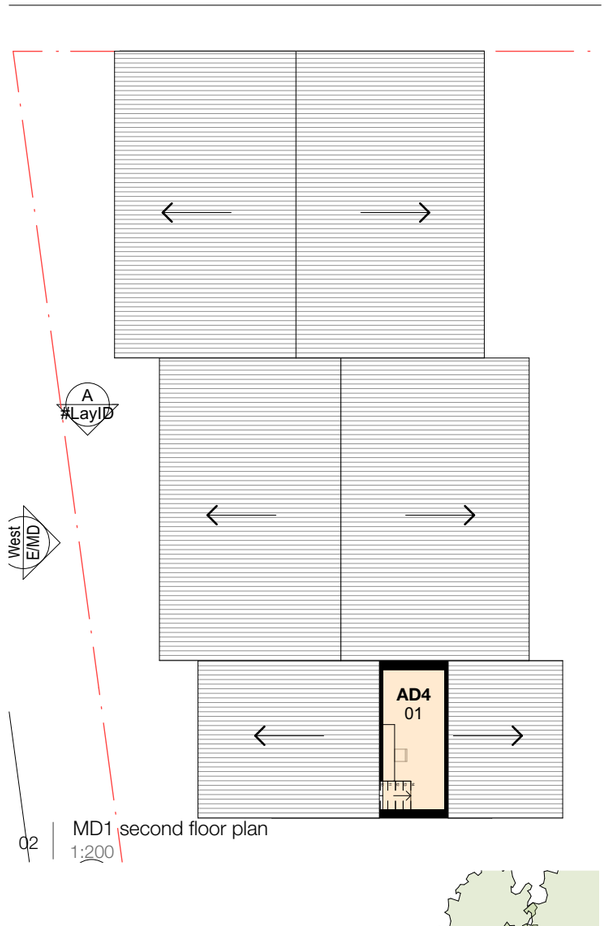
DRAWN JA
CHECKED ####
SCALE 1:100, 1:200 @ a3



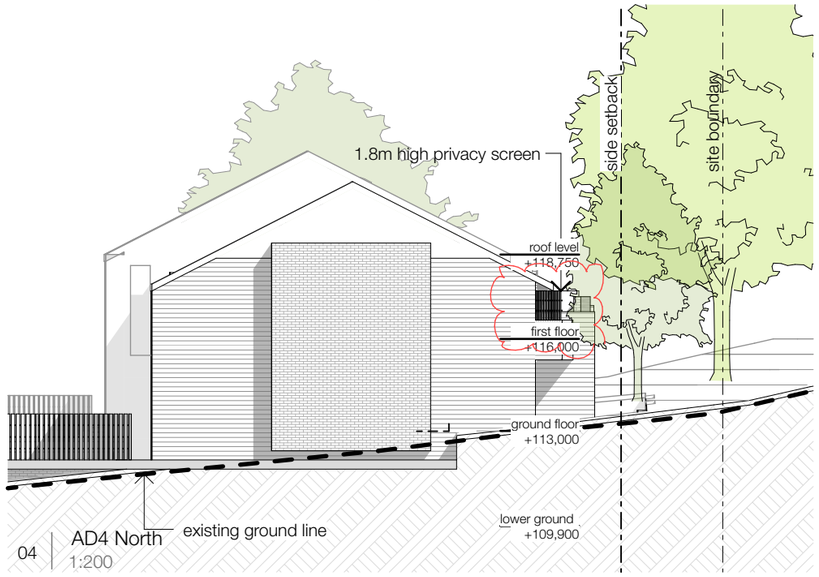
1 | AD4 ground floor plan
1:200



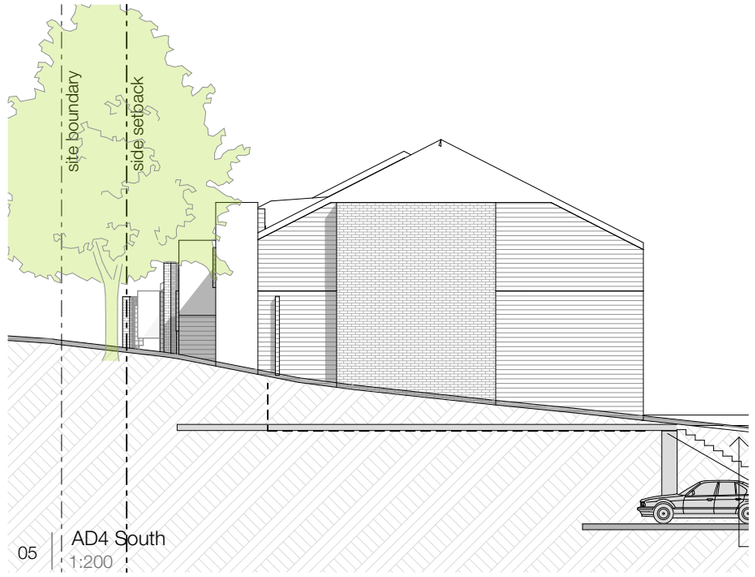
02 | MD1 first floor plan
1:200



02 | MD1 second floor plan
1:200



04 | AD4 North
1:200



05 | AD4 South
1:200



06 | AD4 West
1:200

ARCHITECT

INTEGRATED DESIGN GROUP
ARCHITECTURE|MASTERPLANNING|INTERIORS

© Integrated Design Group Pty Ltd
ABN 84 115 006 329
Nominated Architect
Simon Thorne reg. no. 7093

info@idgarchitects.com.au
www.idgarchitects.com.au

NOTES

1. Figured dimensions take precedence over scaled drawings
2. Contractors to check and verify all levels datum and dimensions on site
3. All materials and workmanship to be in accordance with current written manufacturers instructions, local regulations and SAA codes
4. Conflicting information to be brought to notice of the architect and clarification sought before proceeding with any works
5. All drawings are not for construction and are subject to further design development, consultant input, council and legislative requirements.
6. Refer to General notes page for legend and abbreviations

DISCIPLINES

Access	#Access	Civil	####
Acoustic	#Acoustic	Electrical	####
Arborist	#Arborist	Geotech	#Geotech
BCA	#BCA	Hydraulic	####
Landscape	####	Mechanical	####
Planner	####	Structure	####
Surveyor	####		
Traffic	#Traffic	PCA	####
Waste	#Waste	Builder	####

PROJECT

Raith amended DA

SITE: Fern Ave Bradbury NSW
CLIENT: Capital Developments
REF: CAP18075

REVISION

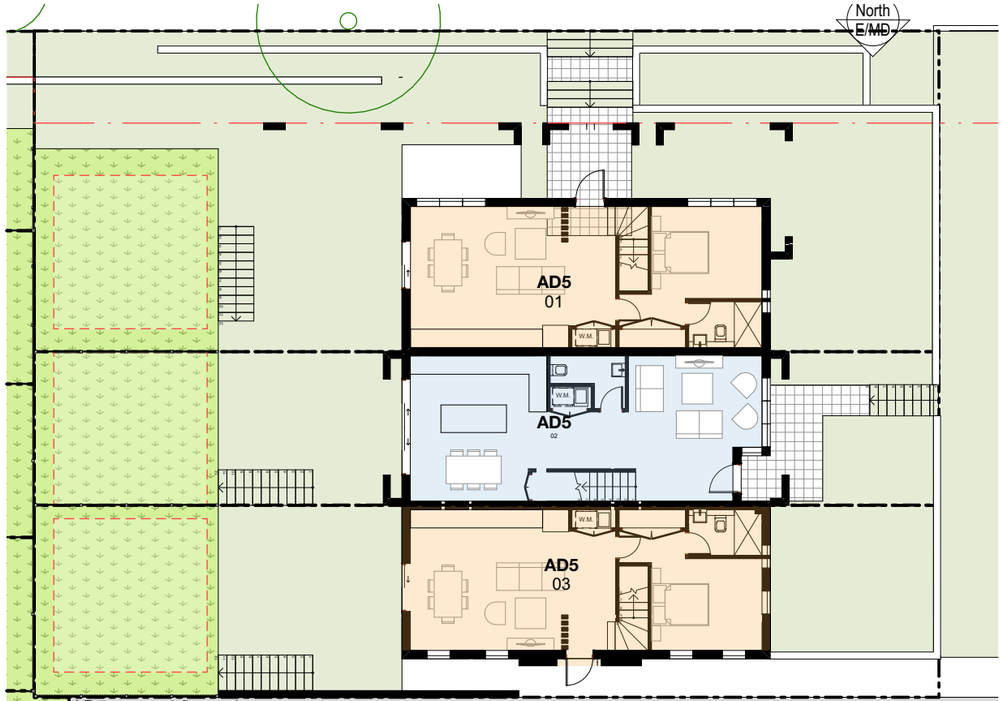
25/8/20	A	isssue for review
1/9/20	B	isssue for review
16/9/20	C	isssue for Council Review
17/12/20	D	issue for DA
21/5/21	E	ISSUE FOR DA
8/7/21	F	ISSUE FOR DA

DRAWING

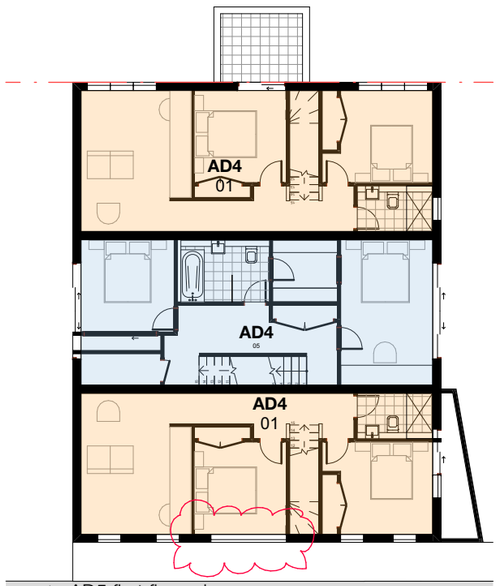
AD4 general arrangement

DRAWING: DA-AD113
ISSUE: F

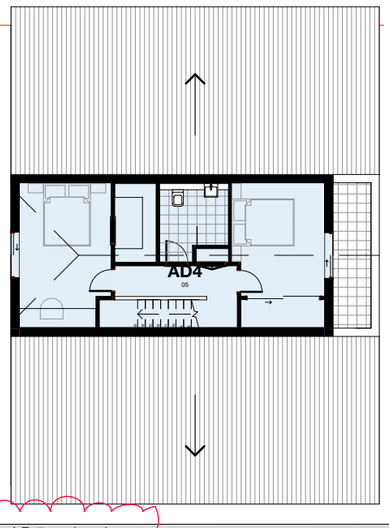
DRAWN ####
CHECKED JA
SCALE 1:200 @ a3



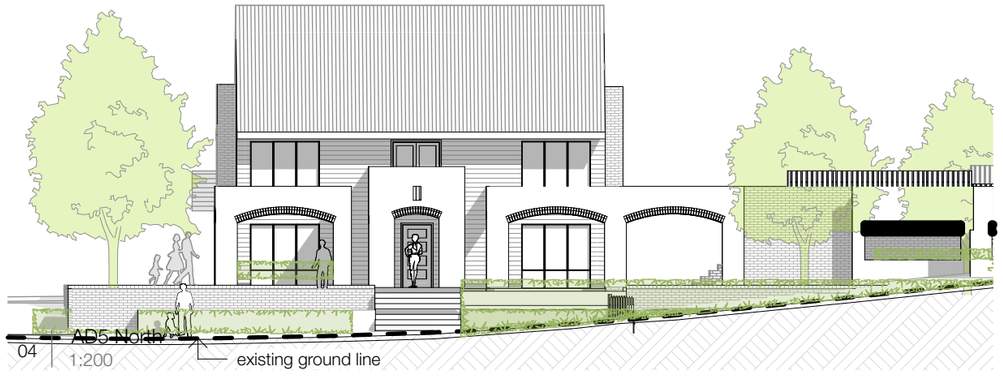
01 | AD5 ground floor plan
1:200



02 | AD5 first floor plan
1:200



02 | AD5 attic plan
1:200



04 | AD5 North
1:200



05 | AD5 South
1:200



1 | AD5 SECTION

ARCHITECT

INTEGRATED DESIGN GROUP
ARCHITECTURE|MASTERPLANNING|INTERIORS

© Integrated Design Group Pty Ltd
ABN 84 115 006 329
Nominated Architect
Simon Thorne reg. no. 7093

info@idgarchitects.com.au
www.idgarchitects.com.au

NOTES

1. Figured dimensions take precedence over scaled drawings
2. Contractors to check and verify all levels datum and dimensions on site
3. All materials and workmanship to be in accordance with current written manufacturers instructions, local regulations and SAA codes
4. Conflicting information to be brought to notice of the architect and clarification sought before proceeding with any works
5. All drawings are not for construction and are subject to further design development, consultant input, council and legislative requirements.
6. Refer to General notes page for legend and abbreviations

DISCIPLINES

Access	#Access	Civil	####
Acoustic	#Acoustic	Electrical	####
Arborist	#Arborist	Geotech	#Geotech
BCA	#BCA	Hydraulic	####
Landscape	####	Mechanical	####
Planner	####	Structure	####
Surveyor	####		
Traffic	#Traffic	PCA	####
Waste	#Waste	Builder	####

PROJECT

Raith amended DA

SITE: Fern Ave Bradbury NSW
CLIENT: Capital Developments
REF: CAP18075

REVISION

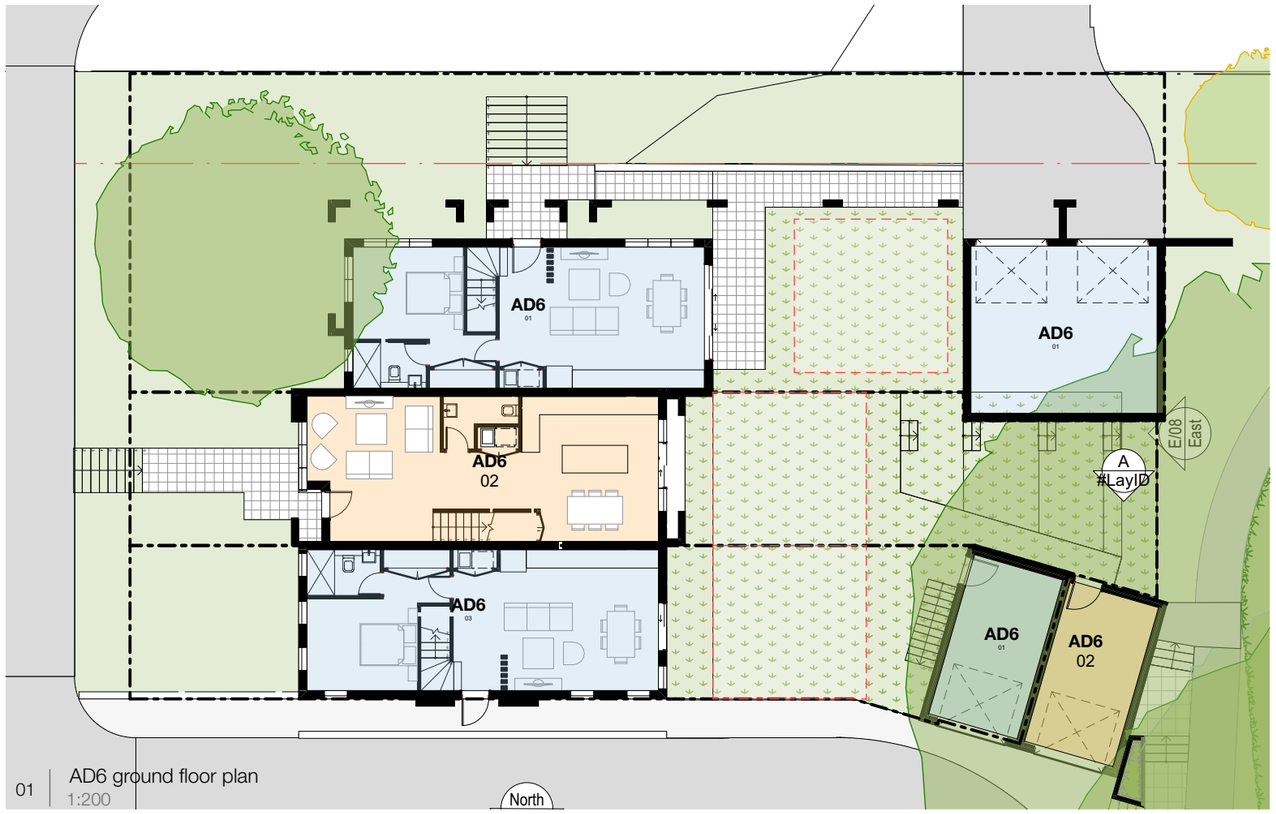
25/8/20	A	isssue for review
1/9/20	B	isssue for review
16/9/20	C	isssue for Council Review
17/12/20	D	issue for DA
21/5/21	E	ISSUE FOR DA
9/6/21	F	ISSUE FOR DA

DRAWING

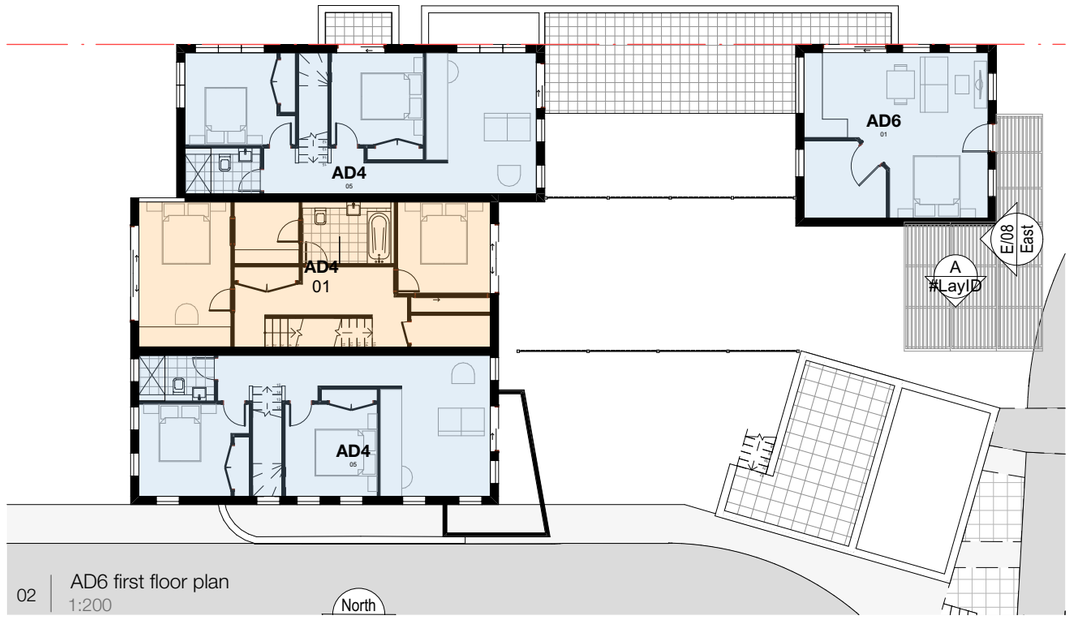
AD5 general arrangement

DRAWING: DA-AD114
ISSUE: F
DRAWN: ####
CHECKED: JA
SCALE: 1:200 @ a3

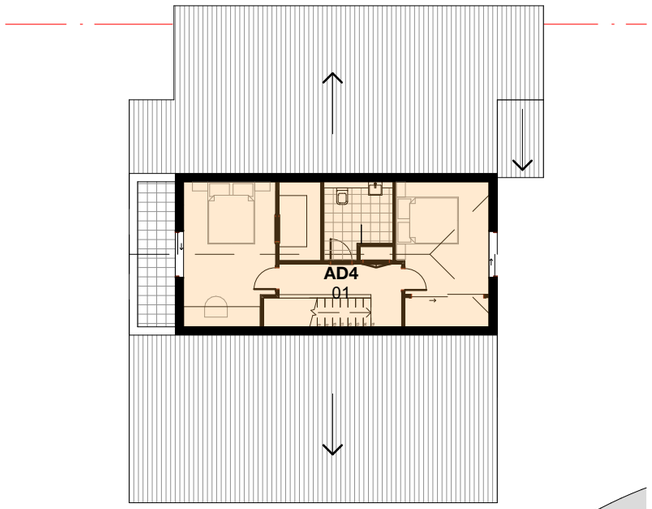

lot 154
DP 225888
FERN AVE
79.550
110.39
AD4
AD5
AD6
AD3
AD1
AD2
APT2
APT1
communal open space
communal open space
1,399.17 m²
new landscape treatment of open space
lot 101
DP 1168971
historic Raith preserved and retained as a single residence
Raith
existing dwelling 01
existing dwelling 02
lot 1
DP 871149
lot 213
DP 225888
lot 317
DP 228241
lot 316
DP 228241
lot 312
DP 228241
lot 311
DP 228241
lot 310
DP 228241
APPIN RD
16.145
16.360
12.550
13.350
17.455
3.000
3.000
3.000



01 | AD6 ground floor plan
1:200



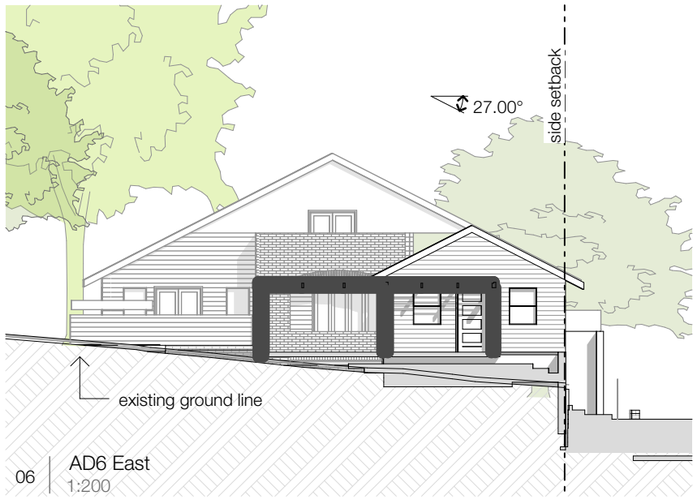
02 | AD6 first floor plan
1:200



02 | AD6 second floor plan
1:200



04 | AD6 North
1:200



06 | AD6 East
1:200

ARCHITECT

INTEGRATED DESIGN GROUP
ARCHITECTURE|MASTERPLANNING|INTERIORS

© Integrated Design Group Pty Ltd
ABN 84 115 006 329
Nominated Architect
Simon Thorne reg. no. 7093

info@idgarchitects.com.au
www.idgarchitects.com.au

NOTES

1. Figured dimensions take precedence over scaled drawings
2. Contractors to check and verify all levels datum and dimensions on site
3. All materials and workmanship to be in accordance with current written manufacturers instructions, local regulations and SAA codes
4. Conflicting information to be brought to notice of the architect and clarification sought before proceeding with any works
5. All drawings are not for construction and are subject to further design development, consultant input, council and legislative requirements.
6. Refer to General notes page for legend and abbreviations

DISCIPLINES

Access	#Access	Civil	####
Acoustic	#Acoustic	Electrical	####
Arborist	#Arborist	Geotech	#Geotech
BCA	#BCA	Hydraulic	####
Landscape	####	Mechanical	####
Planner	####	Structure	####
Surveyor	####		
Traffic	#Traffic	PCA	####
Waste	#Waste	Builder	####

PROJECT

Raith amended DA

SITE: Fern Ave Bradbury NSW
CLIENT: Capital Developments
REF: CAP18075

REVISION

25/8/20	A	isssue for review
1/9/20	B	isssue for review
16/9/20	C	isssue for Council Review
17/12/20	D	issue for DA
17/5/21	E	ISSUE FOR DA

DRAWING

AD6 general arrangement

DRAWING: DA-AD115
ISSUE: E

DRAWN ####
CHECKED JA
SCALE 1:200 @ a3



AD5 - internal street elevation



02 AD6 - internal street elevation

ARCHITECT

INTEGRATED DESIGN GROUP
ARCHITECTURE|MASTERPLANNING|INTERIORS

© Integrated Design Group Pty Ltd
ABN 84 115 006 329
Nominated Architect
Simon Thorne reg. no. 7093

info@idgarchitects.com.au
www.idgarchitects.com.au

NOTES

1. Figured dimensions take precedence over scaled drawings
2. Contractors to check and verify all levels datum and dimensions on site
3. All materials and workmanship to be in accordance with current written manufacturers instructions, local regulations and SAA codes
4. Conflicting information to be brought to notice of the architect and clarification sought before proceeding with any works
5. All drawings are not for construction and are subject to further design development, consultant input, council and legislative requirements.
6. Refer to General notes page for legend and abbreviations

DISCIPLINES

Access	#Access	Civil	####
Acoustic	#Acoustic	Electrical	####
Arborist	#Arborist	Geotech	#Geotech
BCA	#BCA	Hydraulic	####
Landscape	####	Mechanical	####
Planner	####	Structure	####
Surveyor	####		
Traffic	#Traffic	PCA	####
Waste	#Waste	Builder	####

PROJECT

Raith amended DA

SITE: Fern Ave Bradbury NSW
CLIENT: Capital Developments
REF: CAP18075

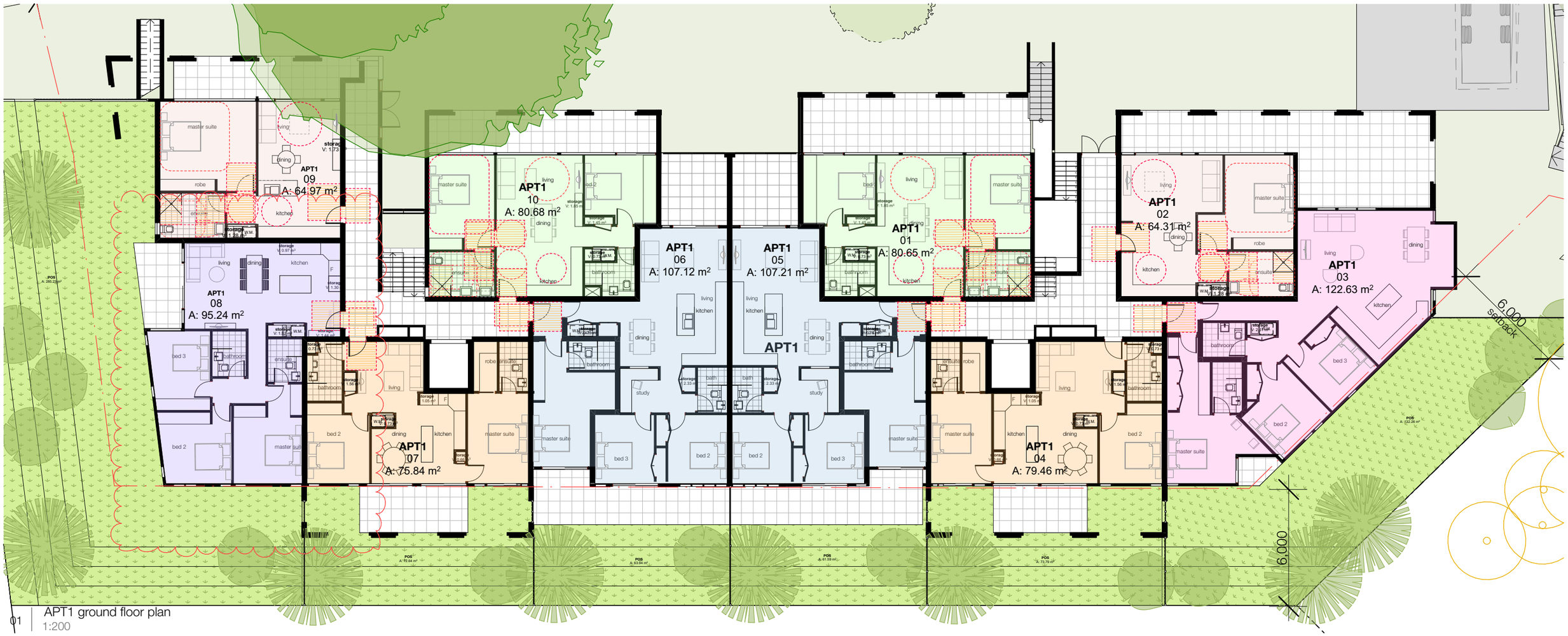
REVISION

10/6/21	A	ISSUE FOR DA

DRAWING

AD5 & AD6 internal street elevations

DRAWING	ISSUE		
DA-AD116	A	DRAWN	####
		CHECKED	JA
		SCALE	@ a3



01 | APT1 ground floor plan
1:200

ARCHITECT

INTEGRATED DESIGN GROUP
ARCHITECTURE|MASTERPLANNING|INTERIORS

© Integrated Design Group Pty Ltd
ABN 84 115 006 329
Nominated Architect
Simon Thorne reg. no. 7093

info@idgarchitects.com.au
www.idgarchitects.com.au

NOTES

1. Figured dimensions take precedence over scaled drawings
2. Contractors to check and verify all levels datum and dimensions on site
3. All materials and workmanship to be in accordance with current written manufacturers instructions, local regulations and SAA codes
4. Conflicting information to be brought to notice of the architect and clarification sought before proceeding with any works
5. All drawings are not for construction and are subject to further design development, consultant input, council and legislative requirements.
6. Refer to General notes page for legend and abbreviations

DISCIPLINES

Access	#Access	Civil	####
Acoustic	#Acoustic	Electrical	####
Arborist	#Arborist	Geotech	#Geotech
BCA	#BCA	Hydraulic	####
Landscape	####	Mechanical	####
Planner	####	Structure	####
Surveyor	####		
Traffic	#Traffic	PCA	####
Waste	#Waste	Builder	####

PROJECT

Raith amended DA

SITE: Fern Ave Bradbury NSW
CLIENT: Capital Developments
REF: CAP18075

REVISION

5/4/19	G	Issue for DA
21/5/19	H	Issue for DA
12/7/19	I	council requested amendments
1/9/20	J	isssue for review
16/9/20	K	isssue for Council Review
17/12/20	L	issue for DA
21/5/21	M	ISSUE FOR DA
8/7/21	N	ISSUE FOR DA

DRAWING

APT1 ground & typical floor plan

DRAWING: DA-APT102
ISSUE: N

DRAWN: ####
CHECKED: JA
SCALE: 1:200 @ a3



02 | ATP1 first & second floor plan
1:200

ARCHITECT

INTEGRATED DESIGN GROUP
ARCHITECTURE|MASTERPLANNING|INTERIORS

© Integrated Design Group Pty Ltd
ABN 84 115 006 329
Nominated Architect
Simon Thorne reg. no. 7093

info@idgarchitects.com.au
www.idgarchitects.com.au

NOTES

1. Figured dimensions take precedence over scaled drawings
2. Contractors to check and verify all levels datum and dimensions on site
3. All materials and workmanship to be in accordance with current written manufacturers instructions, local regulations and SAA codes
4. Conflicting information to be brought to notice of the architect and clarification sought before proceeding with any works
5. All drawings are not for construction and are subject to further design development, consultant input, council and legislative requirements.
6. Refer to General notes page for legend and abbreviations

DISCIPLINES

Access	#Access	Civil	####
Acoustic	#Acoustic	Electrical	####
Arborist	#Arborist	Geotech	#Geotech
BCA	#BCA	Hydraulic	####
Landscape	####	Mechanical	####
Planner	####	Structure	####
Surveyor	####		
Traffic	#Traffic	PCA	####
Waste	#Waste	Builder	####

PROJECT

Raith amended DA

SITE: Fern Ave Bradbury NSW
CLIENT: Capital Developments
REF: CAP18075

REVISION

12/7/19	A	council requested amendments
1/9/20	B	isssue for review
16/9/20	C	isssue for Council Review
17/12/20	D	issue for DA
21/5/21	E	ISSUE FOR DA
8/7/21	F	ISSUE FOR DA

DRAWING

APT1 typical floor plan

DRAWING: DA-APT103
ISSUE: F

DRAWN ####
CHECKED JA
SCALE 1:200 @ a3



1 North 1:200



02 South 1:200

due to complex topography refer height plane model view DA/9300 showing compliance.

ARCHITECT

INTEGRATED DESIGN GROUP
ARCHITECTURE|MASTERPLANNING|INTERIORS

© Integrated Design Group Pty Ltd
ABN 84 115 006 329
Nominated Architect
Simon Thorne reg. no. 7093

info@idgarchitects.com.au
www.idgarchitects.com.au

NOTES

1. Figured dimensions take precedence over scaled drawings
2. Contractors to check and verify all levels datum and dimensions on site
3. All materials and workmanship to be in accordance with current written manufacturers instructions, local regulations and SAA codes
4. Conflicting information to be brought to notice of the architect and clarification sought before proceeding with any works
5. All drawings are not for construction and are subject to further design development, consultant input, council and legislative requirements.
6. Refer to General notes page for legend and abbreviations

Access	#Access	Civil	####
Acoustic	#Acoustic	Electrical	####
Arborist	#Arborist	Geotech	#Geotech
BCA	#BCA	Hydraulic	####
Landscape	####	Mechanical	####
Planner	####	Structure	####
Surveyor	####		
Traffic	#Traffic	PCA	####
Waste	#Waste	Builder	####

PROJECT

Raith amended DA

SITE: Fern Ave Bradbury NSW
CLIENT: Capital Developments
REF: CAP18075

REVISION

5/4/19	F	Issue for DA
21/5/19	G	Issue for DA
12/7/19	H	council requested amendments
1/9/20	I	isssue for review
16/9/20	J	isssue for Council Review
17/12/20	K	issue for DA
21/5/21	L	ISSUE FOR DA
8/7/21	M	ISSUE FOR DA

DRAWING

APT1 elevations

DRAWING DA-APT104 ISSUE M

DRAWN ####
CHECKED JA
SCALE 1:200 @ a3



03 East
1:200



04 West
1:200

due to complex topography refer height plane
model view DA/9300 showing compliance.

ARCHITECT

INTEGRATED DESIGN GROUP
ARCHITECTURE|MASTERPLANNING|INTERIORS

© Integrated Design Group Pty Ltd
ABN 84 115 006 329
Nominated Architect
Simon Thorne reg. no. 7093

info@idgarchitects.com.au
www.idgarchitects.com.au

NOTES

1. Figured dimensions take precedence over scaled drawings
2. Contractors to check and verify all levels datum and dimensions on site
3. All materials and workmanship to be in accordance with current written manufacturers instructions, local regulations and SAA codes
4. Conflicting information to be brought to notice of the architect and clarification sought before proceeding with any works
5. All drawings are not for construction and are subject to further design development, consultant input, council and legislative requirements.
6. Refer to General notes page for legend and abbreviations

DISCIPLINES

Access	#Access	Civil	####
Acoustic	#Acoustic	Electrical	####
Arborist	#Arborist	Geotech	#Geotech
BCA	#BCA	Hydraulic	####
Landscape	####	Mechanical	####
Planner	####	Structure	####
Surveyor	####		
Traffic	#Traffic	PCA	####
Waste	#Waste	Builder	####

PROJECT

Raith amended DA

SITE: Fern Ave Bradbury NSW
CLIENT: Capital Developments
REF: CAP18075

REVISION

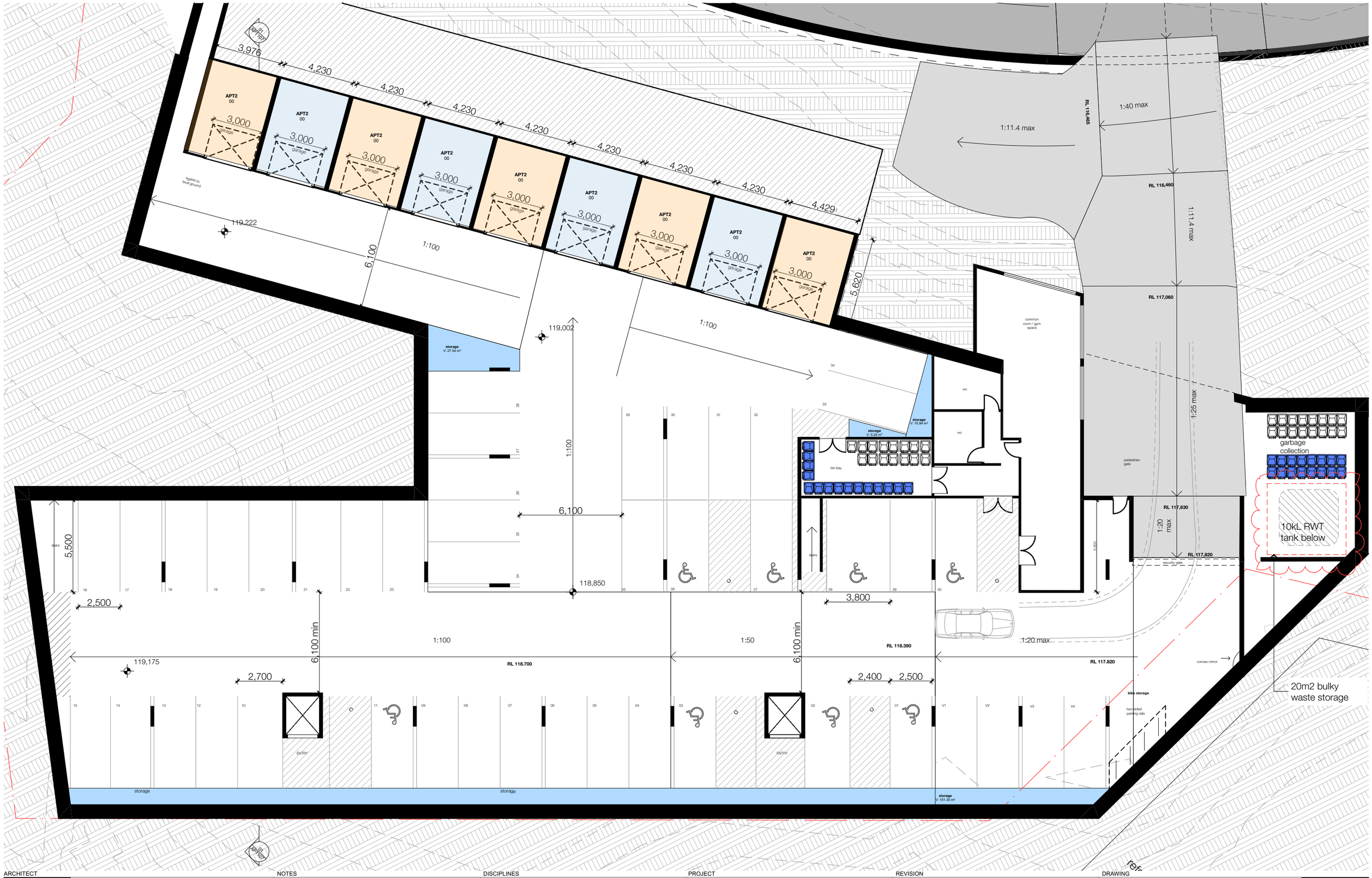
4/3/19	B	Issue for consultants
5/4/19	C	Issue for DA
21/5/19	D	Issue for DA
12/7/19	E	council requested amendments
1/9/20	F	isssue for review
16/9/20	G	isssue for Council Review
17/12/20	H	issue for DA
21/5/21	I	ISSUE FOR DA

DRAWING

APT1 elevations

DRAWING DA-APT105 ISSUE I

DRAWN ####
CHECKED JA
SCALE 1:200 @ a3



ARCHITECT

INTEGRATED DESIGN GROUP
ARCHITECTURE|MASTERPLANNING|INTERIORS

© Integrated Design Group Pty Ltd
ABN 84 115 006 329
Nominated Architect
Simon Thorne reg. no. 7093

info@idgarchitects.com.au
www.idgarchitects.com.au

NOTES

1. Figured dimensions take precedence over scaled drawings
2. Contractors to check and verify all levels datum and dimensions on site
3. All materials and workmanship to be in accordance with current written manufacturers instructions, local regulations and SAA codes
4. Conflicting information to be brought to notice of the architect and clarification sought before proceeding with any works
5. All drawings are not for construction and are subject to further design development, consultant input, council and legislative requirements.
6. Refer to General notes page for legend and abbreviations

DISCIPLINES

Access	#Access	Civil	####
Acoustic	#Acoustic	Electrical	####
Arborist	#Arborist	Geotech	#Geotech
BCA	#BCA	Hydraulic	####
Landscape	####	Mechanical	####
Planner	####	Structure	####
Surveyor	####		
Traffic	#Traffic	PCA	####
Waste	#Waste	Builder	####

PROJECT

Raith amended DA

SITE: Fern Ave Bradbury NSW
CLIENT: Capital Developments
REF: CAP18075

REVISION

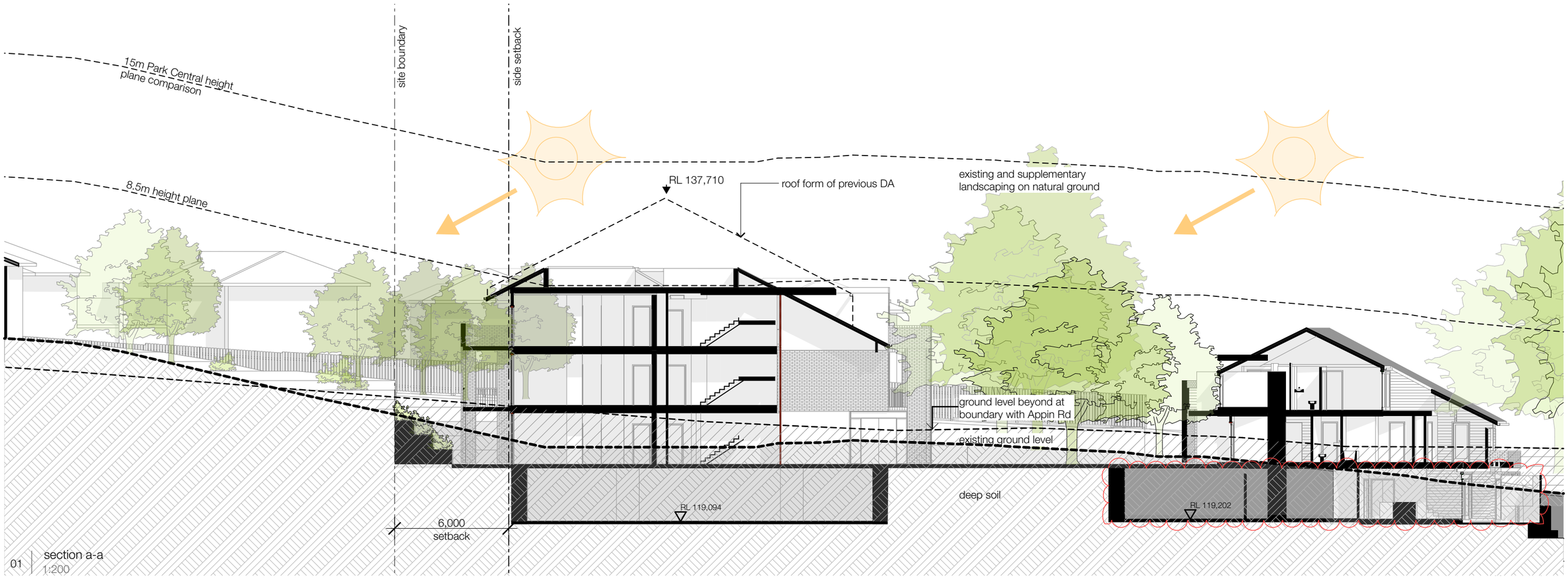
16/9/20	M	isssue for Council Review
17/12/20	N	issue for DA
3/2/21	O	issue for review
15/3/21	P	issue for consultant coordination
26/4/21	Q	issue for coordination
7/5/21	R	issue for coordination
21/5/21	S	ISSUE FOR DA
8/7/21	T	ISSUE FOR DA

DRAWING

APT1 basement plan

DRAWING DA-APT106 ISSUE T

DRAWN ####
CHECKED JA
SCALE @ a3



01 section a-a
1:200

ARCHITECT

INTEGRATED DESIGN GROUP
ARCHITECTURE|MASTERPLANNING|INTERIORS

© Integrated Design Group Pty Ltd
ABN 84 115 006 329
Nominated Architect
Simon Thorne reg. no. 7093

info@idgarchitects.com.au
www.idgarchitects.com.au

NOTES

1. Figured dimensions take precedence over scaled drawings
2. Contractors to check and verify all levels datum and dimensions on site
3. All materials and workmanship to be in accordance with current written manufacturers instructions, local regulations and SAA codes
4. Conflicting information to be brought to notice of the architect and clarification sought before proceeding with any works
5. All drawings are not for construction and are subject to further design development, consultant input, council and legislative requirements.
6. Refer to General notes page for legend and abbreviations

DISCIPLINES

Access	#Access	Civil	####
Acoustic	#Acoustic	Electrical	####
Arborist	#Arborist	Geotech	#Geotech
BCA	#BCA	Hydraulic	####
Landscape	####	Mechanical	####
Planner	####	Structure	####
Surveyor	####		
Traffic	#Traffic	PCA	####
Waste	#Waste	Builder	####

PROJECT

Raith amended DA

SITE: Fern Ave Bradbury NSW
CLIENT: Capital Developments
REF: CAP18075

REVISION

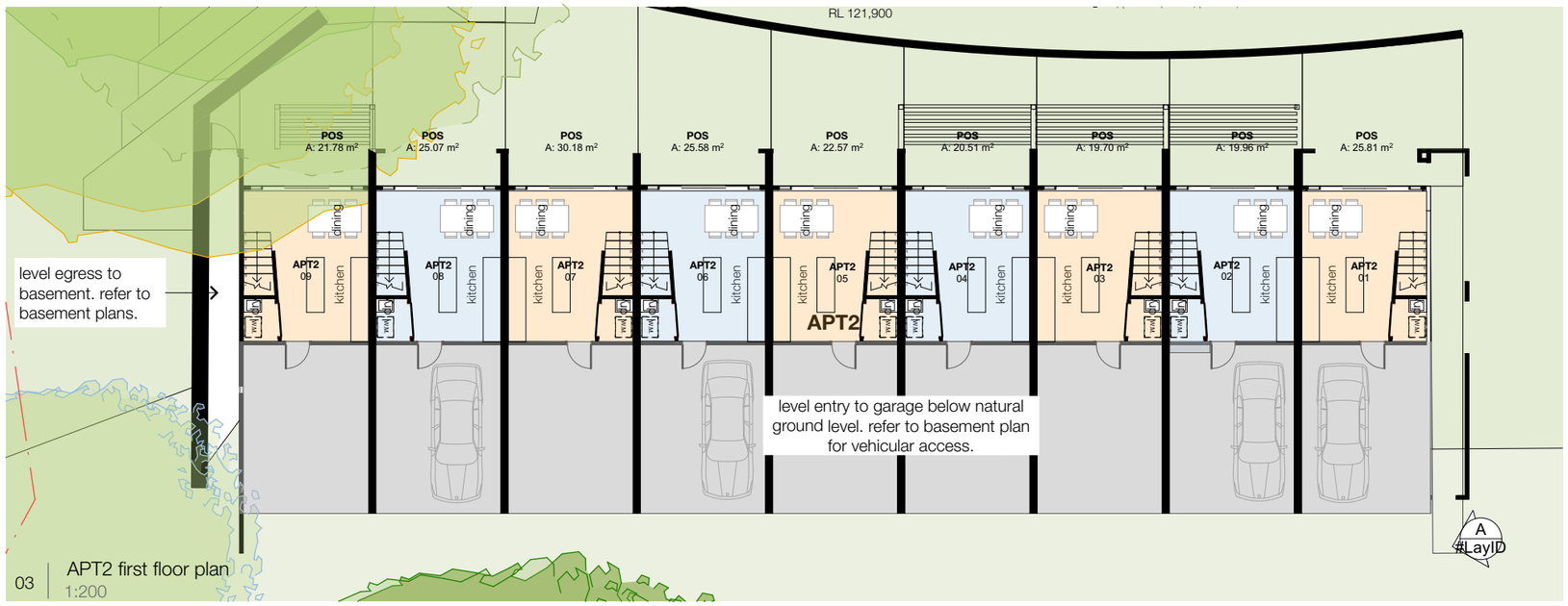
5/4/19	F	Issue for DA
21/5/19	G	Issue for DA
12/7/19	H	council requested amendments
1/9/20	I	isssue for review
16/9/20	J	isssue for Council Review
17/12/20	K	issue for DA
3/2/21	L	issue for review
17/5/21	M	ISSUE FOR DA

DRAWING

apartment sectior

DRAWING DA-APT107
ISSUE M

DRAWN ####
CHECKED JA
SCALE 1:200 @ a3



03 | APT2 first floor plan
1:200

ARCHITECT

INTEGRATED DESIGN GROUP
ARCHITECTURE|MASTERPLANNING|INTERIORS

© Integrated Design Group Pty Ltd
ABN 84 115 006 329
Nominated Architect
Simon Thorne reg. no. 7093

info@idgarchitects.com.au
www.idgarchitects.com.au

NOTES

1. Figured dimensions take precedence over scaled drawings
2. Contractors to check and verify all levels datum and dimensions on site
3. All materials and workmanship to be in accordance with current written manufacturers instructions, local regulations and SAA codes
4. Conflicting information to be brought to notice of the architect and clarification sought before proceeding with any works
5. All drawings are not for construction and are subject to further design development, consultant input, council and legislative requirements.
6. Refer to General notes page for legend and abbreviations

DISCIPLINES

Access	#Access	Civil	####
Acoustic	#Acoustic	Electrical	####
Arborist	#Arborist	Geotech	#Geotech
BCA	#BCA	Hydraulic	####
Landscape	####	Mechanical	####
Planner	####	Structure	####
Surveyor	####		
Traffic	#Traffic	PCA	####
Waste	#Waste	Builder	####

PROJECT

Raith amended DA

SITE: Fern Ave Bradbury NSW
CLIENT: Capital Developments
REF: CAP18075

REVISION

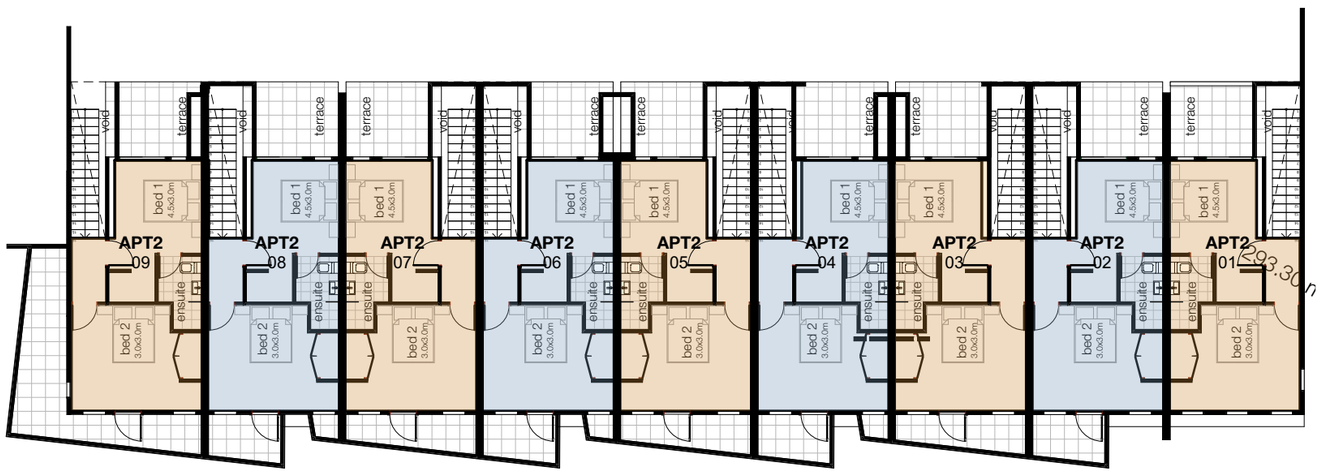
24/1/19	A	Issue for information
18/2/19	B	Issue for consultants
4/3/19	C	Issue for consultants
5/4/19	D	Issue for DA
21/5/19	E	Issue for DA
12/7/19	F	council requested amendments
16/9/20	G	isssue for Council Review
17/12/20	H	issue for DA

DRAWING

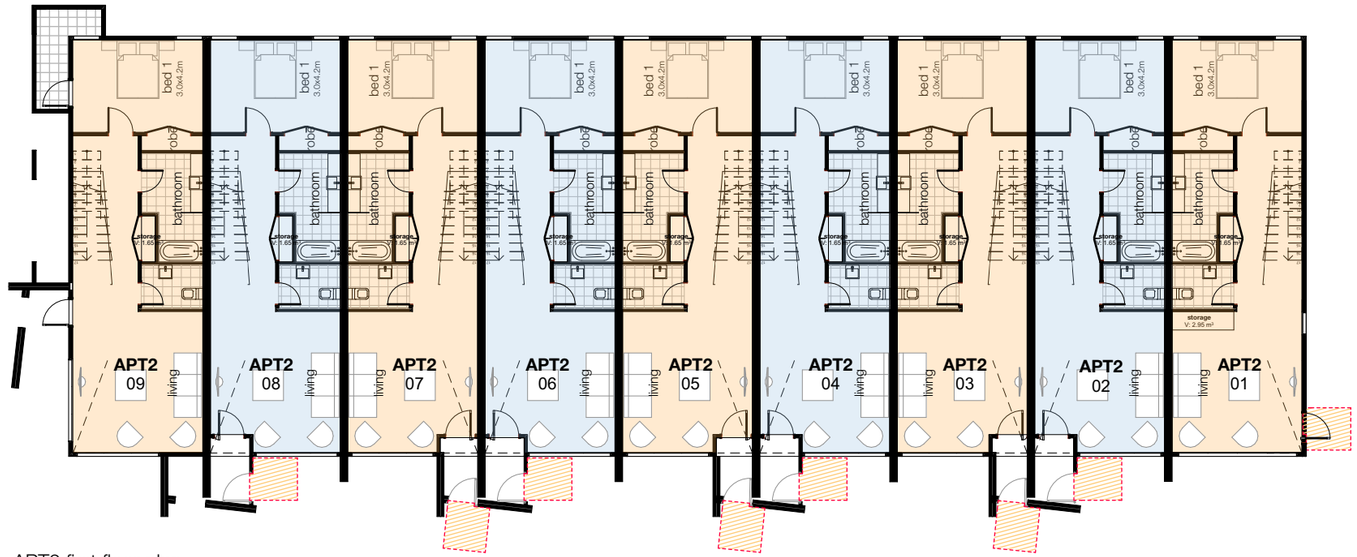
APT2 ground floor plan

DRAWING DA-APT110 ISSUE H

DRAWN ####
CHECKED AMcB
SCALE 1:200 @ a3



01 | APT2 second floor plan
1:200



02 | APT2 first floor plan
1:200

ARCHITECT

INTEGRATED DESIGN GROUP
ARCHITECTURE|MASTERPLANNING|INTERIORS

© Integrated Design Group Pty Ltd
ABN 84 115 006 329
Nominated Architect
Simon Thorne reg. no. 7093

info@idgarchitects.com.au
www.idgarchitects.com.au

NOTES

1. Figured dimensions take precedence over scaled drawings
2. Contractors to check and verify all levels datum and dimensions on site
3. All materials and workmanship to be in accordance with current written manufacturers instructions, local regulations and SAA codes
4. Conflicting information to be brought to notice of the architect and clarification sought before proceeding with any works
5. All drawings are not for construction and are subject to further design development, consultant input, council and legislative requirements.
6. Refer to General notes page for legend and abbreviations

DISCIPLINES

Access	#Access	Civil	####
Acoustic	#Acoustic	Electrical	####
Arborist	#Arborist	Geotech	#Geotech
BCA	#BCA	Hydraulic	####
Landscape	####	Mechanical	####
Planner	####	Structure	####
Surveyor	####		
Traffic	#Traffic	PCA	####
Waste	#Waste	Builder	####

PROJECT

Raith amended DA

SITE: Fern Ave Bradbury NSW
CLIENT: Capital Developments
REF: CAP18075

REVISION

24/1/19	C	Issue for information
18/2/19	D	Issue for consultants
4/3/19	E	Issue for consultants
5/4/19	F	Issue for DA
21/5/19	G	Issue for DA
12/7/19	H	council requested amendments
16/9/20	I	isssue for Council Review
17/12/20	J	issue for DA

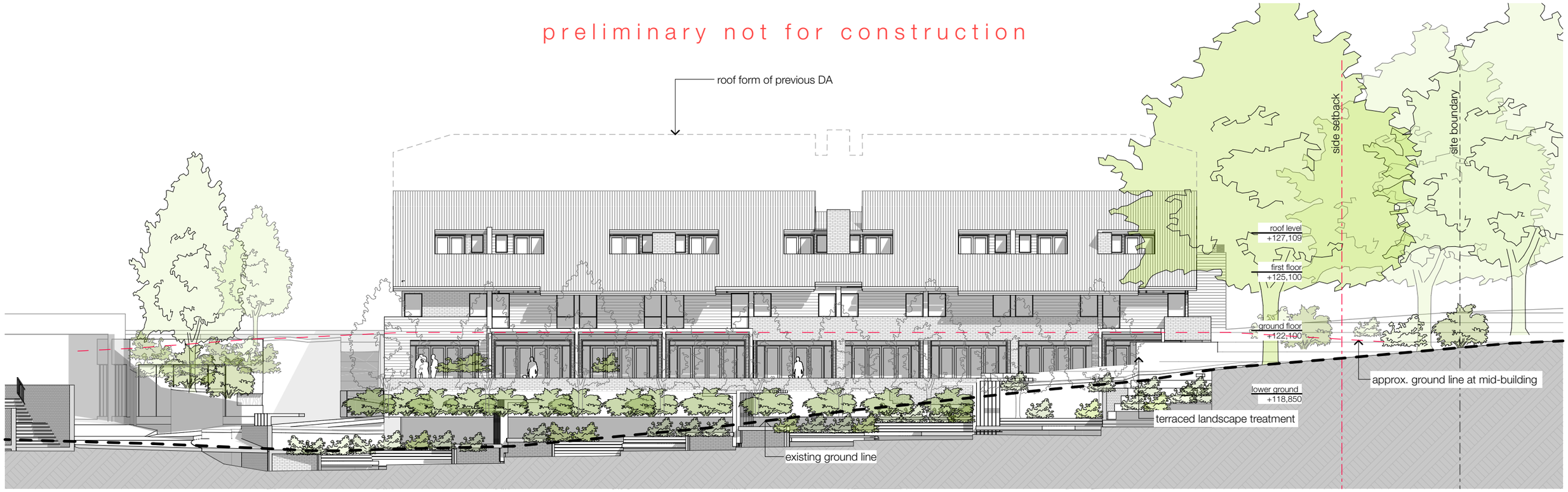
DRAWING

APT2 general arrangement

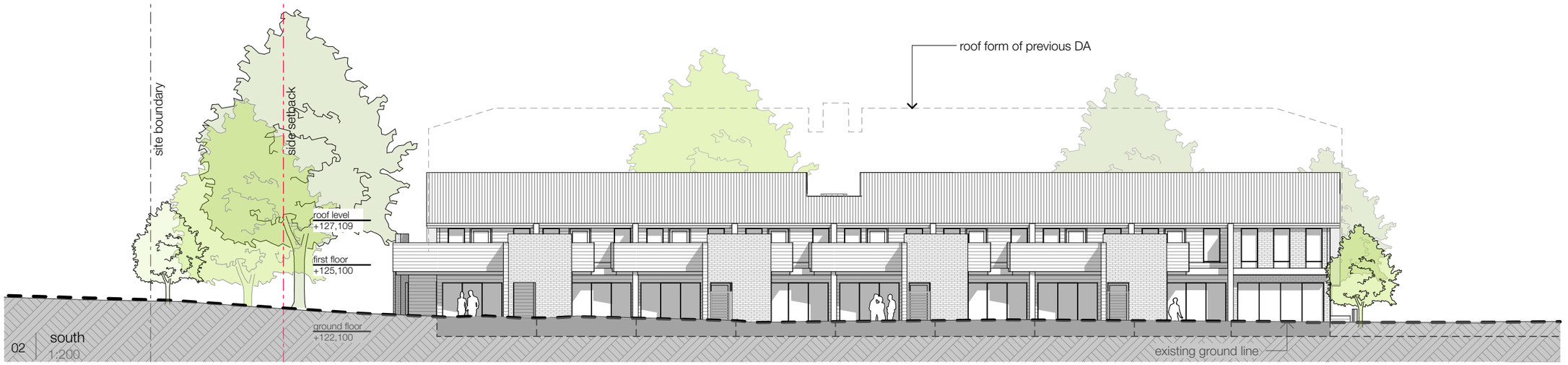
DRAWING DA-APT111 ISSUE J

DRAWN ####
CHECKED AMcB
SCALE 1:200 @ a3

preliminary not for construction



01 | North
1:200



02 | south
1:200

due to complex topography refer height plane
model view DA/9300 showing compliance.

ARCHITECT

INTEGRATED DESIGN GROUP
ARCHITECTURE|MASTERPLANNING|INTERIORS

© Integrated Design Group Pty Ltd
ABN 84 115 006 329
Nominated Architect
Simon Thorne reg. no. 7093

info@idgarchitects.com.au
www.idgarchitects.com.au

NOTES

1. Figured dimensions take precedence over scaled drawings
2. Contractors to check and verify all levels datum and dimensions on site
3. All materials and workmanship to be in accordance with current written manufacturers instructions, local regulations and SAA codes
4. Conflicting information to be brought to notice of the architect and clarification sought before proceeding with any works
5. All drawings are not for construction and are subject to further design development, consultant input, council and legislative requirements.
6. Refer to General notes page for legend and abbreviations

DISCIPLINES

Access	#Access	Civil	####
Acoustic	#Acoustic	Electrical	####
Arborist	#Arborist	Geotech	#Geotech
BCA	#BCA	Hydraulic	####
Landscape	####	Mechanical	####
Planner	####	Structure	####
Surveyor	####		
Traffic	#Traffic	PCA	####
Waste	#Waste	Builder	####

PROJECT

Raith amended DA

SITE: Fern Ave Bradbury NSW
CLIENT: Capital Developments
REF: CAP18075

REVISION

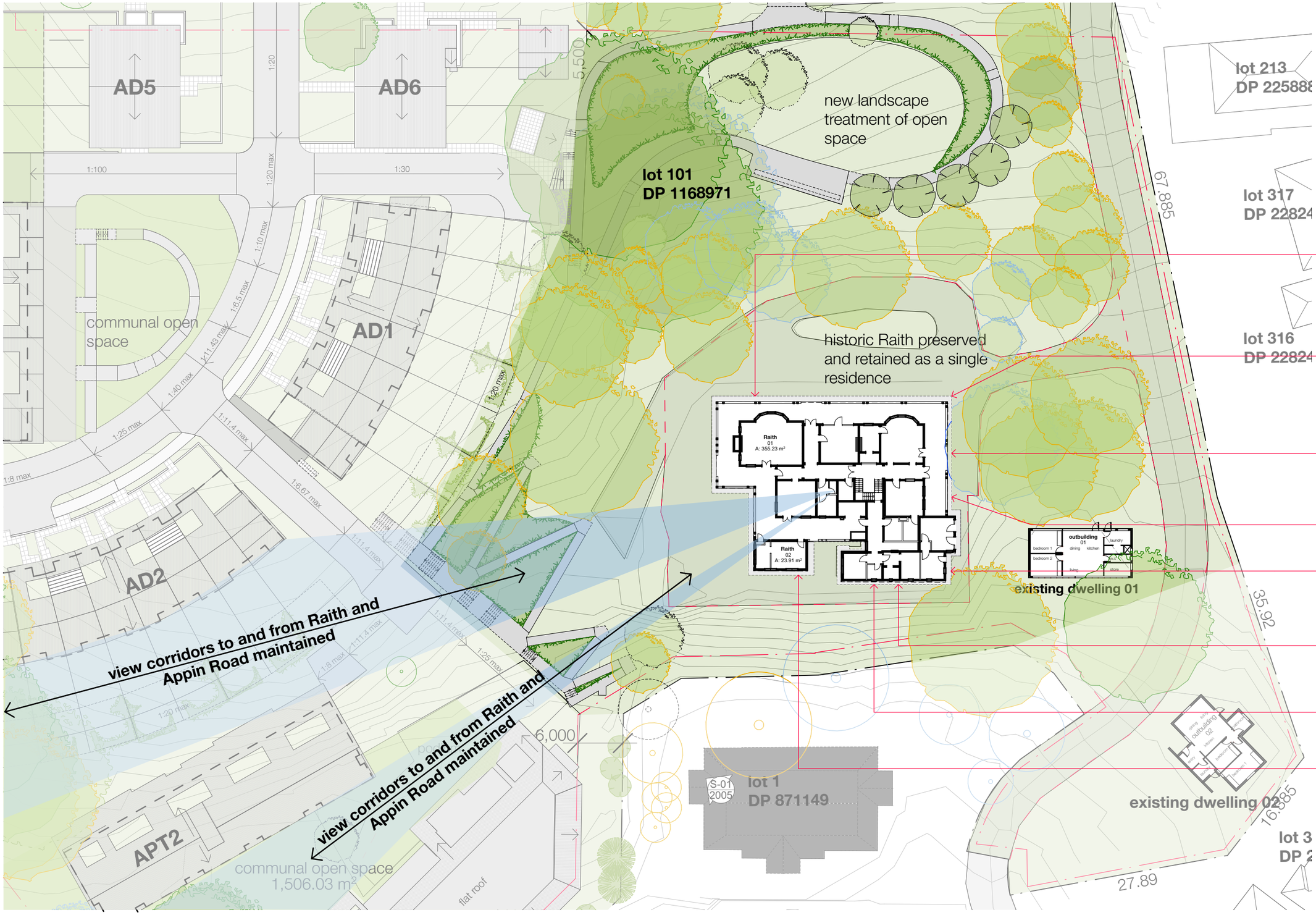
4/3/19	E	Issue for consultants
5/4/19	F	Issue for DA
21/5/19	G	Issue for DA
12/7/19	H	council requested amendments
1/9/20	I	isssue for review
16/9/20	J	isssue for Council Review
17/12/20	K	issue for DA
17/5/21	L	ISSUE FOR DA

DRAWING

APT2 elevations

DRAWING DA-APT112 ISSUE L

DRAWN ####
CHECKED JA
SCALE 1:200 @ a3



generally to significant trees and plants - retain and carry out required tree surgery and pruning for viability. source and propagate seeds for additional / succession planting.

generally - remove all noxious weeds carefully using hand tool methods and limited localised poisoning. Take care to treat weed species only and minimise ground disturbance.

all verandahs throughout: inspect all verandah timbers for termites and rot; refix loose verandah ceiling boards. replace damaged sections & repaint

general review and repair of pointing and tuck pointing throughout.
brick pointing to eastern verandah and corner adjacent to kitchen: repair pointing and tuck pointing after removal of damp, moss and mould, to match existing. Test and Desalinate if required.

all downpipes and gutters: check clear, clear drains, ensure falls to downpipes, ensure downpipes drain effectively away from house, check all flashings.
to eastern rainwater head, downpipe & gutter: check and repair as required to ensure full effective operation

eastern verandah sandstone caps: remove paint finish by use of non-caustic paint removal techniques.

sandstone caps generally: inspect for stability and replace where required with matching pieces

- clear plant growth and excavate ground level to 50mm below underfloor vents. Maintain a 450mm gravel skirt around full perimeter of building with agricultural drainage to provide an air drain and remove water from base of building. Grade falls of ground away from building min. 1 in 100.

inspect damp proof course to full perimeter of building. repair where necessary.

south verandah: inspect sub floor and replace rotten timbers. New full verandah width verandah flooring replacement where required to remove trip hazards after repair of substructure. Replace with matching sections and detail

Rendered sections of verandah: check moisture levels, desalinate and remove flaking paint / chemical / oil deposits and repaint

ARCHITECT

INTEGRATED DESIGN GROUP
ARCHITECTURE|MASTERPLANNING|INTERIORS

© Integrated Design Group Pty Ltd
ABN 84 115 006 329
Nominated Architect
Simon Thorne reg. no. 7093

info@idgarchitects.com.au
www.idgarchitects.com.au

NOTES

1. Figured dimensions take precedence over scaled drawings
2. Contractors to check and verify all levels datum and dimensions on site
3. All materials and workmanship to be in accordance with current written manufacturers instructions, local regulations and SAA codes
4. Conflicting information to be brought to notice of the architect and clarification sought before proceeding with any works
5. All drawings are not for construction and are subject to further design development, consultant input, council and legislative requirements.
6. Refer to General notes page for legend and abbreviations

DISCIPLINES

Access	#Access	Civil	####
Acoustic	#Acoustic	Electrical	####
Arborist	#Arborist	Geotech	#Geotech
BCA	#BCA	Hydraulic	####
Landscape	####	Mechanical	####
Planner	####	Structure	####
Surveyor	####		
Traffic	#Traffic	PCA	####
Waste	#Waste	Builder	####

PROJECT

Raith amended DA

SITE: Fern Ave Bradbury NSW
CLIENT: Capital Developments
REF: CAP18075

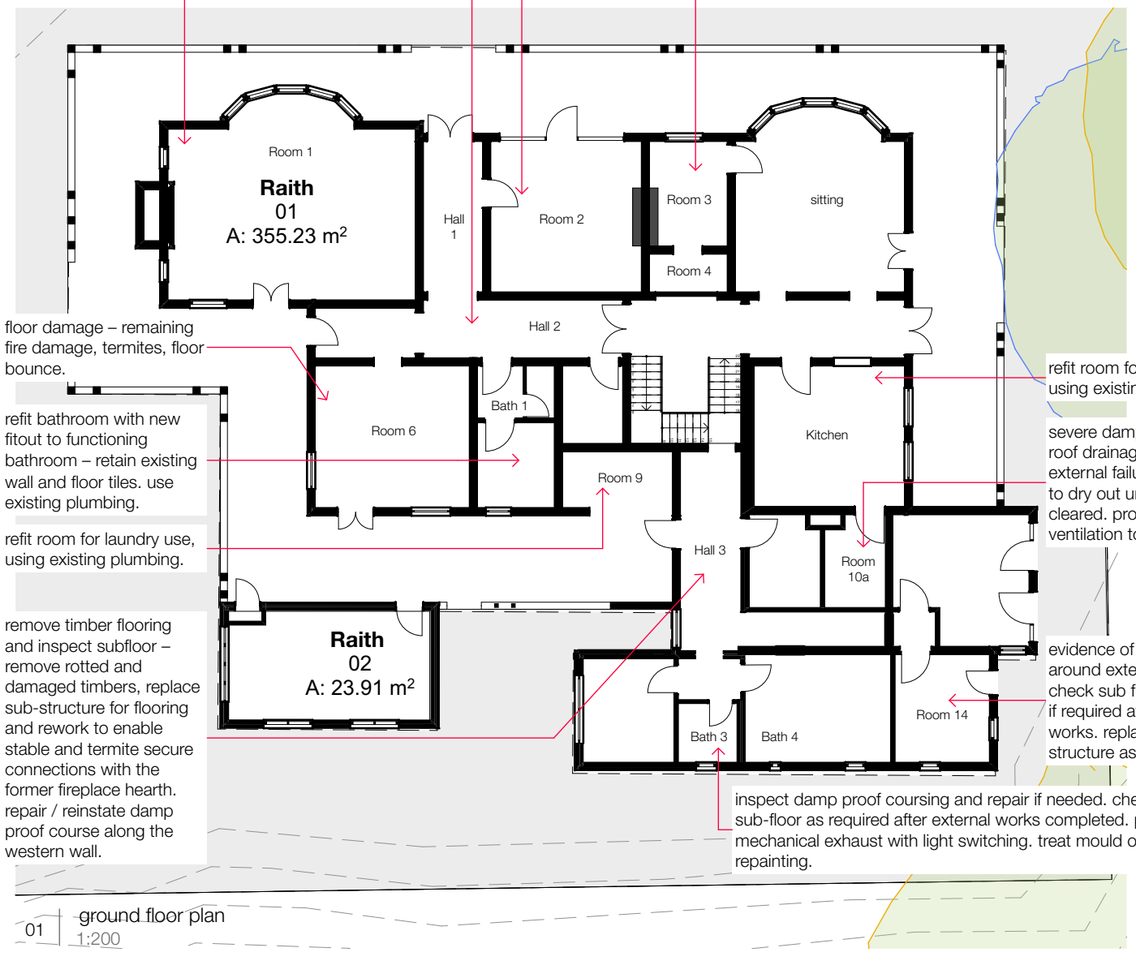
REVISION

24/1/19	A	Issue for information
18/2/19	B	Issue for consultants
4/3/19	C	Issue for consultants
5/4/19	D	Issue for DA
21/5/19	E	Issue for DA
12/7/19	F	council requested amendments
17/12/20	G	issue for DA

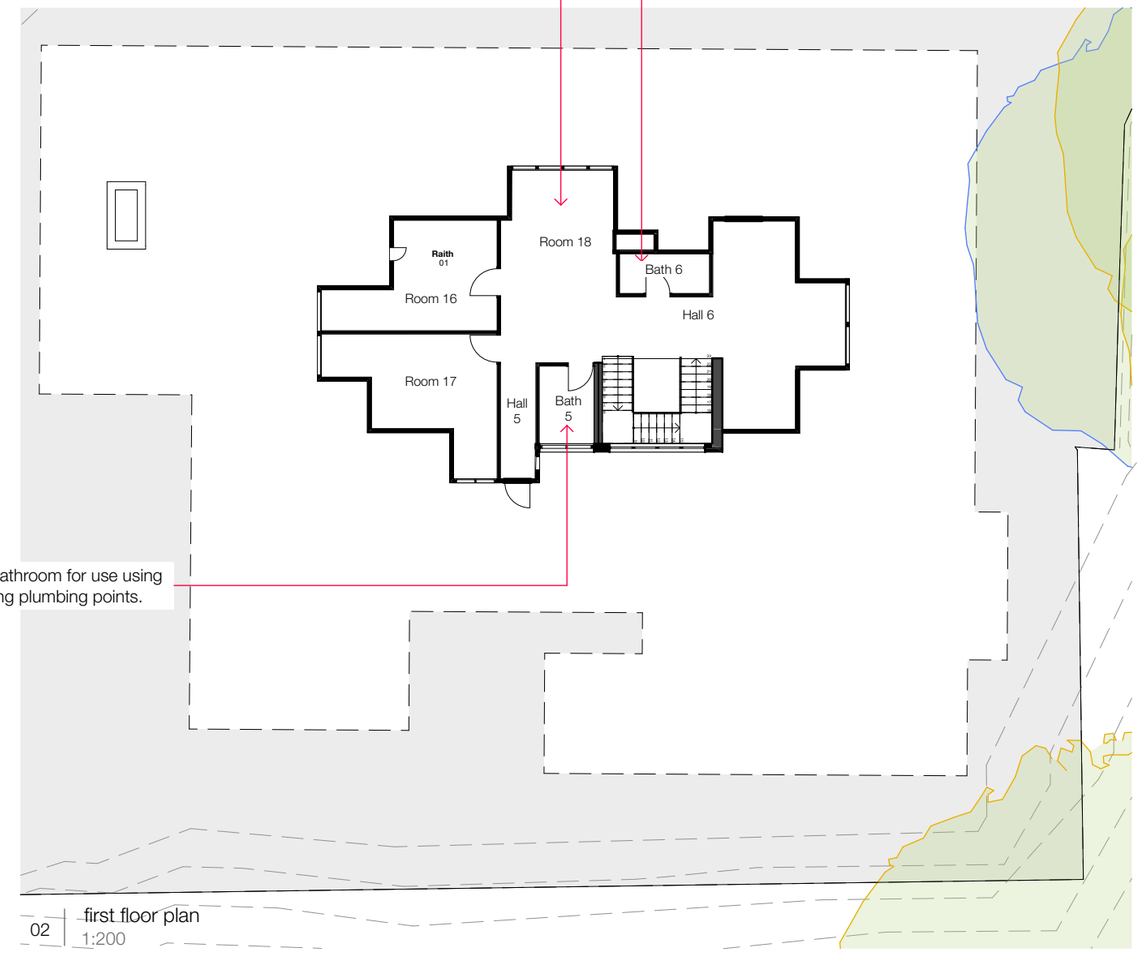
DRAWING

Raith House Precinct

DRAWING: DA-R001
ISSUE: G
DRAWN: ####
CHECKED: AMcB
SCALE: 1:500 @ a3



01 ground floor plan
1:200



02 first floor plan
1:200

- works to upgrade to commercial use

- commercial fitout as separate DA

-latest agreement with council for raith to be used as commercial tenancy

general internal conservation works:

- check moisture, chemical, and oil levels and for rising and falling damp in masonry walls. desalinate, remove toxins as required after repair of damp proof course. remove flaking paint.
- inspect all subfloor areas, skirtings and architraves for termites and rot. Remove termite damaged timbers and replace with matching sections in termite resistant timbers. where possible provide physical termite barriers to underfloor areas.
- paint walls low sheen breathable paint. paint timbers full gloss enamel. paint only existing surfaces. colours may be based on original colour schemes identified in report
- check and refix loose floor boards and ceiling boards throughout
- provide bulk insulation (R3) to ceiling space on first floor

ARCHITECT

INTEGRATED DESIGN GROUP
ARCHITECTURE|MASTERPLANNING|INTERIORS

© Integrated Design Group Pty Ltd
ABN 84 115 006 329
Nominated Architect
Simon Thorne reg. no. 7093

info@idgarchitects.com.au
www.idgarchitects.com.au

NOTES

1. Figured dimensions take precedence over scaled drawings
2. Contractors to check and verify all levels datum and dimensions on site
3. All materials and workmanship to be in accordance with current written manufacturers instructions, local regulations and SAA codes
4. Conflicting information to be brought to notice of the architect and clarification sought before proceeding with any works
5. All drawings are not for construction and are subject to further design development, consultant input, council and legislative requirements.
6. Refer to General notes page for legend and abbreviations

DISCIPLINES

Access	#Access	Civil	####
Acoustic	#Acoustic	Electrical	####
Arborist	#Arborist	Geotech	#Geotech
BCA	#BCA	Hydraulic	####
Landscape	####	Mechanical	####
Planner	####	Structure	####
Surveyor	####		
Traffic	#Traffic	PCA	####
Waste	#Waste	Builder	####

PROJECT

Raith amended DA

SITE: Fern Ave Bradbury NSW
CLIENT: Capital Developments
REF: CAP18075

REVISION

24/1/19	01	Issue for information
18/2/19	B	Issue for consultants
4/3/19	C	Issue for consultants
5/4/19	D	Issue for DA
21/5/19	E	Issue for DA
12/7/19	F	council requested amendments
17/12/20	G	issue for DA

DRAWING

Raith floor plans

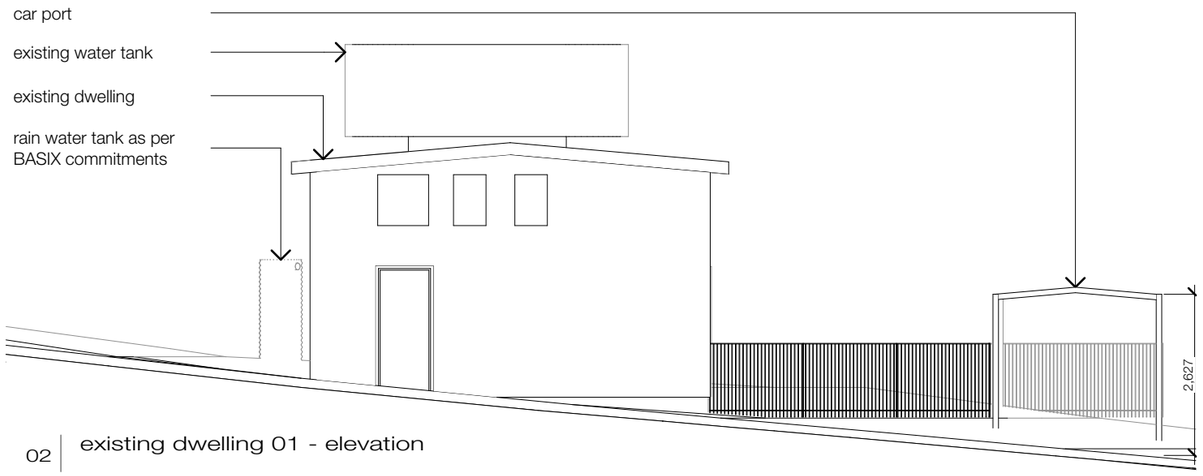
DRAWING DA-R002
ISSUE G

DRAWN ####
CHECKED AMcB
SCALE 1:200 @ a3

preliminary not for construction



01 | Existing dwelling plan



02 | existing dwelling 01 - elevation

architect

integrated DESIGN group
architects | bathurst penrith sydney

Member Australian Institute of Architects

nominated architects
tony mcburney reg#5273
simon thorne reg#7093

bathurst | 02 6332 6206
penrith | 02 4732 4430
sydney | 02 9764 6100

info@idgarchitects.com.au
www.idgarchitects.com.au

copyright
integratedDESIGNgroup p/l
abn 84 115 006 329

date	issue	amendment
17/5/21	A	ISSUE FOR DA

title

Existing dwelling 01

Raith amended DA
Capital Developments | Fern Ave Bradbury NSW

project ref: CAP18075
drawn: PW, AB, EG
checked: JA
scale: @ a3

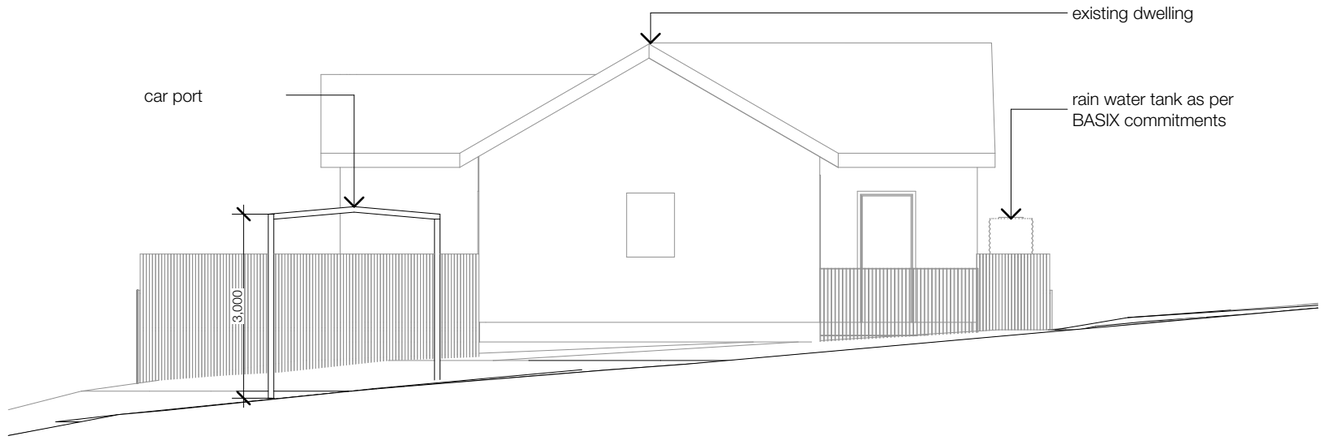
DA
R003

issue
A

preliminary not for construction



01 | Existing dwelling plan



02 | existing dwelling 02 - north elevation



03 | existing dwelling 02 - east elevation

architect

integrated DESIGN group
architects | bathurst penrith sydney

Member Australian Institute of Architects

copyright
integratedDESIGNgroup p/l
abn 84 115 006 329

nominated architects
tony mcburney reg#5273
simon thorne reg#7093

bathurst | 02 6332 6206
penrith | 02 4732 4430
sydney | 02 9764 6100

info@idgarchitects.com.au
www.idgarchitects.com.au

date	issue	amendment
21/5/21	A	ISSUE FOR DA
8/7/21	B	ISSUE FOR DA

title

Existing dwelling 02

Raith amended DA
Capital Developments | Fern Ave Bradbury NSW

project ref: CAP18075
drawn: PW, AB, EG
checked: JA
scale: @ a3

DA R004

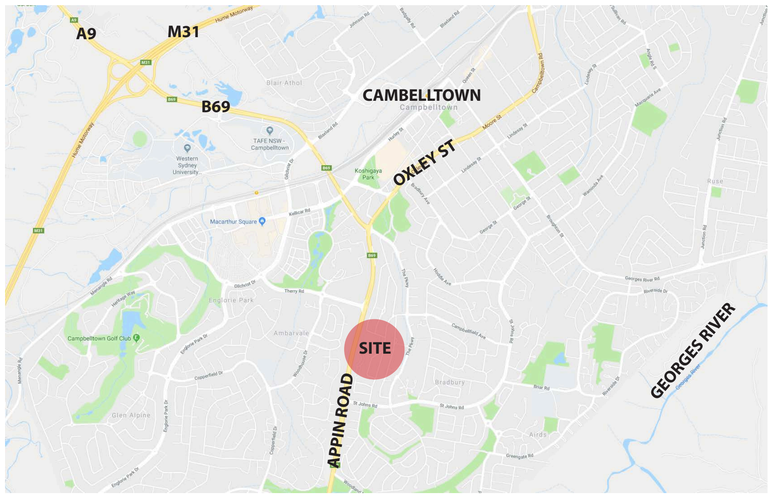
issue B

FERN AVENUE

LANDSCAPE WORKS
DEVELOPMENT APPLICATION

DRAWING LIST

NR	TITLE
LA-00	COVER SHEET
LA-01	LANDSCAPE MASTERPLAN
LA-02	ENLARGEMENT LOCAL PARK
LA-03	ENLARGEMENT NEIGHBOURHOOD PARK
LA-04	ENLARGEMENT COMMUNAL OPEN SPACE
LA-05	PLANT SCHEDULE
LA-06	PLANT SCHEDULE
LA-07	LANDSCAPE DETAILS



CONTEXT MAP
N.T.S



COVER SHEET

Paterson Design Studio
Landscape Architects / Urban Designers
Registered Landscape Architect: Garth Paterson FAILA Reg#716
BLA (CANB) MLAUD (HARV)
Paterson Design Studio PTY LTD
16a/1-15 Tramore Place
Killarney Heights, NSW 2087.
T +61 2 9452 4911
admin@pdsdesign.com.au
www.pdsdesign.com.au

Copyright by PDS Pty Ltd. This drawing, or parts thereof, may not be reproduced for any purpose without the consent of PDS Pty Ltd. It is implied and has legal backing.

Use figured dimensions only. All dimensions to be verified on site before commencing work. All dimensions are in mm unless otherwise stated. The drawings are to be read in conjunction with the specification and any other written instructions issued.
Any discrepancies shall be referred to the Superintendent for a written decision prior to ordering/ supply/ installation/ construction.

REV	NO	DESCRIPTION	DWN	CHK	DATE
	2	AMENDMENTS	ET	GP	15.12.20
	1	ISSUE FOR DA	ET	GP	05.08.19

CLIENT
CAPITAL DEVELOPMENTS

PROJECT
FERN AVENUE
LANDSCAPE WORKS

DRAWING TITLE

ISSUE: DA
PROJECT NO.: -
SCALE:

DRAWING NO.: LA-00
REVISION: 2



Paterson Design Studio
Landscape Architects / Urban Designers
Registered Landscape Architect: Garth Paterson FAILA Reg#716
BLA (CANB) MLAUD (HARV)
Paterson Design Studio PTY LTD
16a/1-15 Tramore Place
Killarney Heights, NSW 2087.
T +61 2 9452 4911
admin@pdsdesign.com.au
www.pdsdesign.com.au

Copyright by PDS Pty Ltd. This drawing, or parts thereof, may not be reproduced for any purpose without the consent of PDS Pty Ltd. It is implied and has legal backing.

Use figured dimensions only. All dimensions to be verified on site before commencing work. All dimensions are in mm unless otherwise stated. The drawings are to be read in conjunction with the specification and any other written instructions issued.
Any discrepancies shall be referred to the Superintendent for a written decision prior to ordering/ supply/ installation/ construction.

KEY:

- Site boundary/Extent of DA
- Proposed deciduous tree
- Proposed evergreen tree
- Existing tree to remain. Refer Arborist report for details.
- Existing tree to be removed. Refer Arborist report for details.

SOFTSCAPE

- (1) Private open space in deep soil. Refer arch for area m²
- (2) Private open space on structure. Refer arch for area m²
- (3) Public open space, plants per schedule
- (4) Turf in public open space

HARDSCAPE

- (A) Pedestrian paving/stairs/ramp, refer arch
- (B) Vehicular paving, refer arch
- (C) Decking, refer arch
- Retaining wall in Public and Private open space, refer arch
- Privacy fence, height varies
- Building Entry/Access

REV	NO	DESCRIPTION	DWN	CHK	DATE
	2	AMENDMENTS	ET	GP	15.12.20
	1	ISSUE FOR DA	ET	GP	05.08.19

CLIENT
CAPITAL DEVELOPMENTS

PROJECT
FERN AVENUE LANDSCAPE WORKS

DRAWING TITLE
LANDSCAPE MASTERPLAN

ISSUE	PROJECT NO.
DA	-

SCALE
0 2 4 6 8 10 12m
SCALE 1:300

DRAWING NO.	REVISION
LA-01	2



ENLARGEMENT LOCAL PARK
Scale 1:100

Paterson Design Studio
Landscape Architects / Urban Designers
Registered Landscape Architect: Garth Paterson FAILA Reg#716
BLA (CANB) MLAUD (HARV)
Paterson Design Studio PTY LTD
16a/1-15 Tramore Place
Killarney Heights, NSW 2087.
T +61 2 9452 4911
admin@pdsdesign.com.au
www.pdsdesign.com.au

Copyright by PDS Pty Ltd. This drawing, or parts thereof, may not be reproduced for any purpose without the consent of PDS Pty Ltd. It is implied and has legal backing.

Use figured dimensions only. All dimensions to be verified on site before commencing work. All dimensions are in mm unless otherwise stated. The drawings are to be read in conjunction with the specification and any other written instructions issued.
Any discrepancies shall be referred to the Superintendent for a written decision prior to ordering/ supply/ installation/ construction.

KEY:

- Site boundary/Extent of DA
- Proposed deciduous tree
- Proposed evergreen tree
- Existing tree to remain. Refer Arborist report for details.
- Existing tree to be removed. Refer Arborist report for details.

SOFTSCAPE

- (1) Private open space in deep soil. Refer arch for area m²
- (2) Private open space on structure. Refer arch for area m²
- (3) Public open space, plants per schedule
- (4) Turf in public open space

HARDSCAPE

- (A) Pedestrian paving/stairs/ramp, refer arch
- (B) Vehicular paving, refer arch
- (C) Decking, refer arch
- Retaining wall in Public and Private open space, refer arch
- Privacy fence, height varies
- Building Entry/Access

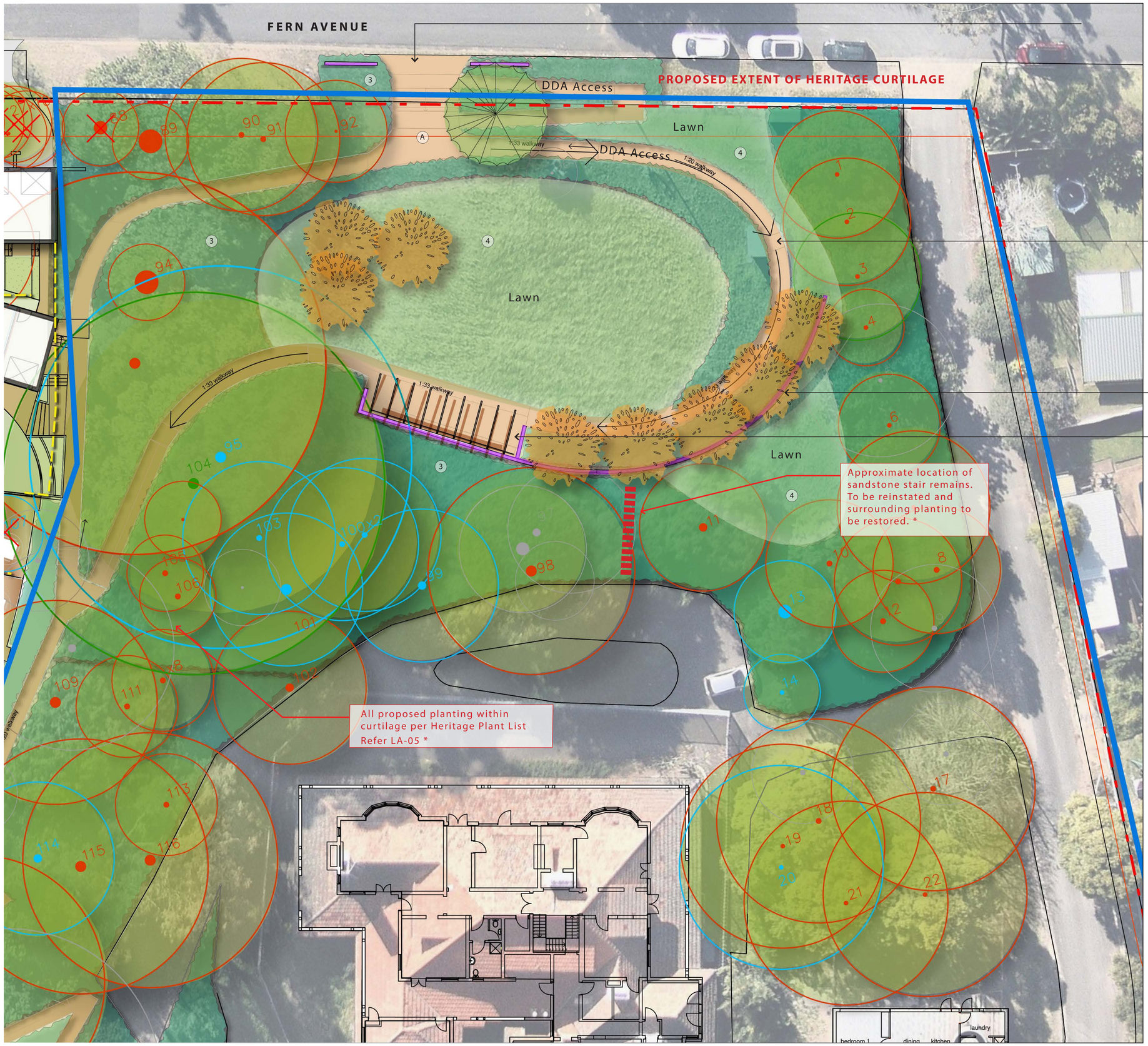
REV	NO	DESCRIPTION	DWN	CHK	DATE
	2	AMENDMENTS	ET	GP	15.12.20
	1	ISSUE FOR DA	ET	GP	05.08.19

CLIENT
CAPITAL DEVELOPMENTS

PROJECT
FERN AVENUE
LANDSCAPE WORKS

DRAWING TITLE
ENLARGEMENT LOCAL PARK

ISSUE: DA
PROJECT NO.: -
SCALE: 0 1 2 3 4 5 6m
SCALE 1:100
DRAWING NO.: LA-02
REVISION: 2



Park entry threshold with freestanding entry walls and feature planting

Batter with feature planting along DDA access route

Retaining wall below 1m HT

Seating nook with shade structure overlooking park

TREE RETENTION PRIORITY PER ARBORIST REPORT

- Trees considered of high retention value
- Trees considered of medium retention value
- Trees considered of low retention value
- Trees considered of recommended to be removed

ENLARGEMENT NEIGHBOURHOOD PARK
Scale 1:100

Paterson Design Studio
Landscape Architects / Urban Designers
Registered Landscape Architect: Garth Paterson FAILA Reg#716
BLA (CANB) MLAUD (HARV)
Paterson Design Studio PTY LTD
16a/1-15 Tramore Place
Killarney Heights, NSW 2087.
T +61 2 9452 4911
admin@pdsdesign.com.au
www.pdsdesign.com.au

Copyright by PDS Pty Ltd. This drawing, or parts thereof, may not be reproduced for any purpose without the consent of PDS Pty Ltd. It is implied and has legal backing.

Use figured dimensions only. All dimensions to be verified on site before commencing work. All dimensions are in mm unless otherwise stated. The drawings are to be read in conjunction with the specification and any other written instructions issued.
Any discrepancies shall be referred to the Superintendent for a written decision prior to ordering/ supply/ installation/ construction.

KEY:

- Site boundary/Extent of DA
- Proposed deciduous tree
- Proposed evergreen tree
- Existing tree to remain. Refer Arborist report for details.
- Existing tree to be removed. Refer Arborist report for details.

SOFTSCAPE

- (1) Private open space in deep soil. Refer arch for area m²
- (2) Private open space on structure. Refer arch for area m²
- (3) Public open space, plants per schedule
- (4) Turf in public open space

HARDSCAPE

- (A) Pedestrian paving/stairs/ramp, refer arch
- (B) Vehicular paving, refer arch
- (C) Decking, refer arch
- Retaining wall in Public and Private open space, refer arch
- Privacy fence, height varies
- Building Entry/Access

REV	NO	DESCRIPTION	DWN	CHK	DATE
	2	AMENDMENTS	ET	GP	15.12.20
	1	ISSUE FOR DA	ET	GP	05.08.19

CLIENT
CAPITAL DEVELOPMENTS

PROJECT
FERN AVENUE
LANDSCAPE WORKS

DRAWING TITLE
ENLARGEMENT NEIGHBOURHOOD PARK

ISSUE: DA
PROJECT NO.: -

SCALE
0 1 2 3 4 5 6 7 8m
SCALE 1:200

DRAWING NO.: LA-03
REVISION: 2



ENLARGEMENT COMMUNAL OPEN SPACE
Scale 1:100

Paterson Design Studio
Landscape Architects / Urban Designers
Registered Landscape Architect: Garth Paterson FAILA Reg#716
BLA (CANB) MLAUD (HARV)
Paterson Design Studio PTY LTD
16a/1-15 Tramore Place
Killarney Heights, NSW 2087.
T +61 2 9452 4911
admin@pdsdesign.com.au
www.pdsdesign.com.au

Copyright by PDS Pty Ltd. This drawing, or parts thereof, may not be reproduced for any purpose without the consent of PDS Pty Ltd. It is implied and has legal backing.

Use figured dimensions only. All dimensions to be verified on site before commencing work. All dimensions are in mm unless otherwise stated. The drawings are to be read in conjunction with the specification and any other written instructions issued.
Any discrepancies shall be referred to the Superintendent for a written decision prior to ordering/ supply/ installation/ construction.

KEY:

- Site boundary/Extent of DA
- Proposed deciduous tree
- Proposed evergreen tree
- Existing tree to remain. Refer Arborist report for details.
- Existing tree to be removed. Refer Arborist report for details.

SOFTSCAPE

- 1 Private open space in deep soil. Refer arch for area m²
- 2 Private open space on structure. Refer arch for area m²
- 3 Public open space, plants per schedule
- 4 Turf in public open space

HARDSCAPE

- A Pedestrian paving/stairs/ramp, refer arch
- B Vehicular paving, refer arch
- C Decking, refer arch
- Retaining wall in Public and Private open space, refer arch
- Privacy fence, height varies
- Building Entry/Access

REV	NO	DESCRIPTION	DWN	CHK	DATE
	2	AMENDMENTS	ET	GP	15.12.20
	1	ISSUE FOR DA	ET	GP	05.08.19

CLIENT
CAPITAL DEVELOPMENTS

PROJECT
FERN AVENUE LANDSCAPE WORKS

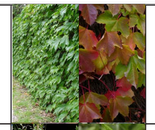
DRAWING TITLE
ENLARGEMENT COMMUNAL OPEN SPACE

ISSUE	PROJECT NO.
DA	-

SCALE
0 1 2 3 4 5 6 7 8m
SCALE 1:200

DRAWING NO.	REVISION
LA-04	2

CLIMBERS

Code	Botanical Name	Common Name	Images	Height	Spread	Description	Seasonal/ Special Feature	Preferred Soil Conditions	Drought/Frost Tolerance	Pest & Disease Susceptibility	Maintenance Requirement	Availability	Nuisance	Longevity/ Growth Rate	Root Damage Potential
Par tri	Parthenocissus tricuspidata	Boston Ivy		1m to 5m	5m+	This vine has a slender woody stems that branch and has tendrils with suckering disks that adhere to walls.	The leaves are glossy green turning red during autumn and the small star-shaped greenish flowers appear in a cluster from spring to summer.	t prefers a well-drained fertile moist sandy to caly soil with a pH range from 6.0 to 8.0 including chalky soils.	It grows in a semi shaded to sunny position and is frost and drought tolerant.	Canker, downy mildew, leaf spot, powdery mildew, wilt, scale, leaf hopper	Once established it has a medium water require-ment, (Scale: 2-drops from 3) and responds to mulching with an occasional deep watering during dry periods.	Readily available from commercial nurseries		Medium	not considered to be extensive or overly vigorous.
Hib Sca	Hibbertia scandens	Climbing Guinea Flower, Guinea Gold or Snake Vine		2 to 3m	2.5m +	Has vigorous twinning woody stems that scramble to form a dense cover. Dark glossy green leathery oval leaves and the large yellow wheel-shaped flowers	arge yellow wheel-shaped flowers appear solitary during spring or throughout the year in warm regions.	Well drained, moist sandy to clay loam, organic rich acidic	salt-spray tolerant, drought tolerant, frost tender	Plague thrips, phytophthora root rot, grey mold, grapevine moth	used as a ground cover and as a spill-over in rockeries. Cut back after flowering	Available from from commercial nurseries or native nurseries	occasional deep watering during dry periods, to establish young plants. Once established low watering needed.	fast	not considered to be extensive or overly vigorous
Hed Hel	Hedera helix	Common Ivy, English Ivy		4 to 20m	15m +	vigorous, evergreen climber with adventitious rootlets that adhere to walls and structures forming a dense cover. Glossy green leaves.	small greenish flowers are followed by black berries.	Most soils, high organic well aerated clay to sandy loams	Frost hardy, will tolerate some dry spells	Scale, aphids caterpillars, sooty mold, cyclamen & spider mite, canker	Does require some heavy pruning to keep under control	Readily available from commercial nurseries		Fast	Adventitious roots can cause some damage or marking to paint work if plant is removed.
Tra Jas	Trachelospermum jasminoides	Star jasmin, Confederate jasmine				evergreen climbing and twining plants	Fragrant white flowers in summer to autum	Suitable to most soil types, however, will perform best in rich, well-drained soil.	Drought and frost hardy	Mealy bug or scale if plant is stressed	low maintenance trim if it starts getting out of hand or requires shaping . Best to prune after flowering.	Readily available from commercial nurseries	Water well until established, once established the plant is moderately drought tolerant.	fast in growing season and warm climates	not considered to be extensive or overly vigorou

GROUNDCOVERS

Code	Botanical Name	Common Name	Images	Height	Spread	Description	Seasonal/ Special Feature	Preferred Soil Conditions	Drought/Frost Tolerance	Pest & Disease Susceptibility	Maintenance Requirement	Availability	Nuisance	Longevity/ Growth Rate	Root Damage Potential
Car Gla	Carpobrotus glaucescens	Pigface, Angular Pigface		0.15 m	2 m	succulent with spreading stems that root at the nodes, erect foliage forming a dense prostrate habit.	Bright daisy-like flowers appear above the foliage from spring to summer. Fleshy glaucous green linear leaves	Well-drained, poor sandy to light loamy soil, dry-moist, acidic	Drought salt, light frost tolerant	Aphids, fungal root rot in wet soil	Once established it has a low water requirement and will tolerate long periods of drought. Can be cut back easily	Readily available from commercial nurseries in various sizes.	Pruning not necessary, tolerates cutting back to control.	Fast	Root system is not considered to be extensive or overly vigorous.

PALMS / CYCADS

Cyc Med	Cycads media R.Br	Cycad Palm, Sago palm		6m	2-3m	A squat and thick trunk, With a crown of large, hard and stiff, evergreen leaves, They usually have pinnate leaves. The individual plants are either all male or all female	Only produces one round of new leaves each growing season. Plant is very slow growing	Well draining soil, sandy loam	Drough hardy, does not like wet feet	Scale, mealy bug, rust. Is toxic if fronds/ leaves are handled to much	Removal of old leaves bellow	Usually available from commercial nurseries in various sizes.	Does not like wet feet, or having roots disturbed	Very slow	Fibrous root system

TUFTED GRASSES

Code	Botanical Name	Common Name	Images	Height	Spread	Description	Seasonal/ Special Feature	Preferred Soil Conditions	Drought/Frost Tolerance	Pest & Disease Susceptibility	Maintenance Requirement	Availability	Nuisance	Longevity/ Growth Rate	Root Damage Potential
Lir mus	Liriope muscari	Lily Turf, Big Blue lilyturf		0.3 - 0.45 m	0.5 m	This tuberous perennial has a tufted habit with upright dark green strap-like leaves.	The small violet-mauve cup-shaped flowers appear in a raceme above the foliage from mid to late summer.	Well drained fer-tile sandy-clay loam, moist.	Semi-shade, moderately drought and frost-cold tolerant, wind protection	Slugs and snails cause damage on young plants	Establish clumps require little maintenance and have a medium water requirement once established.		Pruning not normally re-quired, remove old flower heads, divide to contain during late winter	Medium	Root system is not considered to be extensive or overly vigorous.
Lom tan	Lomandra Tanika	Tanika		1m	1m	This rhizomatous rush-like perennial forms a tussock-like clump.It has soft fine textured deep green foliage.	During early spring a yellowish flower head appears and the plant is used in patio pots or along borders.	It tolerates heavy clay to well drained sandy soils that are moderately fertile.	Full sun, open position; frost, drought and pollution tolerant	No major pest or disease problem, rhizomes shoots after fire or disturbance	It has a low water requirement once established.		Pruning not normally required, but will recover well if cut back hard.	Fast	Root system is not considered to be extensive or overly vigorous.
Poa lab	Poa labillardieri	Tussock Grass		0.3 - 0.8 m		Poa labillardieri is a dense perennial tussock grass with long, slender, soft, greyish-green or blue-green leaves in a weeping habit.	Delicate plume like flowerheads in spring to summer extend above the foliage up to 1.2 metres.	Prefers moist well drained soils, but will grow on slightly dry soils. It is not very well suited to growing on harsh shallow soils.	Tolerates full sun, but prefers dappled shade. Tolerates moderate salt winds and frost.	No major pest or disease problem	It has a low water requirement once established.		Pruning not normally required, but will recover well if cut back hard	Short lived with a fast growth rate.	Root system is not considered to be extensive or overly vigorous.
Jun usi	Juncus usitatus	Common Rush, Tussock Rush		0.6 - 1.2 m	1 m	This rhizomatous perennial has bright green stems (culms) that form a dense tufted habit.	The yellow-ish-green flowers appear in an open clus-ter from spring to summer.	Damp humus rich, sandy to clay loam, mod-erately drained	Full sun, open to protected position, frost, wind and slightly drought tolerant.	No major pest or disease problem.	It has a medium water require-ment once established and requires a little maintenance.			It has a vigorous growth rate establishing in 1 to 2 years	Root system is not considered to be extensive or overly vigorous.
Dia cae	Dianella caeru-lea/Dianella revoluta	Flax Lily, Paroo Lily, Blue Flax-lily		0.6 - 1 m	2m	This perennial plant has a tufted or mat habit. It has dark green grass-like, flat lanced-shaped leaves	The pendent blue star-shaped flowers appear in a cluster above the foliage on a slender stem from spring to early summer.	Well drained moderatly fertile sandy to clay loams, neutral to slightly acid	Full sun to semi-shade, drought and frost resistant, protected position.	Not attacked, seeds ger-minate and rhizomes shoots after fire or disturbance	It has a low water requirement once established.		Pruning not normally required, divide to contain during spring	Medium	Root system is not considered to be extensive or overly vigorous.

FEDERATION ERA PLANTLIST (To be used within the Proposed Heritage Curtlage area, list from Conservation and Management Report dated November 2018)

Robinia psuedoacaia – Black Locust
Carya illoinensis – Pecan Tree
Brachychiton Rupestris – Bottle Tree
Brachychiton Acerifolious – Illawarra Flame Tree
Ligustrum Lucidium – Broad leaf privet (Weed)
Palms
Jacarandeae sp – Blue Jacaranda
Hibisceae – Hibiscus cultivars
Aloe sp
Frangipani
Rose

Paterson Design Studio
Landscape Architects / Urban Designers
Registered Landscape Architect: Garth Paterson FAILA Reg#716
BLA (CANB) MLAUD (HARV)
Paterson Design Studio PTY LTD T +61 2 9452 4911
16a/1-15 Tramore Place admin@pdsdesign.com.au
Killarney Heights, NSW 2087. www.pdsdesign.com.au

Copyright by PDS Pty Ltd. This drawing, or parts thereof, may not be reproduced for any purpose without the consent of PDS Pty Ltd. It is implied and has legal backing.

Use figured dimensions only. All dimensions to be verified on site before commencing work. All dimensions are in mm unless otherwise stated. The drawings are to be read in conjunction with the specification and any other written instructions issued.
Any discrepancies shall be referred to the Superintendent for a written decision prior to ordering/ supply/ installation/ construction.

REV	NO	DESCRIPTION	DWN	CHK	DATE
	2	AMENDMENTS	ET	GP	15.12.20
	1	ISSUE FOR DA	ET	GP	05.08.19

CLIENT
CAPITAL DEVELOPMENTS

PROJECT
FERN AVENUE
LANDSCAPE WORKS

DRAWING TITLE

ISSUE
DA

PROJECT NO.
-

SCALE
PLANT SCHEDULE

DRAWING NO.
LA-05

REVISION
2

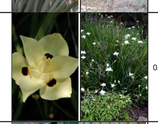
HEDGES

Code	Botanical Name	Common Name	Images	Height	Spread	Description	Seasonal/ Special Feature	Preferred Soil Conditions	Drought/Frost Tolerance	Pest & Disease Susceptibility	Maintenance Requirement	Availability	Nuisance	Longevity/ Growth Rate	Root Damage Potential
Acm smi	Acmena smithii "Allyn Magic"	Dwarf Lilly Pilly		0.5m	0.5m	A native Australian, compact lilly pilly with glossy green foliage and copper coloured new growth.	Perfect for low hedges and borders with richly coloured new growth appearing throughout the year following pruning.	Grows well in most soil types which are reasonably welldraining.	Tolerant of cool temperate to tropical environments Full sun to part shade.		Has a naturally dense habit but may be trimmed as required.			Medium	Root system is not considered to be extensive or overly vigorous.
Acm smi	Acmena smithii 'Red Tip'	Lilly Pilly Red Tip		6m	5m	The spreading smooth branches form a dense crown with glossy green ovate leaves.	Fluffy-like white flowers appear in summer, followed by purple berries.	It grows in medium to heavy loam tolerating temporary inundation.	Prefers a sunny to semi-shaded wind protected position and is drought and frost resistant.	Wax scale, borers, sooty mold, pimple psyllid, brown looper, vine hopper.	Once established it has a low water requirement.			Long-lived – 50 years plus in urban areas Fast	Root system is not considered to be extensive or overly vigorous.
Ela eum	Elaeocarpus eumundi	Eumundi Quandong		10-15m	5m	This medi-um-size tree has an upright grey-brown trunk with small scales and ascending branches that form a narrow rounded crown.	It has dark green oblong leaves and the small fragrant bell-shaped flowers appear in early summer.	It prefers an organic rich well drained soil that is tending acidic with reliable moisture and grows in an open to protected sunny position	Frost, wind and drought tender.	Sawfly, leaf spot	Once estab-lished it has a high water requirement, responding to mulch and an occasional deep watering during dry periods	This plant is not commonly cultivated and may be difficult to obtained, requiring a spe-cialist nursery.		It establishes in 3 to 5 years and is long lived. Slow	
Cam sas	Camellia sasanqua	Camellia sasanqua		4-6m	4m	This single trunked large shrub to small tree has upright spreading branches that form a narrow conical crown.	It has glossy dark green oval leaves and the white, pink to red saucer-shaped flowers appear from summer to winter.	Well drained sandy to clay loam, moist, organic rich	Semi shade to full sun, slightly drought-frost tolerant, no morning sun	Aphids, caterpillars, thrips, mites, mealy bug and scale, mosaic virus	Once established it has a medium water requirement	Generally available from commercial nurseries.	Light prune after flowering, tolerates hard prune when mature	Medium	Root system is not considered to be extensive or overly vigorous.

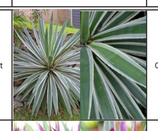
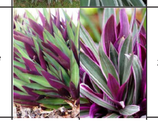
TREES

Code	Botanical Name	Common Name	Images	Height	Spread	Description	Seasonal/ Special Feature	Preferred Soil Conditions	Drought/Frost Tolerance	Pest & Disease Susceptibility	Maintenance Requirement	Availability	Nuisance	Longevity/ Growth Rate	Root Damage Potential
Plu rub	Plumeria rubra	Frangipani		4-6m	5m	This small deciduous tree has a broad rounded crown with irregular smooth grey fleshy branches.	It has large-glossy green textured leaves and the fragrant white, yellow centred funnel-shaped flowers appear in a cluster during summer.	Very well drained sandy loam, organic rich, moderately fertile.	It is drought, salt and deer resistant but is frost tender and dislikes wet soils.	Long-horned beetle, rust, rots from overwatering, leaf nematodes, mealybugs.	It has a low water require-ment once established, responding to mulch and an occasional deep watering during dry periods.	Generally available from commercial nurseries.	Leaf fall in autumn.	It establishes in 5 to 7 years and dislikes pruning. Slow growth rate.	Susceptible to fungal root rot in wet winters.
Lag ind	Lagerstroemia indica x fauriei 'Biloxi'	Crepe Myrtle		7m	5m	A multi stemmed large shrub or tree with a open vase habit. During summer it produces masses of pale pink flowers.	During summer it produces masses of pale pink flowers that appear on the current season's growth.	It prefers a well drained moderately fertile moist sandy to clay soil	Grows in an open sunny to semi shaded position and is frost tolerant and drought tender when young.	Susceptible to powdery mildew, wax scale, aphids, leaf spot, sooty mold.	Once established it has a low water requirement, responding to mulch and an occasional deep watering during dry periods.	Readily available from commercial nurseries.	Leaf fall in autumn. Relatively small leaflets.	Long-lived – 50 years plus in urban areas. Moderate.	Root system is not considered to be extensive or overly vigorous.
Lag ind	Lagerstroemia indica x fauriei 'Natchez'	Crepe Myrtle		8m	6m	Smooth greyish trunk and spreading branches. Dark green foliage, produces clusters of white flowers during summer	White flowers from early January to April. Mid green foliage turning yellow, orange & scarlet in Autumn.	Moderately heavy clays & moist but well-drained alluvial soils.	Tolerant of light frosts to minus 3°C.	Susceptible to powdery mil-dew in high humidity.	Regular watering during establishment. Requires formative pruning to ensure development of a single trunk.	Readily available in commercial nurseries. Propagated from Semi-Hardwood cuttings.	Leaf fall in autumn. Relatively small leaflets.	Long-lived – 50 years plus in urban areas. Moderate.	Root system is not considered to be extensive or overly vigorous.
Cor fic	Corymbia ficifolia	W.A. Red Flowering Gum		8-15	5m	This small tree has a twisted trunk with grey brown fibrous bark and spreading branches that form a dense rounded crown	It has glossy dark green leaves and the scarlet to pink, orange or red flowers appear in a large cluster during early summer	Well drained, moist gravelly to clay loams, moderately fertile, tending acidic	Drought and frost tender	Pimple galls, stem canker, phytopthora resistant	Once established it has a medium water requir-ment				
Cup ana	Cupaniopsis anacardioides	Tuckeroo		7-12m	10m	This small tree has an upright greyish trunk with ascending spreading branches that form a domed crown	It has glossy dark green leaflets and tiny green yellow saucer-shaped flowers appear in a cluster during late summer.	Tolerates most well drained, fertile sandy to light clay friable loams.	Tolerates salt spray in an open sunny position and is drought and wind tolerant but frost tender.	Leaf miner, caterpillar.	It has a low water requirement once established.	Readily available from commercial nurseries.	Leaf fall in autumn. Relatively small leaflets	Fast	Root system is not considered to be extensive or overly vigorous.

UNDERSTORY ACCENT PLANTING

Code	Botanical Name	Common Name	Images	Height	Spread	Description	Seasonal/ Special Feature	Preferred Soil Conditions	Drought/Frost Tolerance	Pest & Disease Susceptibility	Maintenance Requirement	Availability	Nuisance	Longevity/ Growth Rate	Root Damage Potential
Alp Cae	Alpinia caerulea	Native Ginger		2-2.5m	3m or more	Clumping perennial herb. Sword shaped-leaves with red underside	Coloured folage, verticle line	Loamy, Sandy loam, clay loam, potting mix	Frost will damage leaves. Hard frost or prolonged frost will kill rhizome. Leaf burn in hot summer sun with lack of water	Rust, scale	Cuting back/ clearing of old canes. Seperat-ing and culling, redusing of rhizones	Generally available from commercial nurseries.		Fast, clump will expand each season	Root system is not considered to be extensive or overly vigorous.
Bes Yuc	Beschroneria yuccoides	Mexican Lily		1-2m	2m	Clumping	Soft blue/grey foliage architectural plant with spectacular flower spike	Adaptable to many soil types from clay loam to sandy clay loam to sandy loam to silt loam. Prefers highly fertile soils	Once estab-lished is very hardy and with-stands heat, drought, wind and frost condi-tions.	Snails, slugs	Very little. removal of old leaves & flower spikes	starting to become available from commercial nurseries.		Medium to fast	Root system is not considered to be extensive or overly vigorous.
Can Hyb	Canna X gener-alis Hybrids	Canna Lilly		varying from 60cm to 2m tall	3m or more	Vigorus grower in growing season Vigorous growers, a rhizome- rooted perennial , form a clumping habit that can spread. Upright cans with lush large flaige	Coloured folaige & flower	Deep moist humus rich soils, free draining	sub tropics to temperate. Can with stand light frost when dormant	Most free of pests, Canna rust in Sydney humid climate . slugs, snails	Prunning to ground in win-termonths. clearing of old canes. Seperating and culling, redusing of rhizones	Different cultivars Generally available from commercial nurseries.	Remove dead flowers. Prune to ground in winter months	Medium to fast	Root system is not considered to be extensive or overly vigorous
Str jun	Strelitzia juncea1v	Bird of Paradise		1.5m -2m	1.5m	This rhizoma-tous perennial has grey green rush-like leaves and forms a large clump.	It has large orange bird-like flowers that appear in a cluster above the folage on a slender stem from mid autumn to the end of spring.	It prefers a well drained fertile moist sandy-stony soil.	It grows in an open to exposed sunny position and is light frost and drought tolerant.	Scale insect, scale, root rot.	Once estab-lished it has a medium water requirement.		Remove dead flowers and damaged leaves, divide clump when congested, may be difficult.	It establishes in 3 to 6 years and is long lived. Medium	
Die bic	Dietes bicolor	Wild Iris		0.8 - 1 m	1 m	This tufted perennial shrub forms a clump with long upright sword shape bronze-green leaves.	The pale yellow brown-spotted flowers are held above the folage on a slender scape and appear from late spring to early summer.	It prefers a well drained fertile moist sandy to silty or loamy soil and will tolerate wet conditions	It grows in an open sunny to semi shaded position and is drought, salt spray and frost tolerant	Rabbit and deer resistant and tolerates neglect	It has a low water requirement once estab-lished		Pruning not necessary, remove dead foliage and spent flowers above swelling in the stem.	Medium	Root system is not considered to be extensive or overly vigorous.
Cli min	Clivia miniata	Clivia, Kaffir Lily		0.2 - 0.5 m	0.6m	This perennial plant forms an upright clump habit with strap-like dark green leaves.	The funnel-shaped orange flowers have a yellow throat and appear in a cluster from early to mid spring.	Tolerates most well drained fertile moist soils, organic rich	Grows in a protected semi shaded to shaded position and is drought tolerant once established but frost tender.	Slugs and snails attack new growth, mealybugs, leaf scorch	Once established it has a high wa-ter requirement		Remove spent flowers, divide to contain after flowering	Medium	Root system is not considered to be extensive or overly vigorous.
Dor exc	Doryanthes excelsa	Gymea Lily		1 - 1.5 m	2.5 m	This sub-shrub forms a rounded clump with many sword-shaped curved leaves that reach up to 2 m from a central rosette.	The red funnel-shaped flowers appear in a large cluster on the top of a stem up to 6 m tall in summer.	Well drained sandy-stony soil, poor to moderately fertile.	Full sun, partial shade, drought tolerant, frost tender open to ex-posed position	Not attacked, re-shoots and seeds germi-nate after low intensity fire	It has a low water requirement once established.		Not normally, remove dead leaves and old flower stalks	Slow	Root system is not considered to be extensive or overly vigorous.

SUCCULENTS

Code	Botanical Name	Common Name	Images	Height	Spread	Description	Seasonal/ Special Feature	Preferred Soil Conditions	Drought/Frost Tolerance	Pest & Disease Susceptibility	Maintenance Requirement	Availability	Nuisance	Longevity/ Growth Rate	Root Damage Potential
Aga ang	Agave angustifolia	Century Plant		0.4-0.6	2m	A suckering perennial succulent has a short trunk to 450 mm long that is topped with a rosette of stiff blue green lanced-shaped leaves.	The greenish funnel-shaped flowers appear on a tall stem from the centre of the plant during summer.	It prefers a well drained, mod-erately fertile sandy soil in an open sunny to semi shaded position.	It is drought, salt spray and light frost tolerant.	Attracts spiders and snails, anthracnose, leaf spot, leaf blight, scale	It has a low water requirement once established		Take care as the plant rots easily in wet soils.	It establishes from offsets in 3 to 5 years and produces flowers after 10 years	Root system is not considered to be extensive or overly vigorous.
Tra Spa	Tradescantia spathacea	Moses in the cradle		20cm	40cm	producing rosettes of lanceulate leaves. That are crowded togther, flat, stiff, pointed, dark green above, purple to green below;	foliage colour	Well drained moist soils with lots of organic matter. Will tolerate drought and sandy soils. Will rot in wet soils.	Full sun semi-shade, hot dry climate. Protect from frost.	Fungus, root rot, and leaf spot can all be problems if plants receive to much irrigation.	It has a low water requirement once establishe	Readily available from commercial nurseries in various sizes	Take care as the plant rots easily in wet soils.	medium to fast in growing months	ot considered to be extensive or overly vigorous.

Paterson Design Studio

Landscape Architects / Urban Designers
Registered Landscape Architect: Garth Paterson FAILA Reg#716
BLA (CANB) MLAUD (HARV)

Paterson Design Studio PTY LTD
16a/1-15 Tramore Place
Killarney Heights, NSW 2087.

T +61 2 9452 4911
admin@pdsdesign.com.au
www.pdsdesign.com.au

Copyright by PDS Pty Ltd. This drawing, or parts thereof, may not be reproduced for any purpose without the consent of PDS Pty Ltd. It is implied and has legal backing.

Use figured dimensions only. All dimensions to be verified on site before commencing work. All dimensions are in mm unless otherwise stated. The drawings are to be read in conjunction with the specification and any other written instructions issued.
Any discrepancies shall be referred to the Superintendent for a written decision prior to ordering/ supply/ installation/ construction.

REV	NO	DESCRIPTION	DWN	CHK	DATE
	2	AMENDMENTS	ET	GP	15.12.20
	1	ISSUE FOR DA	ET	GP	05.08.19

CLIENT
CAPITAL DEVELOPMENTS

PROJECT
FERN AVENUE
LANDSCAPE WORKS

DRAWING TITLE

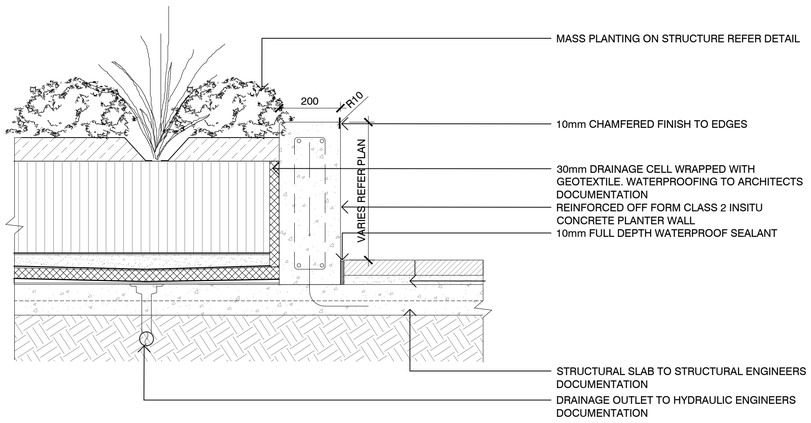
ISSUE
DA

PROJECT NO.
-

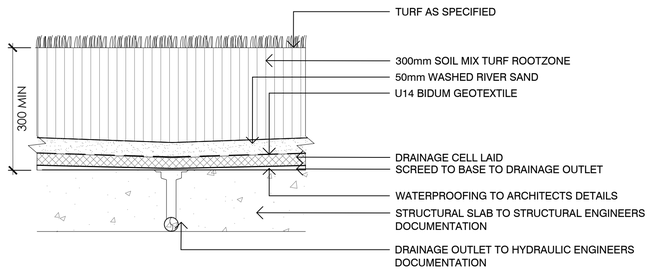
SCALE
PLANT SCHEDULE

DRAWING NO.
LA-06

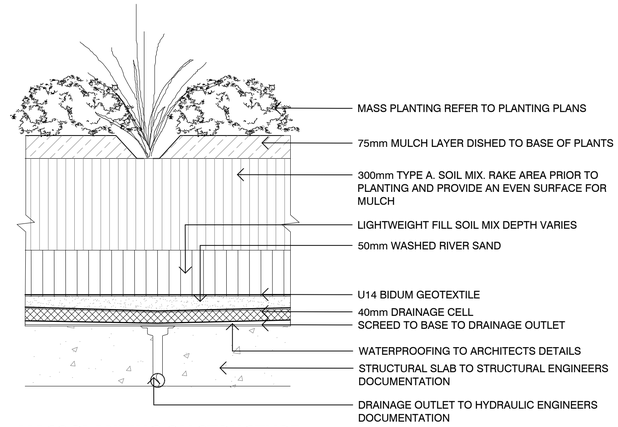
REVISION
2



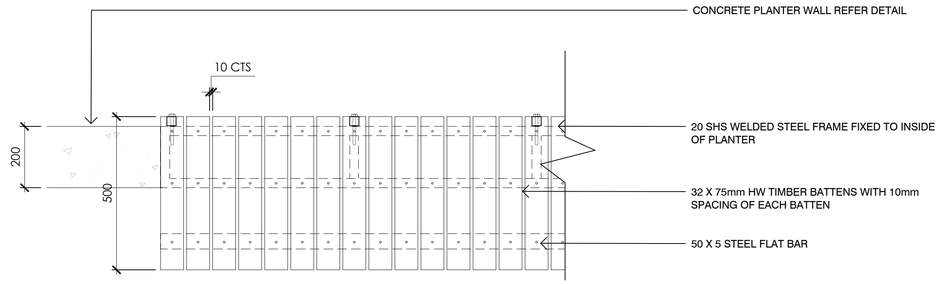
TYPICAL CONCRETE PLANTER WALL ON STRUCTURE
Scale 1:10 @ A1



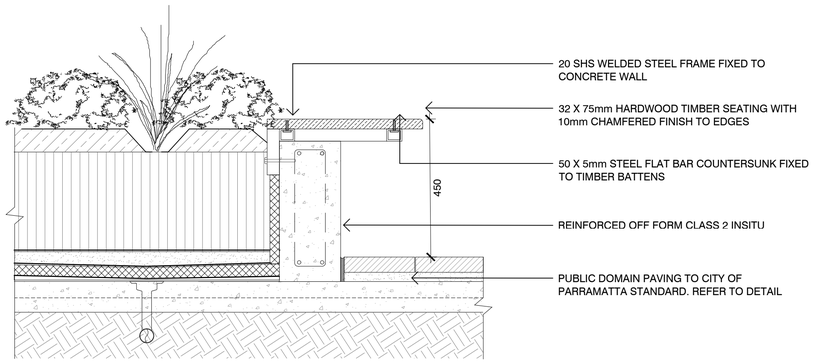
TURF ON STRUCTURE
Scale 1:10 @ A1



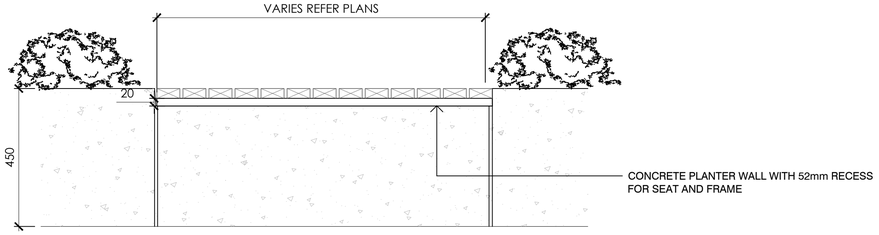
MASS PLANTING ON STRUCTURE
Scale 1:10 @ A1



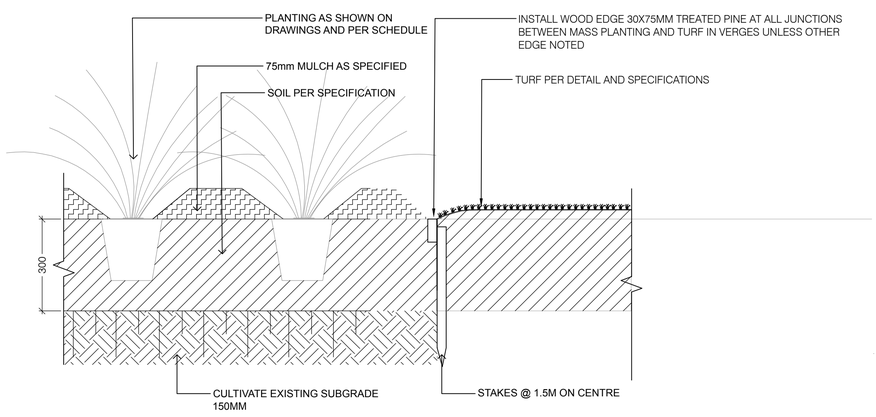
SEAT ON TOP OF WALL PLAN
Scale 1:10 @ A1



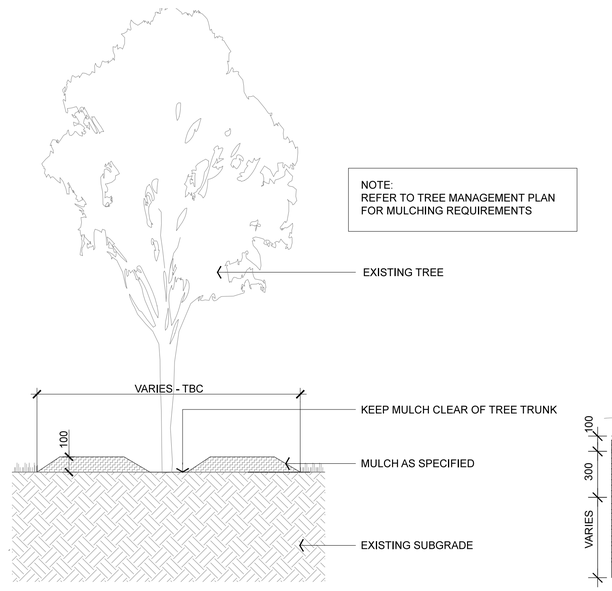
SEAT ON TOP OF WALL SECTION
Scale 1:10 @ A1



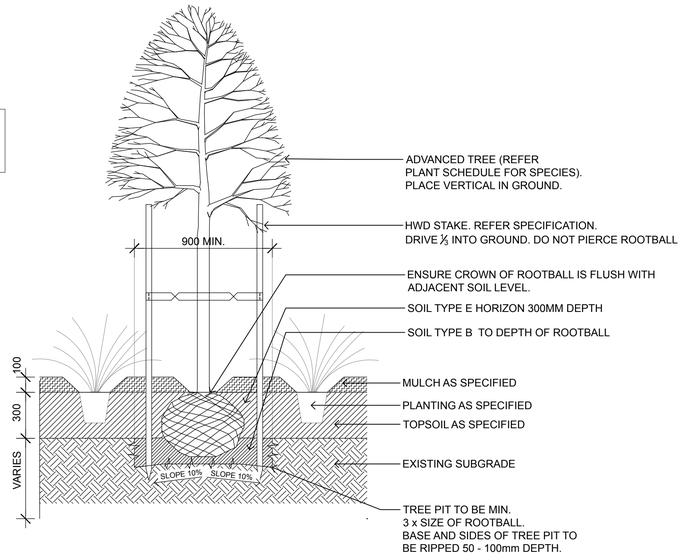
SEAT ON TOP OF WALL ELEVATION
Scale 1:10 @ A1



MASS PLANTING IN DEEP SOIL
Scale 1:10 @ A1



EXISTING TREE RETAINED
Scale 1:10 @ A1



TREE IN MASS PLANTING (DEEP SOIL)
Scale 1:10 @ A1

Paterson Design Studio
Landscape Architects / Urban Designers
Registered Landscape Architect: Garth Paterson FAILA Reg#716
BLA (CANB) MLAUD (HARV)
Paterson Design Studio PTY LTD
16a/1-15 Tramore Place
Killarney Heights, NSW 2087.
T +61 2 9452 4911
admin@pdsdesign.com.au
www.pdsdesign.com.au

Copyright by PDS Pty Ltd. This drawing, or parts thereof, may not be reproduced for any purpose without the consent of PDS Pty Ltd. It is implied and has legal backing.

Use figured dimensions only. All dimensions to be verified on site before commencing work. All dimensions are in mm unless otherwise stated. The drawings are to be read in conjunction with the specification and any other written instructions issued.
Any discrepancies shall be referred to the Superintendent for a written decision prior to ordering/ supply/ installation/ construction.

REV	NO	DESCRIPTION	DWN	CHK	DATE
	2	AMENDMENTS	ET	GP	15.12.20
	1	ISSUE FOR DA	ET	GP	05.08.19

CLIENT
CAPITAL DEVELOPMENTS

PROJECT
FERN AVENUE
LANDSCAPE WORKS

DRAWING TITLE

ISSUE
DA

PROJECT NO.
-

SCALE
LANDSCAPE DETAILS

DRAWING NO.
LA-07

REVISION
2

STORMWATER DRAWINGS

FOR

PROPOSED RESIDENTIAL DEVELOPMENT

AT

LOT 101, FERN AVENUE, BRADBURY

Revisions		
E	26/04/23	UPDATED ARCHITECTURALS
D	2/08/19	UPDATED ARCHITECTURALS
C	20/03/19	UPDATED ARCHITECTURALS
B	12/11/18	UPDATED ARCHITECTURALS
A	10/01/17	CONCEPT FOR COUNCIL

DRAWING SCHEDULE

DRAWING NO.	DRAWING TITLE
D01	COVER SHEET
D02	SITE AND ROOF DRAINAGE PLAN
D03	SITE AND ROOF DRAINAGE PLAN - LOCATION A
D04	SITE AND ROOF DRAINAGE PLAN - LOCATION B
D05	BASEMENT DRAINAGE PLAN
D06	BASEMENT DRAINAGE PLAN - LOCATION A
D07	BASEMENT DRAINAGE PLAN - LOCATION B
D08	DRAINAGE DETAILS
D09	DRAINAGE DETAILS
D010	MUSIC RESULTS AND DETAILS
D011	SOIL AND WATER MANAGEMENT PLAN

UNDERGROUND SERVICES

COVERS SHOWN IN THIS TABLE IS A GENERAL GUIDE ONLY.
DEPTH OF SERVICES TO BE DETERMINED BY SERVICE CONTRACTOR/BUILDER PRIOR TO DIGGING.

SERVICE	COVER (mm)	DIAMETER (mm)	REFERENCE
ELECTRIC CABLES	600	150	ENERGY AUSTRALIA DRAWINGS, DBYD
	900	150	ENERGY AUSTRALIA DRAWINGS, DBYD
TELSTRA	250		DBYD DRAWING,
GAS	750	75	NSW-GUIDE TO CODES AND PRACTICES FOR STREETS OPENING
WATER	600	150	SYDNEY WATER DRAWING & GUIDE TO CODES AND PRACTICES FOR STREETS OPENING

IF DIGGING WITHIN 2m OF AUSGRID TRANSMISSION CABLES AN AUSGRID SERVICE COORDINATOR MUST BE NOTIFIED AND PRESENT WHILE DIGGING.

LEGEND

- E — ELECTRICAL
- T — TELSTRA
- G — GAS
- S — SEWER
- WATER
- FENCE

AS 3500.3 - TABLE 7.2

MINIMUM GRADIENT OF SURFACE WATER DRAINS

NOMINAL SIZE DN	MINIMUM GRADIENT AUST.
90	1:100
100	1:100
150	1:100
225	1:200
300	1:250
375	1:300

AS 3500.3 - TABLE 8.2

SIZE OF MINIMUM INTERNAL DIMENSIONS FOR STORMWATER AND INLET PITS

DEPTH TO INVERT OF OUTLET	MINIMUM INTERNAL DIMENSION (mm)		
	RECTANGULAR		CIRCULAR DIAMETER
	WIDTH	WIDTH	
≤600	450	450	600
>600 ≤900	600	600	900
>900 ≤1200	600	900	1000
<1200	900	900	1000

NOTE:
PITS GREATER THAN 900 DEEP TO HAVE STEP RUNGS AT 300 CTS IN ACCORDANCE WITH AUSTRALIAN STANDARDS

SEDIMENT CONTROL NOTES

1. ALL EROSION AND SEDIMENTATION CONTROL MEASURES, INCLUDING REVEGETATION AND STORAGE OF SOIL, SHALL BE IMPLEMENTED TO THE STANDARDS OF SOIL CONSERVATION N.S.W.
2. ALL DRAINAGE WORKS SHALL BE CONSTRUCTED AND STABILIZED AS EARLY AS POSSIBLE DURING DEVELOPMENT.
3. SEDIMENT TRAPS SHALL BE CONSTRUCTED AROUND ALL INLET PITS, CONSISTING OF 300mm WIDE x 300mm DEEP TRENCH.
4. ALL SEDIMENT BASINS AND TRAPS SHALL BE CLEANED WHEN THE STRUCTURES ARE A MINIMUM OF 60% FULL OF SOIL MATERIALS, INCLUDING DURING THE MAINTENANCE PERIOD.
5. ALL DISTURBED AREAS SHALL BE REVEGETATED AS SOON AS THE RELEVANT WORKS ARE COMPLETED.
6. SOIL AND STOCKPILES SHALL BE LOCATED AWAY FROM DRAINAGE LINES AND AREAS WHERE WATER MAY CONCENTRATE.
7. FILTER SHALL BE CONSTRUCTED BY STRETCHING A FILTER FABRIC (PROPEX OR APPROVED EQUIVALENT BETWEEN POST AT 3.0M CENTERS. FABRIC SHALL BE BURIED 150 mm ALONG ITS LOWER EDGE.
8. CONTROL SURFACE WATER FLOW IN A MANNER THAT:
   A- DIVERTS RUN-OFF AROUND DISTURBED AREAS
   B- MINIMISES SLOPE AND FLOW DISTANCE WITHIN DISTURBED AREAS
   C- ENSURES SURFACE RUN-OFF OCCURS AT NON-ERODABLE VELOCITIES
   D- ENSURES DISTURBED AREAS ARE PROMPTLY REHABILITATED

EROSION CONTROL NOTES

1. ALL EROSION AND SILTATION CONTROL DEVICES ARE TO BE PLACED PRIOR TO THE COMMENCEMENT OF ANY CONSTRUCTION WORKS, AND ALL SILT TRAPS ARE TO HAVE DEPOSITED SILT REMOVED REGULARLY DURING CONSTRUCTION.
2. ALL TREES ARE TO BE PRESERVED UNLESS INDICATED OTHERWISE ON THE ARCHITECT'S OR LANDSCAPE ARCHITECT'S DRAWINGS. EXISTING GRASS COVER SHALL BE MAINTAINED EXCEPT IN AREAS CLEARED FOR BUILDINGS, PAVEMENTS ETC.
3. INSTALL TEMPORARY SEDIMENT BARRIERS TO ALL INLET PITS LIKELY TO COLLECT SILT LADDEN WATER, TO COUNCIL'S STANDARDS
4. NOT WITHSTANDING DETAILS SHOWN IT IS THE CONTRACTORS SOLE RESPONSIBILITY TO ENSURE THAT ALL SITE ACTIVITIES COMPLY WITH THE REQUIREMENTS OF THE CLEAN WATERS ACT.
5. ALL TOPSOIL TO BE CONSERVED FOR RE-USE ON SITE

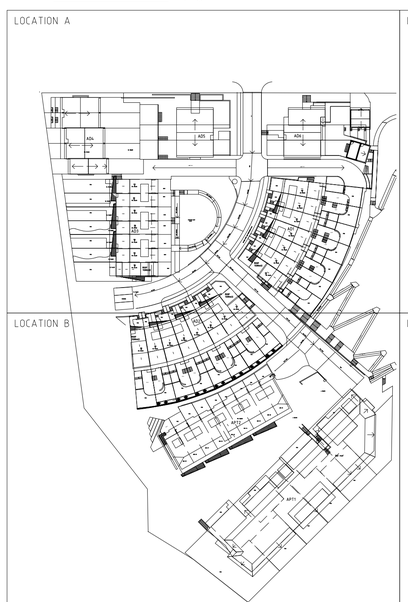
NOTES

1. ALL LINES ARE TO BE Ø100 U.P.V.C @ MIN 1.0% GRADE UNLESS NOTED OTHERWISE. CHARGED LINES TO BE SEWER GRADE & SEALED.
2. IT IS THE CONTRACTORS RESPONSIBILITY TO LOCATE & LEVEL ALL EXISTING SERVICES PRIOR TO THE COMMENCEMENT OF ANY EARTHWORKS.
3. ALL PIPES TO HAVE MIN 150mm COVER IF LOCATED WITHIN PROPERTY.
4. ALL PITS IN DRIVEWAYS TO BE 450x450 CONCRETE AND ALL PITS IN LANDSCAPED AREAS TO BE 450x450 PLASTIC.
5. PITS LESS THAN 600 DEEP MAY BE BRICK, PRECAST OR CONCRETE.
6. PITS DEEPER THAN 900 MUST BE 900x900 AND HAVE STEP RUNGS AT 300 CENTRES.
7. ALL BALCONIES AND ROOFS TO BE DRAINED AND TO HAVE SAFETY OVERFLOWS IN ACCORDANCE WITH RELEVANT AUSTRALIAN STANDARDS.
8. ALL EXTERNAL SLABS TO BE WATERPROOFED.
9. ALL GRATES TO HAVE CHILD PROOF LOCKS.
10. ALL DRAINAGE WORKS TO AVOID TREE ROOTS.
11. ALL DP'S TO HAVE LEAF GUARDS
12. ALL EXISTING LEVELS TO BE CONFIRMED BY BUILDER PRIOR TO CONSTRUCTION.
13. ALL WORK WITHIN COUNCIL RESERVE TO BE INSPECTED BY COUNCIL PRIOR TO CONSTRUCTION.
14. COUNCIL'S ISSUED FOOTWAY DESIGN LEVELS TO BE INCORPORATED INTO THE FINISHED LEVELS ONCE ISSUED BY COUNCIL.
15. ALL WORK SHALL BE IN ACCORDANCE WITH B.C.A. AND A.S.3500.3.
16. EXISTING STORMWATER PIPE LOCATIONS HAVE BEEN ASSUMED. PLUMBER TO INSPECT PRIOR TO WORKS AND UPGRADE PIPES AS NECESSARY.

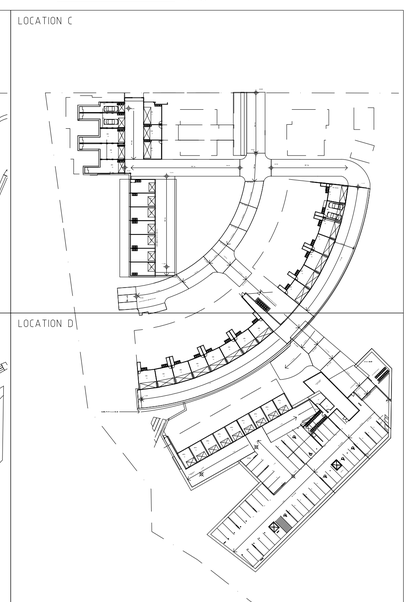
SYMBOLS

F.F.L.	FINISHED FLOOR LEVEL
F.G.L.	FINISHED GARAGE LEVEL
T.K.	TOP OF KERB
* 11.0	FINISHED LEVEL
+ 11.0	EXISTING LEVEL
S.L.	SURFACE LEVEL
I.L.	INVERT LEVEL
20 R	ROOF CATCHMENT AREA (m2)
20 I	IMPERVIOUS CATCHMENT AREA (m2)
20 L	LANDSCAPED CATCHMENT AREA (m2)
● DP	Ø100 DOWN PIPE OR EQUIVALENT
◀ SP	SPREADER
● VD	VERTICAL DROP
● VR	VERTICAL RISER
	RAIN WATER HEAD & DOWN PIPE
⊗	CLEAN OUT POINT
SUMP	Ø150 SUMP
	CONCRETE COVER JUNCTION PIT
	GRATED INLET PIT 450x450
	200Wx100D GRATED DRAIN WITH 2% BTM SLOPE
	STORMWATER PIPE
	SUSPENDED STORMWATER PIPE
	CHARGED STORMWATER PIPE
	PUMP LINE
	Ø100 SUBSOIL PIPE
	SILT FENCE
	OVERLAND FLOW

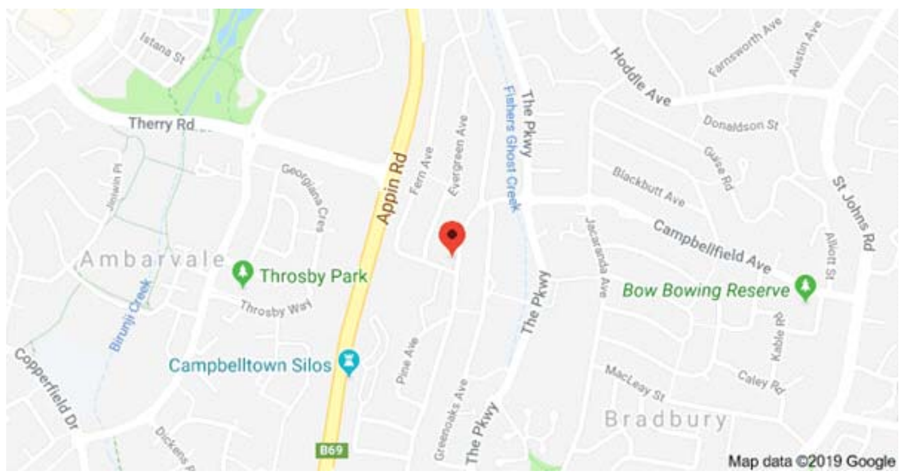
KEY PLAN 1 NTS



KEY PLAN 2 NTS



LOCALITY MAP



2m 0 2 4 6 8 10m
1 : 200 A1

1m 0 1 2 3 4 5m
1 : 100 A1

1m 0 1 2 3 4 5m
1 : 200 A3

4m 0 4 8 12 16 20m
1 : 400 A1

DIAL 1100 BEFORE YOU DIG
NO SUBSURFACE INVESTIGATION HAS BEEN MADE IT IS YOUR RESPONSIBILITY TO OBTAIN SERVICE DIAGRAMS FROM RELEVANT AUTHORITIES

FOR D.A. ONLY
CAMPBELLTOWN COUNCIL

DIAL 1100 BEFORE YOU DIG
NO SUBSURFACE INVESTIGATION HAS BEEN MADE IT IS YOUR RESPONSIBILITY TO OBTAIN SERVICE DIAGRAMS FROM RELEVANT AUTHORITIES

CLIENT
CAPITAL DEVELOPMENT

PROJECT
PROPOSED DEVELOPMENT
RAITH - Lot 101 FERN AVE, BRADBURY

TITLE
COVER SHEET

A.C.N. 090 572 973
UNITED
UNITED CONSULTING ENGINEERS PTY LTD
Civil/Structural Engineers
Shop 1, 147-153 Liverpool Rd, Burwood
Burwood NSW, 2134
Telephone: (02) 9715 5111
Facsimile: (02) 9715 6222
Mobile: 0411 453 012
Email: united_engd@bigpond.com
Copyright

Approved: Mark Anthony Boudib MIEAust, CPEng, NPER

North	Designed	Drawn	
	MAB	F.B.	
	Checked	Scale	
	MAB	1:100	
	Drawing No.	Sheet	Issue
	16MB7088/D01	1 of 11	E


FERN AVENUE
CAMPBELLFIELD AVENUE
APPIN ROAD
CATCHMENT AREA 1 (6900m2)
CATCHMENT AREA 2 (6900m2)
AD1
AD2
AD3
AD4
AD5
AD6
APT1
APT2
1:33 walkway
1:20 walkway
1:33 walkway
1:33 walkway
TWO STOREY BRICK RESIDENCE TILE ROOF "RAITH"
BRICK BUILDING TILE ROOF
BRICK BUILDING METAL ROOF
TILE ROOF BRICK BUILDING GARAGES
MAINTAIN EXISTING DRAINAGE SYSTEM FOR SINGLE DWELLING
PROPOSED KERB INLET PIT SAG LL: 98.28
PROPOSED KERB INLET PIT SAG LL: 98.34
SOG GRATE SAG LL: 98.62
2x450/900 GR SAG TL: 98.78 LL: 97.28
2x450/900 GR SAG TL: 98.70 LL: 98.45
SOG GRATE SAG LL: 98.63
2x450/900 GR SAG TL: 98.43 LL: 98.14

Revisions		
E	26/04/21	UPDATED ARCHITECTURALS
D	2/08/19	UPDATED ARCHITECTURALS
C	20/03/19	UPDATED ARCHITECTURALS
B	12/11/18	UPDATED ARCHITECTURALS
A	10/01/17	CONCEPT FOR COUNCIL

EROSION CONTROL NOTES

1. ALL EROSION AND SILTATION CONTROL DEVICES ARE TO BE PLACED PRIOR TO THE COMMENCEMENT OF ANY CONSTRUCTION WORKS, AND ALL SILT TRAPS ARE TO HAVE DEPOSITED SILT REMOVED REGULARLY DURING CONSTRUCTION.
2. ALL TREES ARE TO BE PRESERVED UNLESS INDICATED OTHERWISE ON THE ARCHITECT'S OR LANDSCAPE ARCHITECT'S DRAWINGS. EXISTING GRASS COVER SHALL BE MAINTAINED EXCEPT IN AREAS CLEARED FOR BUILDINGS, PAVEMENTS ETC.
3. INSTALL TEMPORARY SEDIMENT BARRIERS TO ALL INLET PITS LIKELY TO COLLECT SILT LADDEN WATER, TO COUNCIL'S STANDARDS
4. NOT WITHSTANDING DETAILS SHOWN IT IS THE CONTRACTORS SOLE RESPONSIBILITY TO ENSURE THAT ALL SITE ACTIVITIES COMPLY WITH THE REQUIREMENTS OF THE CLEAN WATERS ACT.
5. ALL TOPSOIL TO BE CONSERVED FOR RE-USE ON SITE

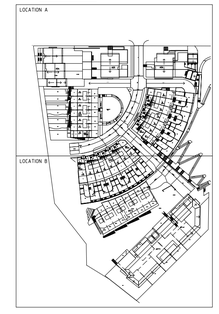
NOTES

1. ALL LINES ARE TO BE Ø 100 U.P.V.C @ MIN 1.0% GRADE UNLESS NOTED OTHERWISE. CHARGED LINES TO BE SEWER GRADE & SEALED.
2. IT IS THE CONTRACTORS RESPONSIBILITY TO LOCATE & LEVEL ALL EXISTING SERVICES PRIOR TO THE COMMENCEMENT OF ANY EARTHWORKS.
3. ALL PIPES TO HAVE MIN 150mm COVER IF LOCATED WITHIN PROPERTY.
4. ALL PITS IN DRIVEWAYS TO BE 450x450 CONCRETE AND ALL PITS IN LANDSCAPED AREAS TO BE 450x450 PLASTIC.
5. PITS LESS THAN 600 DEEP MAY BE BRICK, PRECAST OR CONCRETE.
6. PITS DEEPER THAN 900 MUST BE 900x900 AND HAVE STEP RUNGS AT 300 CENTRES.
7. ALL BALCONIES AND ROOFS TO BE DRAINED AND TO HAVE SAFETY OVERFLOWS IN ACCORDANCE WITH RELEVANT AUSTRALIAN STANDARDS.
8. ALL EXTERNAL SLABS TO BE WATERPROOFED.
9. ALL GRATES TO HAVE CHILD PROOF LOCKS.
10. ALL DRAINAGE WORKS TO AVOID TREE ROOTS.
11. ALL DP'S TO HAVE LEAF GUARDS
12. ALL EXISTING LEVELS TO BE CONFIRMED BY BUILDER PRIOR TO CONSTRUCTION.
13. ALL WORK WITHIN COUNCIL RESERVE TO BE INSPECTED BY COUNCIL PRIOR TO CONSTRUCTION.
14. COUNCIL'S ISSUED FOOTWAY DESIGN LEVELS TO BE INCORPORATED INTO THE FINISHED LEVELS ONCE ISSUED BY COUNCIL.
15. ALL WORK SHALL BE IN ACCORDANCE WITH B.C.A. AND A.S.3500.3.
16. EXISTING STORMWATER PIPE LOCATIONS HAVE BEEN ASSUMED. PLUMBER TO INSPECT PRIOR TO WORKS AND UPGRADE PIPES AS NECESSARY.

SYMBOLS

F.F.L.	FINISHED FLOOR LEVEL
F.G.L.	FINISHED GARAGE LEVEL
T.K.	TOP OF KERB
× 11.0	FINISHED LEVEL
+ 11.0	EXISTING LEVEL
S.L.	SURFACE LEVEL
I.L.	INVERT LEVEL
20 R	ROOF CATCHMENT AREA (m2)
20 I	IMPERVIOUS CATCHMENT AREA (m2)
20 L	LANDSCAPED CATCHMENT AREA (m2)
● DP	Ø 100 DOWN PIPE OR EQUIVALENT
◀ SP	SPREADER
● VD	VERTICAL DROP
● VR	VERTICAL RISER
	RAIN WATER HEAD & DOWN PIPE
⊗	CLEAN OUT POINT
SUMP	Ø 150 SUMP
	CONCRETE COVER JUNCTION PIT
	GRATED INLET PIT 450x450
	200Wx100D GRATED DRAIN WITH 2% BTM SLOPE
	STORMWATER PIPE
	SUSPENDED STORMWATER PIPE
	CHARGED STORMWATER PIPE
	PUMP LINE
	Ø 100 SUBSOIL PIPE
	SILT FENCE
	OVERLAND FLOW

KEY PLAN 1



CLIENT
CAPITAL DEVELOPMENT

PROJECT
PROPOSED DEVELOPMENT
RAITH - Lot 101 FERN AVE, BRADBURY

TITLE
SITE AND ROOF DRAINAGE PLAN - LOCATION A

A.C.N. 090 572 973
UNITED
UNITED CONSULTING ENGINEERS PTY LTD
Civil/Structural Engineers
Shop 1, 147-153 Liverpool Rd, Burwood
Burwood NSW, 2134
Telephone: (02) 9715 6111
Facsimile: (02) 9715 6222
Mobile: 0411 453 012
Email: united_eng@bigpond.com

Copyright

Approved: Mark Anthony Boulos ME(Aust), CPEng, NPER

North	Designed	Drawn	
	MAB	F.B.	
	Checked	Scale	
	MAB	1:200	
	Drawing No	Sheet	Issue
	16MB7088/D03	3 of 11	E

FOR D.A. ONLY
CAMPBELLTOWN COUNCIL

LOCATION A

SITE AND ROOF DRAINAGE PLAN
SCALE 1:200

REFER TO DRAWING 16MB7088/D08 & D09 FOR DRAINAGE DETAILS

DIAL 1100 BEFORE YOU DIG
NO SUBSURFACE INVESTIGATION HAS BEEN MADE IT IS YOUR RESPONSIBILITY TO OBTAIN SERVICE DIAGRAMS FROM RELEVANT AUTHORITIES

Revisions	
E	26/04/23 UPDATED ARCHITECTURALS
D	2/08/19 UPDATED ARCHITECTURALS
C	20/03/19 UPDATED ARCHITECTURALS
B	12/11/18 UPDATED ARCHITECTURALS
A	10/01/17 CONCEPT FOR COUNCIL

EROSION CONTROL NOTES

1. ALL EROSION AND SILTATION CONTROL DEVICES ARE TO BE PLACED PRIOR TO THE COMMENCEMENT OF ANY CONSTRUCTION WORKS, AND ALL SILT TRAPS ARE TO HAVE DEPOSITED SILT REMOVED REGULARLY DURING CONSTRUCTION.
2. ALL TREES ARE TO BE PRESERVED UNLESS INDICATED OTHERWISE ON THE ARCHITECT'S OR LANDSCAPE ARCHITECT'S DRAWINGS. EXISTING GRASS COVER SHALL BE MAINTAINED EXCEPT IN AREAS CLEARED FOR BUILDINGS, PAVEMENTS ETC.
3. INSTALL TEMPORARY SEDIMENT BARRIERS TO ALL INLET PITS LIKELY TO COLLECT SILT LADDEN WATER, TO COUNCIL'S STANDARDS
4. NOT WITHSTANDING DETAILS SHOWN IT IS THE CONTRACTORS SOLE RESPONSIBILITY TO ENSURE THAT ALL SITE ACTIVITIES COMPLY WITH THE REQUIREMENTS OF THE CLEAN WATERS ACT.
5. ALL TOPSOIL TO BE CONSERVED FOR RE-USE ON SITE

NOTES

1. ALL LINES ARE TO BE Ø 100 U.P.V.C @ MIN 1.0% GRADE UNLESS NOTED OTHERWISE. CHARGED LINES TO BE SEWER GRADE & SEALED.
2. IT IS THE CONTRACTORS RESPONSIBILITY TO LOCATE & LEVEL ALL EXISTING SERVICES PRIOR TO THE COMMENCEMENT OF ANY EARTHWORKS.
3. ALL PIPES TO HAVE MIN 150mm COVER IF LOCATED WITHIN PROPERTY.
4. ALL PITS IN DRIVEWAYS TO BE 450x450 CONCRETE AND ALL PITS IN LANDSCAPED AREAS TO BE 450x450 PLASTIC.
5. PITS LESS THAN 600 DEEP MAY BE BRICK, PRECAST OR CONCRETE.
6. PITS DEEPER THAN 900 MUST BE 900x900 AND HAVE STEP RUNGS AT 300 CENTRES.
7. ALL BALCONIES AND ROOFS TO BE DRAINED AND TO HAVE SAFETY OVERFLOWS IN ACCORDANCE WITH RELEVANT AUSTRALIAN STANDARDS.
8. ALL EXTERNAL SLABS TO BE WATERPROOFED.
9. ALL GRATES TO HAVE CHILD PROOF LOCKS.
10. ALL DRAINAGE WORKS TO AVOID TREE ROOTS.
11. ALL DP'S TO HAVE LEAF GUARDS
12. ALL EXISTING LEVELS TO BE CONFIRMED BY BUILDER PRIOR TO CONSTRUCTION.
13. ALL WORK WITHIN COUNCIL RESERVE TO BE INSPECTED BY COUNCIL PRIOR TO CONSTRUCTION.
14. COUNCIL'S ISSUED FOOTWAY DESIGN LEVELS TO BE INCORPORATED INTO THE FINISHED LEVELS ONCE ISSUED BY COUNCIL.
15. ALL WORK SHALL BE IN ACCORDANCE WITH B.C.A. AND A.S.3500.3.
16. EXISTING STORMWATER PIPE LOCATIONS HAVE BEEN ASSUMED. PLUMBER TO INSPECT PRIOR TO WORKS AND UPGRADE PIPES AS NECESSARY.

SYMBOLS

F.F.L.	FINISHED FLOOR LEVEL
F.G.L.	FINISHED GARAGE LEVEL
T.K.	TOP OF KERB
* 11.0	FINISHED LEVEL
+ 11.0	EXISTING LEVEL
S.L.	SURFACE LEVEL
I.L.	INVERT LEVEL
20 R	ROOF CATCHMENT AREA (m2)
20 I	IMPERVIOUS CATCHMENT AREA (m2)
20 L	LANDSCAPED CATCHMENT AREA (m2)
● DP	Ø 100 DOWN PIPE OR EQUIVALENT
◀ SP	SPREADER
● VD	VERTICAL DROP
● VR	VERTICAL RISER
	RAIN WATER HEAD & DOWN PIPE
⊗	CLEAN OUT POINT
SUMP	Ø 150 SUMP
	CONCRETE COVER JUNCTION PIT
	GRATED INLET PIT 450x450
	200Wx100D GRATED DRAIN WITH 2% BTM SLOPE
	STORMWATER PIPE
	SUSPENDED STORMWATER PIPE
	CHARGED STORMWATER PIPE
	PUMP LINE
	Ø 100 SUBSOIL PIPE
	SILT FENCE
	OVERLAND FLOW

KEY PLAN 1



CLIENT
CAPITAL DEVELOPMENT

PROJECT
PROPOSED DEVELOPMENT
RAITH - Lot 101 FERN AVE, BRADBURY

TITLE
SITE AND ROOF DRAINAGE PLAN - LOCATION B

A.C.N. 090 572 973

UNITED

UNITED CONSULTING ENGINEERS PTY LTD
Civil/Structural Engineers

Shop 1, 147-153 Liverpool Rd, Burwood
Burwood NSW, 2134
Telephone: (02) 9715 5111
Facsimile: (02) 9715 6222
Mobile: 0411 453 012
Email: united_eng@bigpond.com

Copyright

Approved: *Mark Anthony Boudib MIEAust, CPEng, NPER*

North	Designed	Drawn	
	MAB	F.B.	
	Checked	Scale	
	MAB	1:200	
	Drawing No	Sheet	Issue
	16MB7088/D04	4 of 11	E

LOCATION B

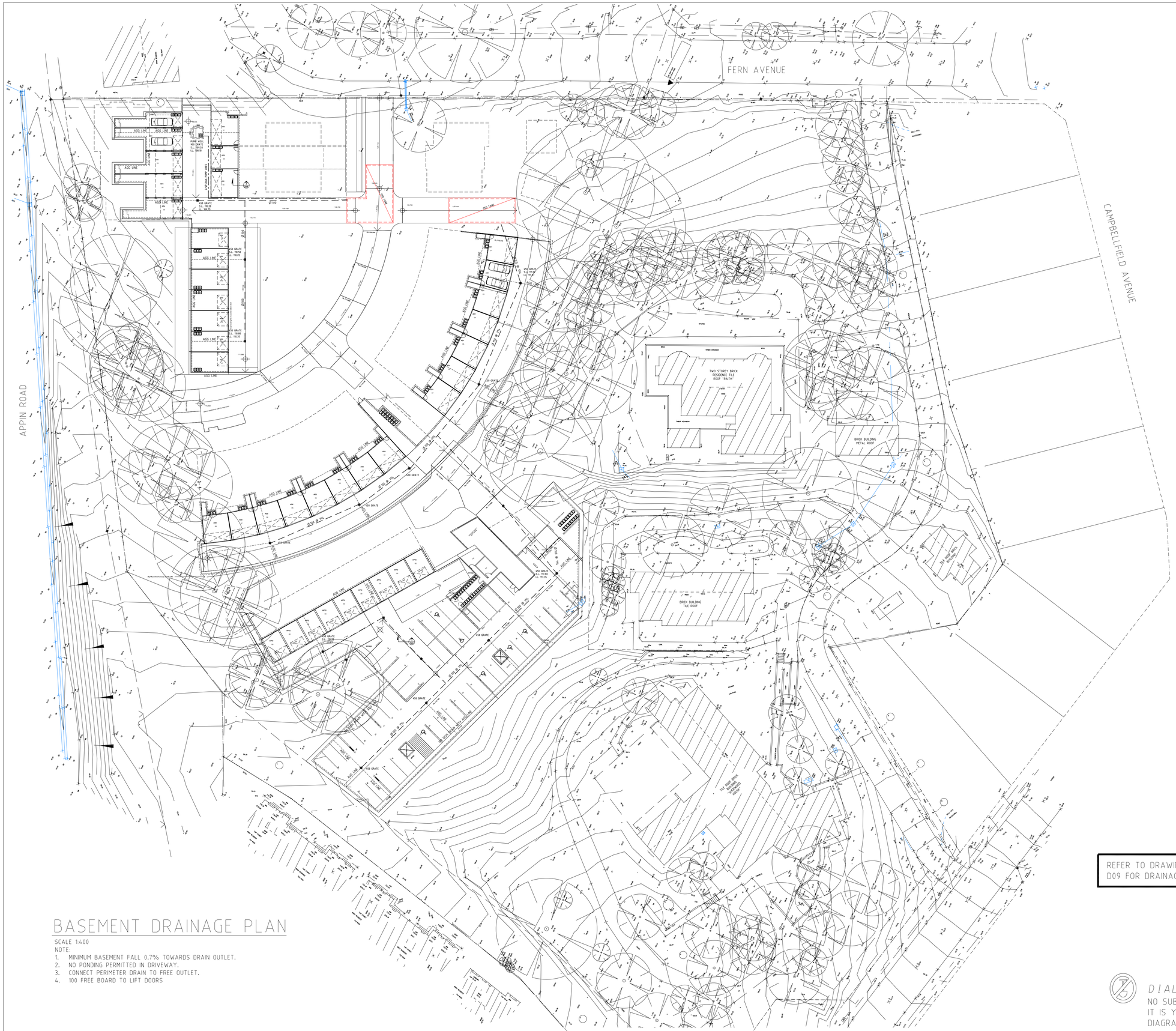
SITE AND ROOF DRAINAGE PLAN

SCALE 1:200

REFER TO DRAWING 16MB7088/D08 & D09 FOR DRAINAGE DETAILS

FOR D.A. ONLY
CAMPBELLTOWN COUNCIL

DIAL 1100 BEFORE YOU DIG
NO SUBSURFACE INVESTIGATION HAS BEEN MADE IT IS YOUR RESPONSIBILITY TO OBTAIN SERVICE DIAGRAMS FROM RELEVANT AUTHORITIES



BASEMENT DRAINAGE PLAN

SCALE 1:400

NOTE:

1. MINIMUM BASEMENT FALL 0.7% TOWARDS DRAIN OUTLET.
2. NO PONDING PERMITTED IN DRIVEWAY.
3. CONNECT PERIMETER DRAIN TO FREE OUTLET.
4. 100 FREE BOARD TO LIFT DOORS

Revisions		
E	26/04/21	UPDATED ARCHITECTURALS
D	2/08/19	UPDATED ARCHITECTURALS
C	20/03/19	UPDATED ARCHITECTURALS
B	12/11/18	UPDATED ARCHITECTURALS
A	10/01/17	CONCEPT FOR COUNCIL

EROSION CONTROL NOTES

1. ALL EROSION AND SILTATION CONTROL DEVICES ARE TO BE PLACED PRIOR TO THE COMMENCEMENT OF ANY CONSTRUCTION WORKS, AND ALL SILT TRAPS ARE TO HAVE DEPOSITED SILT REMOVED REGULARLY DURING CONSTRUCTION.
2. ALL TREES ARE TO BE PRESERVED UNLESS INDICATED OTHERWISE ON THE ARCHITECT'S OR LANDSCAPE ARCHITECT'S DRAWINGS. EXISTING GRASS COVER SHALL BE MAINTAINED EXCEPT IN AREAS CLEARED FOR BUILDINGS, PAVEMENTS ETC.
3. INSTALL TEMPORARY SEDIMENT BARRIERS TO ALL INLET PITS LIKELY TO COLLECT SILT LADDEN WATER, TO COUNCIL'S STANDARDS
4. NOT WITHSTANDING DETAILS SHOWN IT IS THE CONTRACTORS SOLE RESPONSIBILITY TO ENSURE THAT ALL SITE ACTIVITIES COMPLY WITH THE REQUIREMENTS OF THE CLEAN WATERS ACT.
5. ALL TOPSOIL TO BE CONSERVED FOR RE-USE ON SITE

NOTES

1. ALL LINES ARE TO BE Ø100 U.P.V.C @ MIN 1.0% GRADE UNLESS NOTED OTHERWISE. CHARGED LINES TO BE SEWER GRADE & SEALED.
2. IT IS THE CONTRACTORS RESPONSIBILITY TO LOCATE & LEVEL ALL EXISTING SERVICES PRIOR TO THE COMMENCEMENT OF ANY EARTHWORKS.
3. ALL PIPES TO HAVE MIN 150mm COVER IF LOCATED WITHIN PROPERTY.
4. ALL PITS IN DRIVEWAYS TO BE 450x450 CONCRETE AND ALL PITS IN LANDSCAPED AREAS TO BE 450x450 PLASTIC.
5. PITS LESS THAN 600 DEEP MAY BE BRICK, PRECAST OR CONCRETE.
6. PITS DEEPER THAN 900 MUST BE 900x900 AND HAVE STEP RUNGS AT 300 CENTRES.
7. ALL BALCONIES AND ROOFS TO BE DRAINED AND TO HAVE SAFETY OVERFLOWS IN ACCORDANCE WITH RELEVANT AUSTRALIAN STANDARDS.
8. ALL EXTERNAL SLABS TO BE WATERPROOFED.
9. ALL GRATES TO HAVE CHILD PROOF LOCKS.
10. ALL DRAINAGE WORKS TO AVOID TREE ROOTS.
11. ALL DP'S TO HAVE LEAF GUARDS
12. ALL EXISTING LEVELS TO BE CONFIRMED BY BUILDER PRIOR TO CONSTRUCTION.
13. ALL WORK WITHIN COUNCIL RESERVE TO BE INSPECTED BY COUNCIL PRIOR TO CONSTRUCTION.
14. COUNCIL'S ISSUED FOOTWAY DESIGN LEVELS TO BE INCORPORATED INTO THE FINISHED LEVELS ONCE ISSUED BY COUNCIL.
15. ALL WORK SHALL BE IN ACCORDANCE WITH B.C.A. AND A.S.3500.3.
16. EXISTING STORMWATER PIPE LOCATIONS HAVE BEEN ASSUMED. PLUMBER TO INSPECT PRIOR TO WORKS AND UPGRADE PIPES AS NECESSARY.

SYMBOLS

F.F.L.	FINISHED FLOOR LEVEL
F.G.L.	FINISHED GARAGE LEVEL
T.K.	TOP OF KERB
* 11.0	FINISHED LEVEL
+ 11.0	EXISTING LEVEL
S.L.	SURFACE LEVEL
I.L.	INVERT LEVEL
20 R	ROOF CATCHMENT AREA (m2)
20 I	IMPERVIOUS CATCHMENT AREA (m2)
20 L	LANDSCAPED CATCHMENT AREA (m2)
DP	Ø100 DOWN PIPE OR EQUIVALENT
SP	SPREADER
VD	VERTICAL DROP
VR	VERTICAL RISER
	RAIN WATER HEAD & DOWN PIPE
	CLEAN OUT POINT
SUMP	Ø150 SUMP
	CONCRETE COVER JUNCTION PIT
	GRATED INLET PIT 450x450
	200Wx100D GRATED DRAIN WITH 2% BTM SLOPE
	STORMWATER PIPE
	SUSPENDED STORMWATER PIPE
	CHARGED STORMWATER PIPE
	PUMP LINE
	Ø100 SUBSOIL PIPE
	SILT FENCE
	OVERLAND FLOW

REFER TO DRAWING 16MB7088/D08 & D09 FOR DRAINAGE DETAILS

FOR D.A. ONLY
CAMPBELLTOWN COUNCIL

DIAL 1100 BEFORE YOU DIG
NO SUBSURFACE INVESTIGATION HAS BEEN MADE IT IS YOUR RESPONSIBILITY TO OBTAIN SERVICE DIAGRAMS FROM RELEVANT AUTHORITIES

CLIENT
CAPITAL DEVELOPMENT

PROJECT
PROPOSED DEVELOPMENT
RAITH - Lot 101 FERN AVE, BRADBURY

TITLE
BASEMENT DRAINAGE PLAN

A.C.N. 090 572 973
UNITED
UNITED CONSULTING ENGINEERS PTY LTD
Civil/Structural Engineers
Shop 1, 147-153 Liverpool Rd, Burwood
Burwood NSW, 2134
Telephone (02) 9715 5111
Facsimile: (02) 9715 6222
Mobile: 0411 453 012
Email: united_eng@bigpond.com
Copyright

Approved: Mark Anthony Boudib MIEAust, CPEng, NPER

North	Designed: MAB	Drawn: F.B.	
	Checked: MAB	Scale: 1:400	
	Drawing No: 16MB7088/D05	Sheet: 5 of 11	Issue: E

Revisions		
E	26/04/21	UPDATED ARCHITECTURALS
D	2/08/19	UPDATED ARCHITECTURALS
C	20/03/19	UPDATED ARCHITECTURALS
B	12/11/18	UPDATED ARCHITECTURALS
A	10/01/17	CONCEPT FOR COUNCIL

EROSION CONTROL NOTES

1. ALL EROSION AND SILTATION CONTROL DEVICES ARE TO BE PLACED PRIOR TO THE COMMENCEMENT OF ANY CONSTRUCTION WORKS, AND ALL SILT TRAPS ARE TO HAVE DEPOSITED SILT REMOVED REGULARLY DURING CONSTRUCTION.
2. ALL TREES ARE TO BE PRESERVED UNLESS INDICATED OTHERWISE ON THE ARCHITECT'S OR LANDSCAPE ARCHITECT'S DRAWINGS. EXISTING GRASS COVER SHALL BE MAINTAINED EXCEPT IN AREAS CLEARED FOR BUILDINGS, PAVEMENTS ETC.
3. INSTALL TEMPORARY SEDIMENT BARRIERS TO ALL INLET PITS LIKELY TO COLLECT SILT LADDEN WATER, TO COUNCIL'S STANDARDS
4. NOT WITHSTANDING DETAILS SHOWN IT IS THE CONTRACTORS SOLE RESPONSIBILITY TO ENSURE THAT ALL SITE ACTIVITIES COMPLY WITH THE REQUIREMENTS OF THE CLEAN WATERS ACT.
5. ALL TOPSOIL TO BE CONSERVED FOR RE-USE ON SITE

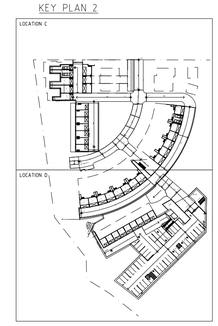
NOTES

1. ALL LINES ARE TO BE Ø 100 U.P.V.C @ MIN 1.0% GRADE UNLESS NOTED OTHERWISE. CHARGED LINES TO BE SEWER GRADE & SEALED.
2. IT IS THE CONTRACTORS RESPONSIBILITY TO LOCATE & LEVEL ALL EXISTING SERVICES PRIOR TO THE COMMENCEMENT OF ANY EARTHWORKS.
3. ALL PIPES TO HAVE MIN 150mm COVER IF LOCATED WITHIN PROPERTY.
4. ALL PITS IN DRIVEWAYS TO BE 450x450 CONCRETE AND ALL PITS IN LANDSCAPED AREAS TO BE 450x450 PLASTIC.
5. PITS LESS THAN 600 DEEP MAY BE BRICK, PRECAST OR CONCRETE.
6. PITS DEEPER THAN 900 MUST BE 900x900 AND HAVE STEP RUNGS AT 300 CENTRES.
7. ALL BALCONIES AND ROOFS TO BE DRAINED AND TO HAVE SAFETY OVERFLOWS IN ACCORDANCE WITH RELEVANT AUSTRALIAN STANDARDS.
8. ALL EXTERNAL SLABS TO BE WATERPROOFED.
9. ALL GRATES TO HAVE CHILD PROOF LOCKS.
10. ALL DRAINAGE WORKS TO AVOID TREE ROOTS.
11. ALL DP'S TO HAVE LEAF GUARDS
12. ALL EXISTING LEVELS TO BE CONFIRMED BY BUILDER PRIOR TO CONSTRUCTION.
13. ALL WORK WITHIN COUNCIL RESERVE TO BE INSPECTED BY COUNCIL PRIOR TO CONSTRUCTION.
14. COUNCIL'S ISSUED FOOTWAY DESIGN LEVELS TO BE INCORPORATED INTO THE FINISHED LEVELS ONCE ISSUED BY COUNCIL.
15. ALL WORK SHALL BE IN ACCORDANCE WITH B.C.A. AND A.S.3500.3.
16. EXISTING STORMWATER PIPE LOCATIONS HAVE BEEN ASSUMED. PLUMBER TO INSPECT PRIOR TO WORKS AND UPGRADE PIPES AS NECESSARY.

SYMBOLS

F.F.L.	FINISHED FLOOR LEVEL
F.G.L.	FINISHED GARAGE LEVEL
T.K.	TOP OF KERB
* 11.0	FINISHED LEVEL
+ 11.0	EXISTING LEVEL
S.L.	SURFACE LEVEL
I.L.	INVERT LEVEL
20 R	ROOF CATCHMENT AREA (m2)
20 I	IMPERVIOUS CATCHMENT AREA (m2)
20 L	LANDSCAPED CATCHMENT AREA (m2)
DP	Ø100 DOWN PIPE OR EQUIVALENT
SP	SPREADER
VD	VERTICAL DROP
VR	VERTICAL RISER
	RAIN WATER HEAD & DOWN PIPE
	CLEAN OUT POINT
SUMP	Ø150 SUMP
	CONCRETE COVER JUNCTION PIT
	GRATED INLET PIT 450x450
	200Wx100D GRATED DRAIN WITH 2% BTM SLOPE
	STORMWATER PIPE
	SUSPENDED STORMWATER PIPE
	CHARGED STORMWATER PIPE
	PUMP LINE
	Ø100 SUBSOIL PIPE
	SILT FENCE
	OVERLAND FLOW

KEY PLAN 2



CLIENT
CAPITAL DEVELOPMENT

PROJECT
PROPOSED DEVELOPMENT
RAITH - Lot 101 FERN AVE, BRADBURY

TITLE
BASEMENT DRAINAGE PLAN - LOCATION C

A.C.N. 090 572 973

UNITED

UNITED CONSULTING ENGINEERS PTY LTD
Civil/Structural Engineers

Shop 1, 147-153 Liverpool Rd, Burwood
Burwood NSW, 2134
Telephone: (02) 9715 5111
Facsimile: (02) 9715 6222
Mobile: 0411 453 012
Email: united_eng@bigpond.com

Copyright

Approved: Mark Anthony Boudib ME Aust, CPEng, NPER

North	Designed	Drawn	
	MAB	F.B.	
	Checked	Scale	
	MAB	1:200	
	Drawing No	Sheet	Issue
	16MB7088/D06	6 of 11	E

LOCATION C

BASEMENT DRAINAGE PLAN

SCALE 1:200

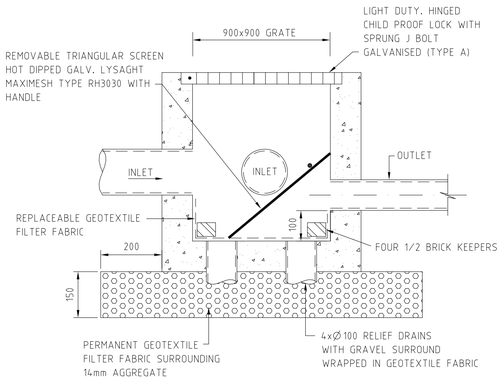
NOTE:
1. MINIMUM BASEMENT FALL 0.7% TOWARDS DRAIN OUTLET.
2. NO PONDING PERMITTED IN DRIVEWAY.
3. CONNECT PERIMETER DRAIN TO FREE OUTLET.
4. 100 FREE BOARD TO LIFT DOORS

REFER TO DRAWING 16MB7088/D08 & D09 FOR DRAINAGE DETAILS

FOR D.A. ONLY
CAMPBELLTOWN COUNCIL

DIAL 1100 BEFORE YOU DIG
NO SUBSURFACE INVESTIGATION HAS BEEN MADE IT IS YOUR RESPONSIBILITY TO OBTAIN SERVICE DIAGRAMS FROM RELEVANT AUTHORITIES


AGG LINE
450 GRATE
Ø100 @ 1%
AD2 01
AD2 02
AD2 03
AD2 04
AD2 05
AD2 06
AD2 07
AD2 08
APT2 00
storage
garbage collection
fire protection room
hydrant booster cupboard
sprinkler booster cupboard
substation
RL 117.800
RL 118.400
RL 118.600
RL 119.000
RL 119.200
RL 119.400
RL 119.600
RL 119.800
RL 120.000
RL 120.200
RL 120.400
RL 120.600
RL 120.800
RL 121.000
RL 121.200
RL 121.400
RL 121.600
RL 121.800
RL 122.000
RL 122.200
RL 122.400
RL 122.600
RL 122.800
RL 123.000
RL 123.200
RL 123.400
RL 123.600
RL 123.800
RL 124.000
RL 124.200
RL 124.400
RL 124.600
RL 124.800
RL 125.000
RL 125.200
RL 125.400
RL 125.600
RL 125.800
RL 126.000
RL 126.200
RL 126.400
RL 126.600
RL 126.800
RL 127.000
RL 127.200
RL 127.400
RL 127.600
RL 127.800
RL 128.000
RL 128.200
RL 128.400
RL 128.600
RL 128.800
RL 129.000
RL 129.200
RL 129.400
RL 129.600
RL 129.800
RL 130.000
RL 130.200
RL 130.400
RL 130.600
RL 130.800
RL 131.000
RL 131.200
RL 131.400
RL 131.600
RL 131.800
RL 132.000
RL 132.200
RL 132.400
RL 132.600
RL 132.800
RL 133.000
RL 133.200
RL 133.400
RL 133.600
RL 133.800
RL 134.000
RL 134.200
RL 134.400
RL 134.600
RL 134.800
RL 135.000
RL 135.200
RL 135.400
RL 135.600
RL 135.800
RL 136.000
RL 136.200
RL 136.400
RL 136.600
RL 136.800
RL 137.000
RL 137.200
RL 137.400
RL 137.600
RL 137.800
RL 138.000
RL 138.200
RL 138.400
RL 138.600
RL 138.800
RL 139.000
RL 139.200
RL 139.400
RL 139.600
RL 139.800
RL 140.000
RL 140.200
RL 140.400
RL 140.600
RL 140.800
RL 141.000
RL 141.200
RL 141.400
RL 141.600
RL 141.800
RL 142.000
RL 142.200
RL 142.400
RL 142.600
RL 142.800
RL 143.000
RL 143.200
RL 143.400
RL 143.600
RL 143.800
RL 144.000
RL 144.200
RL 144.400
RL 144.600
RL 144.800
RL 145.000
RL 145.200
RL 145.400
RL 145.600
RL 145.800
RL 146.000
RL 146.200
RL 146.400
RL 146.600
RL 146.800
RL 147.000
RL 147.200
RL 147.400
RL 147.600
RL 147.800
RL 148.000
RL 148.200
RL 148.400
RL 148.600
RL 148.800
RL 149.000
RL 149.200
RL 149.400
RL 149.600
RL 149.800
RL 150.000
RL 150.200
RL 150.400
RL 150.600
RL 150.800
RL 151.000
RL 151.200
RL 151.400
RL 151.600
RL 151.800
RL 152.000
RL 152.200
RL 152.400
RL 152.600
RL 152.800
RL 153.000
RL 153.200
RL 153.400
RL 153.600
RL 153.800
RL 154.000
RL 154.200
RL 154.400
RL 154.600
RL 154.800
RL 155.000
RL 155.200
RL 155.400
RL 155.600
RL 155.800
RL 156.000
RL 156.200
RL 156.400
RL 156.600
RL 156.800
RL 157.000
RL 157.200
RL 157.400
RL 157.600
RL 157.800
RL 158.000
RL 158.200
RL 158.400
RL 158.600
RL 158.800
RL 159.000
RL 159.200
RL 159.400
RL 159.600
RL 159.800
RL 160.000
RL 160.200
RL 160.400
RL 160.600
RL 160.800
RL 161.000
RL 161.200
RL 161.400
RL 161.600
RL 161.800
RL 162.000
RL 162.200
RL 162.400
RL 162.600
RL 162.800
RL 163.000
RL 163.200
RL 163.400
RL 163.600
RL 163.800
RL 164.000
RL 164.200
RL 164.400
RL 164.600
RL 164.800
RL 165.000
RL 165.200
RL 165.400
RL 165.600
RL 165.800
RL 166.000
RL 166.200
RL 166.400
RL 166.600
RL 166.800
RL 167.000
RL 167.200
RL 167.400
RL 167.600
RL 167.800
RL 168.000
RL 168.200
RL 168.400
RL 168.600
RL 168.800
RL 169.000
RL 169.200
RL 169.400
RL 169.600
RL 169.800
RL 170.000
RL 170.200
RL 170.400
RL 170.600
RL 170.800
RL 171.000
RL 171.200
RL 171.400
RL 171.600
RL 171.800
RL 172.000
RL 172.200
RL 172.400
RL 172.600
RL 172.800
RL 173.000
RL 173.200
RL 173.400
RL 173.600
RL 173.800
RL 174.000
RL 174.200
RL 174.400
RL 174.600
RL 174.800
RL 175.000
RL 175.200
RL 175.400
RL 175.600
RL 175.800
RL 176.000
RL 176.200
RL 176.400
RL 176.600
RL 176.800
RL 177.000
RL 177.200
RL 177.400
RL 177.600
RL 177.800
RL 178.000
RL 178.200
RL 178.400
RL 178.600
RL 178.800
RL 179.000
RL 179.200
RL 179.400
RL 179.600
RL 179.800
RL 180.000
RL 180.200
RL 180.400
RL 180.600
RL 180.800
RL 181.000
RL 181.200
RL 181.400
RL 181.600
RL 181.800
RL 182.000
RL 182.200
RL 182.400
RL 182.600
RL 182.800
RL 183.000
RL 183.200
RL 183.400
RL 183.600
RL 183.800
RL 184.000
RL 184.200
RL 184.400
RL 184.600
RL 184.800
RL 185.000
RL 185.200
RL 185.400
RL 185.600
RL 185.800
RL 186.000
RL 186.200
RL 186.400
RL 186.600
RL 186.800
RL 187.000
RL 187.200
RL 187.400
RL 187.600
RL 187.800
RL 188.000
RL 188.200
RL 188.400
RL 188.600
RL 188.800
RL 189.000
RL 189.200
RL 189.400
RL 189.600
RL 189.800
RL 190.000
RL 190.200
RL 190.400
RL 190.600
RL 190.800
RL 191.000
RL 191.200
RL 191.400
RL 191.600
RL 191.800
RL 192.000
RL 192.200
RL 192.400
RL 192.600
RL 192.800
RL 193.000
RL 193.200
RL 193.400
RL 193.600
RL 193.800
RL 194.000
RL 194.200
RL 194.400
RL 194.600
RL 194.800
RL 195.000
RL 195.200
RL 195.400
RL 195.600
RL 195.800
RL 196.000
RL 196.200
RL 196.400
RL 196.600
RL 196.800
RL 197.000
RL 197.200
RL 197.400
RL 197.600
RL 197.800
RL 198.000
RL 198.200
RL 198.400
RL 198.600
RL 198.800
RL 199.000
RL 199.200
RL 199.400
RL 199.600
RL 199.800
RL 200.000
RL 200.200
RL 200.400
RL 200.600
RL 200.800
RL 201.000
RL 201.200
RL 201.400
RL 201.600
RL 201.800
RL 202.000
RL 202.200
RL 202.400
RL 202.600
RL 202.800
RL 203.000
RL 203.200
RL 203.400
RL 203.600
RL 203.800
RL 204.000
RL 204.200
RL 204.400
RL 204.600
RL 204.800
RL 205.000
RL 205.200
RL 205.400
RL 205.600
RL 205.800
RL 206.000
RL 206.200
RL 206.400
RL 206.600
RL 206.800
RL 207.000
RL 207.200
RL 207.400
RL 207.600
RL 207.800
RL 208.000
RL 208.200
RL 208.400
RL 208.600
RL 208.800
RL 209.000
RL 209.200
RL 209.400
RL 209.600
RL 209.800
RL 210.000
RL 210.200
RL 210.400
RL 210.600
RL 210.800
RL 211.000
RL 211.200
RL 211.400
RL 211.600
RL 211.800
RL 212.000
RL 212.200
RL 212.400
RL 212.600
RL 212.800
RL 213.000
RL 213.200
RL 213.400
RL 213.600
RL 213.800
RL 214.000
RL 214.200
RL 214.400
RL 214.600
RL 214.800
RL 215.000
RL 215.200
RL 215.400
RL 215.600
RL 215.800
RL 216.000
RL 216.200
RL 216.400
RL 216.600
RL 216.800
RL 217.000
RL 217.200
RL 217.400
RL 217.600
RL 217.800
RL 218.000
RL 218.200
RL 218.400
RL 218.600
RL 218.800
RL 219.000
RL 219.200
RL 219.400
RL 219.600
RL 219.800
RL 220.000
RL 220.200
RL 220.400
RL 220.600
RL 220.800
RL 221.000
RL 221.200
RL 221.400
RL 221.600
RL 221.800
RL 222.000
RL 222.200
RL 222.400
RL 222.600
RL 222.800
RL 223.000
RL 223.200
RL 223.400
RL 223.600
RL 223.800
RL 224.000
RL 224.200
RL 224.400
RL 224.600
RL 224.800
RL 225.000
RL 225.200
RL 225.400
RL 225.600
RL 225.800
RL 226.000
RL 226.200
RL 226.400
RL 226.600
RL 226.800
RL 227.000
RL 227.200
RL 227.400
RL 227.600
RL 227.800
RL 228.000
RL 228.200
RL 228.400
RL 228.600
RL 228.800
RL 229.000
RL 229.200
RL 229.400
RL 229.600
RL 229.800
RL 230.000
RL 230.200
RL 230.400
RL 230.600
RL 230.800
RL 231.000
RL 231.200
RL 231.400
RL 231.600
RL 231.800
RL 232.000
RL 232.200
RL 232.400
RL 232.600
RL 232.800
RL 233.000
RL 233.200
RL 233.400
RL 233.600
RL 233.800
RL 234.000
RL 234.200
RL 234.400
RL 234.600
RL 234.800
RL 235.000
RL 235.200
RL 235.400
RL 235.600
RL 235.800
RL 236.000
RL 236.200
RL 236.400
RL 236.600
RL 236.800
RL 237.000
RL 237.200
RL 237.400
RL 237.600
RL 237.800
RL 238.000
RL 238.200
RL 238.400
RL 238.600
RL 238.800
RL 239.000
RL 239.200
RL 239.400
RL 239.600
RL 239.800
RL 240.000
RL 240.200
RL 240.400
RL 240.600
RL 240.800
RL 241.000
RL 241.200
RL 241.400
RL 241.600
RL 241.800
RL 242.000
RL 242.200
RL 242.400
RL 242.600
RL 242.800
RL 243.000
RL 243.200
RL 243.400
RL 243.600
RL 243.800
RL 244.000
RL 244.200
RL 244.400
RL 244.600
RL 244.800
RL 245.000
RL 245.200
RL 245.400
RL 245.600
RL 245.800
RL 246.000
RL 246.200
RL 246.400
RL 246.600
RL 246.800
RL 247.000
RL 247.200
RL 247.400
RL 247.600
RL 247.800
RL 248.000
RL 248.200
RL 248.400
RL 248.600
RL 248.800
RL 249.000
RL 249.200
RL 249.400
RL 249.600
RL 249.800
RL 250.000
RL 250.200
RL 250.400
RL 250.600
RL 250.800
RL 251.000
RL 251.200
RL 251.400
RL 251.600
RL 251.800
RL 252.000
RL 252.200
RL 252.400
RL 252.600
RL 252.800
RL 253.000
RL 253.200
RL 253.400
RL 253.600
RL 253.800
RL 254.000
RL 254.200
RL 254.400
RL 254.600
RL 254.800
RL 255.000
RL 255.200
RL 255.400
RL 255.600
RL 255.800
RL 256.000
RL 256.200
RL 256.400
RL 256.600
RL 256.800
RL 257.000
RL 257.200
RL 257.400
RL 257.600
RL 257.800
RL 258.000
RL 258.200
RL 258.400
RL 258.600
RL 258.800
RL 259.000
RL 259.200
RL 259.400
RL 259.600
RL 259.800
RL 260.000
RL 260.200
RL 260.400
RL 260.600
RL 260.800
RL 261.000
RL 261.200
RL 261.400
RL 261.600
RL 261.800
RL 262.000
RL 262.200
RL 262.400
RL 262.600
RL 262.800
RL 263.000
RL 263.200
RL 263.400
RL 263.600
RL 263.800
RL 264.000
RL 264.200
RL 264.400
RL 264.600
RL 264.800
RL 265.000
RL 265.200
RL 265.400
RL 265.600
RL 265.800
RL 266.000
RL 266.200
RL 266.400
RL 266.600
RL 266.800
RL 267.000
RL 267.200
RL 267.400
RL 267.600
RL 267.800
RL 268.000
RL 268.200
RL 268.400
RL 268.600
RL 268.800
RL 269.000
RL 269.200
RL 269.400
RL 269.600
RL 269.800
RL 270.000
RL 270.200
RL 270.400
RL 270.600
RL 270.800
RL 271.000
RL 271.200
RL 271.400
RL 271.600
RL 271.800
RL 272.000
RL 272.200
RL 272.400
RL 272.600
RL 272.800
RL 273.000
RL 273.200
RL 273.400
RL 273.600
RL 273.800
RL 274.000
RL 274.200
RL 274.400
RL 274.600
RL 274.800
RL 275.000
RL 275.200
RL 275.400
RL 275.600
RL 275.800
RL 276.000
RL 276.200
RL 276.400
RL 276.600
RL 276.800
RL 277.000
RL 277.200
RL 277.400
RL 277.600
RL 277.800
RL 278.000
RL 278.200
RL 278.400
RL 278.600
RL 278.800
RL 279.000
RL 279.200
RL 279.400
RL 279.600
RL 279.800
RL 280.000
RL 280.200
RL 280.400
RL 280.600
RL 280.800
RL 281.000
RL 281.200
RL 281.400
RL 281.600
RL 281.800
RL 282.000
RL 282.200
RL 282.400
RL 282.600
RL 282.800
RL 283.000
RL 283.200
RL 283.400
RL 283.600
RL 283.800
RL 284.000
RL 284.200
RL 284.400
RL 284.600
RL 284.800
RL 285.000
RL 285.200
RL 285.400
RL 285.600
RL 285.800
RL 286.000
RL 286.200
RL 286.400
RL 286.600
RL 286.800
RL 287.000
RL 287.200
RL 287.400
RL 287.600
RL 287.800
RL 288.000
RL 288.200
RL 288.400
RL 288.600
RL 288.800
RL 289.000
RL 289.200
RL 289.400
RL 289.600
RL 289.800
RL 290.000
RL 290.200
RL 290.400
RL 290.600
RL 290.800
RL 291.000
RL 291.200
RL 291.400
RL 291.600
RL 291.800
RL 292.000
RL 292.200
RL 292.400
RL 292.600
RL 292.800
RL 293.000
RL 293.200
RL 293.400
RL 293.600
RL 293.800
RL 294.000
RL 294.200
RL 294.400
RL 294.600
RL 294.800
RL 295.000
RL 295.200
RL 295.400
RL 295.600
RL 295.800
RL 296.000
RL 296.200
RL 296.400
RL 296.600
RL 296.800
RL 297.000
RL 297.200
RL 297.400
RL 297.600
RL 297.800
RL 298.000
RL 298.200
RL 298.400
RL 298.600
RL 298.800
RL 299.000
RL 299.200
RL 299.400
RL 299.600
RL 299.800
RL 300.000
RL 300.200
RL 300.400
RL 300.600
RL 300.800
RL 301.000
RL 301.200
RL 301.400
RL 301.600
RL 301.800
RL 302.000
RL 302.200
RL 302.400
RL 302.600
RL 302.800
RL 303.000
RL 303.200
RL 303.400
RL 303.600
RL 303.800
RL 304.000
RL 304.200
RL 304.400
RL 304.600
RL 304.800
RL 305.000
RL 305.200
RL 305.400
RL 305.600
RL 305.800
RL 306.000
RL 306.200
RL 306.400
RL 306.600
RL 306.800
RL 307.000
RL 307.200
RL 307.400
RL 307.600
RL 307.800
RL 308.000
RL 308.200
RL 308.400
RL 308.600
RL 308.800
RL 309.000
RL 309.200
RL 309.400
RL 309.600
RL 309.800
RL 310.000
RL 310.200
RL 310.400
RL 310.600
RL 310.800
RL 311.000
RL 311.200
RL 311.400
RL 311.600
RL 311.800
RL 312.000
RL 312.200
RL 312.400
RL 312.600
RL 312.800
RL 313.000
RL 313.200
RL 313.400
RL 313.600
RL 313.800
RL 314.000
RL 314.200
RL 314.400
RL 314.600
RL 314.800
RL 315.000
RL 315.200
RL 315.400
RL 315.600
RL 315.800
RL 316.000
RL 316.200
RL 316.400
RL 316.600
RL 316.800
RL 317.000
RL 317.200
RL 317.400
RL 317.600
RL 317.800
RL 318.000
RL 318.200
RL 318.400
RL 318.600
RL 318.800
RL 319.000
RL 319.200
RL 319.400
RL 319.600
RL 319.800
RL 320.000
RL 320.200
RL 320.400
RL 320.600
RL 320.800
RL 321.000
RL 321.200
RL 321.400
RL 321.600
RL 321.800
RL 322.000
RL 322.200
RL 322.400
RL 322.600
RL 322.800
RL 323.000
RL 323.200
RL 323.400
RL 323.600
RL 323.800
RL 324.000
RL 324.200
RL 324.400
RL 324.600
RL 324.800
RL 325.000
RL 325.200
RL 325.400
RL 325.600
RL 325.800
RL 326.000
RL 326.200
RL 326.400
RL 326.600
RL 326.800
RL 327.000
RL 327.200
RL 327.400
RL 327.600
RL 327.800
RL 328.000
RL 328.200
RL 328.400
RL 328.600
RL 328.800
RL 329.000
RL 329.200
RL 329.400
RL 329.600
RL 329.800
RL 330.000
RL 330.200
RL 330.400
RL 330.600
RL 330.800
RL 331.000
RL 331.200
RL 331.400
RL 331.600
RL 331.800
RL 332.000
RL 332.200
RL 332.400
RL 332.600
RL 332.800
RL 333.000
RL 333.200
RL 333.400
RL 333.600
RL 333.800
RL 334.000
RL 334.200
RL 334.400
RL 334.600
RL 334.800
RL 335.000
RL 335.200
RL 335.400
RL 335.600
RL 335.800
RL 336.000
RL 336.200
RL 336.400
RL 336.600
RL 336.800
RL 337.000
RL 337.200
RL 337.400
RL 337.600
RL 337.800
RL 338.000
RL 338.200
RL 338.400
RL 338.600
RL 338.800
RL 339.000
RL 339.200
RL 339.400
RL 339.600
RL 339.800
RL 340.000
RL 340.200
RL 340.400
RL 340.600
RL 340.800
RL 341.000
RL 341.200
RL 341.400
RL 341.600
RL 341.800
RL 342.000
RL 342.200
RL 342.400
RL 342.600
RL 342.800
RL 343.000
RL 343.200
RL 343.400
RL 343.600
RL 343.800
RL 344.000
RL 344.200
RL 344.400
RL 344.600
RL 344.800
RL 345.000
RL 345.200
RL 345.400
RL 345.600
RL 345.800
RL 346.000
RL 346.200
RL 346.400
RL 346.600
RL 346.800
RL 347.000
RL 347.200
RL 347.400
RL 347.600
RL 347.800
RL 348.000
RL 348.200
RL 348.400
RL 348.600
RL 348.800
RL 349.000
RL 349.200
RL 349.400
RL 349.600
RL 349.800
RL 350.000
RL 350.200
RL 350.400
RL 350.600
RL 350.800
RL 351.000
RL 351.200
RL 351.400
RL 351.600
RL 351.800
RL 352.000
RL 352.200
RL 352.400
RL 352.600
RL 352.800
RL 353.000
RL 353.200
RL 353.400
RL 353.600
RL 353.800
RL 354.000
RL 354.200
RL 354.400
RL 354.600
RL 354.800
RL 355.000
RL 355.200
RL 355.400
RL 355.600
RL 355.800
RL 356.000
RL 356.200
RL 356.400
RL 356.600
RL 356.800
RL 357.000
RL 357.200
RL 357.400
RL 357.600
RL 357.800
RL 358.000
RL 358.200
RL 358.400
RL 358.600
RL 358.800
RL 359.000
RL 359.200
RL 359.400
RL 359.600
RL 359.800
RL 360.000
RL 360.200
RL 360.400
RL 360.600
RL 360.800
RL 361.000
RL 361.200
RL 361.400
RL 361.600
RL 361.800
RL 362.000
RL 362.200
RL 362.400
RL 362.600
RL 362.800
RL 363.000
RL 363.200
RL 363.400
RL 363.600
RL 363.800
RL 364.000
RL 364.200
RL 364.400
RL 364.600
RL 364.800
RL 365.000
RL 365.200
RL 365.400
RL 365.600
RL 365.800
RL 366.000
RL 366.200
RL 366.400
RL 366.600
RL 366.800
RL 367.000
RL 367.200
RL 367.400
RL 367.600
RL 367.800
RL 368.000
RL 368.200
RL 368.400
RL 368.600
RL 368.800
RL 369.000
RL 369.200
RL 369.400
RL 369.600
RL 369.800
RL 370.000
RL 370.200
RL 370.400
RL 370.600
RL 370.800
RL 371.000
RL 371.200
RL 371.400
RL 371.600
RL 371.800
RL 372.000
RL 372.200
RL 372.400
RL 372.600
RL 372.800
RL 373.000
RL 373.200
RL 373.400
RL 373.600
RL 373.800
RL 374.000
RL 374.200
RL 374.400
RL 374.600
RL 374.800
RL 375.000
RL 375.200
RL 375.400
RL 375.600
RL 375.800
RL 376.000
RL 376.200
RL 376.400
RL 376.600
RL 376.800
RL 377.000
RL 377.200
RL 377.400
RL 377.600
RL 377.800
RL 378.000
RL 378.200
RL 378.400
RL 378.600
RL 378.800
RL 379.000
RL 379.200
RL 379.400
RL 379.600
RL 379.800
RL 380.000
RL 380.200
RL 380.400
RL 380.600
RL 380.800
RL 381.000
RL 381.200
RL 381.400
RL 381.600
RL 381.800
RL 382.000
RL 382.200
RL 382.400
RL 382.600
RL 382.800
RL 383.000
RL 383.200
RL 383.400
RL 383.600
RL 383.800
RL 384.000
RL 384.200
RL 384.400
RL 384.600
RL 384.800
RL 385.000
RL 385.200
RL 385.400
RL 385.600
RL 385.800
RL 386.000
RL 386.200
RL 386.400
RL 386.600
RL 386.800
RL 387.000
RL 387.200
RL 387.400
RL 387.600
RL 387.800
RL 388.000
RL 388.200
RL 388.400
RL 388.600
RL 388.800
RL 389.000
RL 389.200
RL 389.400
RL 389.600
RL 389.800
RL 390.000
RL 390.200
RL 390.400
RL 390.600
RL 390.800
RL 391.000
RL 391.200
RL 391.400
RL 391.600
RL 391.800
RL 392.000
RL 392.200
RL 392.400
RL 392.600
RL 392.800
RL 393.000
RL 393.200
RL 393.400
RL 393.600
RL 393.800
RL 394.000
RL 394.200
RL 394.400
RL 394.600
RL 394.800
RL 395.000
RL 395.200
RL 395.400
RL 395.600
RL 395.800
RL 396.000
RL 396.200
RL 396.400
RL 396.600
RL 396.800
RL 397.000
RL 397.200
RL 397.400
RL 397.600
RL 397.800
RL 398.000
RL 398.200
RL 398.400
RL 398.600
RL 398.800
RL 399.000
RL 399.200
RL 399.400
RL 399.600
RL 399.800
RL 400.000
RL 400.200
RL 400.400
RL 400.600
RL 400.800
RL 401.000
RL 401.200
RL 401.400
RL 401.600
RL 401.800
RL 402.000
RL 402.200
RL 402.400
RL 402.600
RL 402.800
RL 403.000
RL 403.200
RL 403.400
RL 403.600
RL 403.800
RL 404.000
RL 404.200
RL 404.400
RL 404.600
RL 404.800
RL 405.000
RL 405.200
RL 405.400
RL 405.600
RL 405.800
RL 406.000
RL 406.200
RL 406.400
RL 406.600
RL 406.800
RL 407.000
RL 407.200
RL 407.400
RL 407.600
RL 407.800
RL 408.000
RL 408.200
RL 408.400
RL 408.600
RL 408.800
RL 409.000
RL 409.200
RL 409.400
RL 409.600
RL 409.800
RL 410.000
RL 410.200
RL 410.400
RL 410.600
RL 410.800
RL 411.000
RL 411.200
RL 411.400
RL 411.600
RL 411.800
RL 412.000
RL 412.200
RL 412.400
RL 412.600
RL 412.800
RL 413.000
RL 413.200
RL 413.400
RL 413.600
RL 413.800
RL 414.000
RL 414.200
RL 414.400
RL 414.600
RL 414.800
RL 415.000
RL 415.200
RL 415.400
RL 415.600
RL 415.800
RL 416.000
RL 416.200
RL 416.400
RL 416.600
RL 416.800
RL 417.000
RL 417.200
RL 417.400
RL 417.600
RL 417.800
RL 418.000
RL 418.200
RL 418.400
RL 418.600
RL 418.800
RL 419.000
RL 419.200
RL 419.400
RL 419.600
RL 419.800
RL 420.000
RL 420.200
RL 420.400
RL 420.600
RL 420.800
RL 421.000
RL 421.200
RL 421.400
RL 421.600
RL 421.800
RL 422.000
RL 422.200
RL 422.400
RL 422.600
RL 422.800
RL 423.000
RL 423.200
RL 423.400
RL 423.600
RL 423.800
RL 424.000
RL 424.200
RL 424.400
RL 424.600
RL 424.800
RL 425.000
RL 425.200
RL 425.400
RL 425.600
RL 425.800
RL 426.000
RL 426.200
RL 426.400
RL 426.600
RL 426.800
RL 427.000
RL 427.200
RL 427.400
RL 427.600
RL 427.800
RL 428.000
RL 428.200
RL 428.400
RL 428.600
RL 428.800
RL 429.000
RL 429.200
RL 429.400
RL 429.600
RL 429.800
RL 430.000
RL 430.200
RL 430.400
RL 430.600
RL 430.800
RL 431.000
RL 431.200
RL 431.400
RL 431.600
RL 431.800
RL 432.000
RL 432.200
RL 432.400
RL 432.600
RL 432.800
RL 433.000
RL 433.200
RL 433.400
RL 433.600
RL 433.800
RL 434.000
RL 434.200
RL 434.400
RL 434.600
RL 434.800
RL 435.000
RL 435.200
RL 435.400
RL 435.600
RL 435.800
RL 436.000
RL 436.200
RL 436.400
RL 436.600
RL 436.800
RL 437.000
RL 437.200
RL 437.400
RL 437.600
RL 437.800
RL 438.000
RL 438.200
RL 438.400
RL 438.600
RL 438.800
RL 439.000
RL 439.200
RL 439.400
RL 439.600
RL 439.800
RL 440.000
RL 440.200
RL 440.400
RL 440.600
RL 440.800
RL 441.000
RL 441.200
RL 441.400
RL 441.600
RL 441.800
RL 442.000
RL 442.200
RL 442.400
RL 442.600
RL 442.800
RL 443.000
RL 443.200
RL 443.400
RL 443.600
RL 443.800
RL 444.000
RL 444.200
RL 444.400
RL 444.600
RL 444.800
RL 445.000
RL 445.200
RL 445.400
RL 445.600
RL 445.800
RL 446.000
RL 446.200
RL 446.400
RL 446.600
RL 446.800
RL 447.000
RL 447.200
RL 447.400
RL 447.600
RL 447.800
RL 448.000
RL 448.200
RL 448.400
RL 448.600
RL 448.800
RL 449.000
RL 449.200
RL 449.400
RL 449.600
RL 449.800
RL 450.000
RL 450.200
RL 450.400
RL 450.600
RL 450.800
RL 451.000
RL 451.200
RL 451.400
RL 451.600
RL 451.800
RL 452.000
RL 452.200
RL 452.400
RL 452.600
RL 452.800
RL 453.000
RL 453.200
RL 453.400
RL 453.600
RL 453.800
RL 454.000
RL 454.200
RL 454.400
RL 454.600
RL 454.800
RL 455.000
RL 455.200
RL 455.400
RL 455.600
RL 455.800
RL 456.000
RL 456.200
RL 456.400
RL 456.600
RL 456.800
RL 457.000
RL 457.200
RL 457.400
RL 457.600
RL 457.800
RL 458.000
RL 458.200
RL 458.400
RL 458.600
RL 458.800
RL 459.000
RL 459.200
RL 459.400
RL 459.600
RL 459.800
RL 460.000
RL 460.200
RL 460.400
RL 460.600
RL 460.800
RL 461.000
RL 461.200
RL 461.400
RL 461.600
RL 461.800
RL 462.000
RL 462.200
RL 462.400
RL 462.600
RL 462.800
RL 463.000
RL 463.200
RL 463.400
RL 463.600
RL 463.800
RL 464.000
RL 464.200
RL 464.400
RL 464.600
RL 464.800
RL 465.000
RL 465.200
RL 465.400
RL 465.600
RL 465.800
RL 466.000
RL 466.200
RL 466.400
RL 466.600
RL 466.800
RL 467.000
RL 467.200
RL 467.400
RL 467.600
RL 467.800
RL 468.000
RL 468.200
RL 468.400
RL 468.600
RL 468.800
RL 469.000
RL 469.200
RL 469.400
RL 469.600
RL 469.800
RL 470.000
RL 470.200
RL 470.400
RL 470.600
RL 470.800
RL 471.000
RL 471.200
RL 471.400
RL 471.600
RL 471.800
RL 472.000
RL 472.200
RL 472.400
RL 472.600
RL 472.800
RL 473.000
RL 473.200
RL 473.400
RL 473.600
RL 473.800
RL 474.000
RL 474.200
RL 474.400
RL 474.600
RL 474.800
RL 475.000
RL 475.200
RL 475.400
RL 475.600
RL 475.800
RL 476.000
RL 476.200
RL 476.400
RL 476.600
RL 476.800
RL 477.000
RL 477.200
RL 477.400
RL 477.600
RL 477.800
RL 478.000
RL 478.200
RL 478.400
RL 478.600
RL 478.800
RL 479.000
RL 479.200
RL 479.400
RL 479.600
RL 479.800
RL 480.000
RL 480.200
RL 480.400
RL 480.600
RL 480.800
RL 481.000
RL 481.200
RL 481.400
RL 481.600
RL 481.800
RL 482.000
RL 482.200
RL 482.400
RL 482.600
RL 482.800
RL 483.000
RL 483.200
RL 483.400
RL 483.600
RL 483.800
RL 484.000
RL 484.200
RL 484.400
RL 484.600
RL 484.800
RL 485.000
RL 485.200
RL 485.400
RL 485.600
RL 485.800
RL 486.000
RL 486.200
RL 486.400
RL 486.600
RL 486.800
RL 487.000
RL 487.200
RL 487.400
RL 487.600
RL 487.800
RL 488.000
RL 488.200
RL 488.400
RL 488.600
RL 488.800
RL 489.000
RL 489.200
RL 489.400
RL 489.600
RL 489.800
RL 490.000
RL 490.200
RL 490.400
RL 490.600
RL 490.800
RL 491.000
RL 491.200
RL 491.400
RL 491.600
RL 491.800
RL 492.000
RL 492.200
RL 492.400
RL 492.600
RL 492.800
RL 493.000
RL 493.200
RL 493.400
RL 493.600
RL 493.800
RL 494.000
RL 494.200
RL 494.400
RL 494.600
RL 494.800
RL 495.000
RL 495.200
RL 495.400
RL 495.600
RL 495.800
RL 496.000
RL 496.200
RL 496.400
RL 496.600
RL 496.800
RL 497.000
RL 497.200
RL 497.400
RL 497.600
RL 497.800
RL 498.000
RL 498.200
RL 498.400
RL 498.600
RL 498.800
RL 499.000
RL 499.200
RL 499.400
RL 499.600
RL 499.800
RL 500.000
RL 500.200
RL 500.400
RL 500.600
RL 500.800
RL 501.000
RL 501.200
RL 501.400
RL 501.600
RL 501.800
RL 502.000
RL 502.200
RL 502.400
RL 502.600
RL 502.800
RL 503.000
RL 503.200
RL 503.400
RL 503.600
RL 503.800
RL 504.000
RL 504.200
RL 504.400
RL 504.600
RL 504.800
RL 505.000
RL 505.200
RL 505.400
RL 505.600
RL 505.800
RL 506.000
RL 506.200
RL 506.400
RL 506.600
RL 506.800
RL 507.000
RL 507.200
RL 507.400
RL 507.600
RL 507.800
RL 508.000
RL 508.200
RL 508.400
RL 508.600
RL 508.800
RL 509.000
RL 509.200
RL 509.400
RL 509.600
RL 509.800
RL 510.000
RL 510.200
RL 510.400
RL 510.600
RL 510.800
RL 511.000
RL 511.200
RL 511.400
RL 511.600
RL 511.800
RL 512.000
RL 512.200
RL 512.400
RL 512.600
RL 512.800
RL 513.000
RL 513.200
RL 513.400
RL 513.600
RL 513.800
RL 514.000
RL 514.200
RL 514.400
RL 514.600
RL 514.800
RL 515.000
RL 515.200
RL 515.400
RL 515.600
RL 515.800
RL 516.000
RL 516.200
RL 516.400
RL 516.600
RL 516.800
RL 517.000
RL 517.200
RL 517.400
RL 517.600
RL 517.800
RL 518.000
RL 518.200
RL 518.400
RL 518.600
RL 518.800
RL 519.000
RL 519.200
RL 519.400
RL 519.600
RL 519.800
RL 520.000
RL 520.200
RL 520.400
RL 520.600
RL 520.800
RL 521.000
RL 521.200
RL 521.400
RL 521.600
RL 521.800
RL 522.000
RL 522.200
RL 522.400
RL 522.600
RL 522.800
RL 523.000
RL 523.200
RL 523.400
RL 523.600
RL 523.800
RL 524.000
RL 524.200
RL 524.400
RL 524.600
RL 524.800
RL 525.000
RL 525.200
RL 525.400
RL 525.600
RL 525.800
RL 526.000
RL 526.200
RL 526.400
RL 526.600
RL 526.800
RL 527.000
RL 527.200
RL 527.400
RL 527.600
RL 527.800
RL 528.000
RL 528.200
RL 528.400
RL 528.600
RL 528.800
RL 529.000
RL 529.200
RL 529.400
RL 529.600
RL 529.800
RL 530.000
RL 530.200
RL 530.400
RL 530.600
RL 530.800
RL 531.000
RL 531.200
RL 531.400
RL 531.600
RL 531.800
RL 532.000
RL 532.200
RL 532.400
RL 532.600
RL 532.800
RL 533.000
RL 533.200
RL 533.400
RL 533.600
RL 533.800
RL 534.000
RL 534.200
RL 534.400
RL 534.600
RL 534.800
RL 535.000
RL 535.200
RL 535.400
RL 535.600
RL 535.800
RL 536.000
RL 536.200
RL 536.400
RL 536.600
RL 536.800
RL 537.000
RL 537.200
RL 537.400
RL 537.600
RL 537.800
RL 538.000
RL 538.200
RL 538.400
RL 538.600
RL 538.800
RL 539.000
RL 539.200
RL 539.400
RL 539.600
RL 539.800
RL 540.000
RL 540.200
RL 540.400
RL 540.600
RL 540.800
RL 541.000
RL 541.200
RL 541.400
RL 541.600
RL 541.800
RL 542.000
RL 542.200
RL 542.400
RL 542.600
RL 542.800
RL 543.000
RL 543.200
RL 543.400
RL 543.600
RL 543.800
RL 544.000
RL 544.200
RL 544.400
RL 544.600
RL 544.800
RL 545.000
RL 545.200
RL 545.400
RL 545.600
RL 545.800
RL 546.000
RL 546.200
RL 546.400
RL 546.600
RL 546.800
RL 547.000
RL 547.200
RL 547.400
RL 547.600
RL 547.800
RL 548.000
RL 548.200
RL 548.400
RL 548.600
RL 548.800
RL 549.000
RL 549.200
RL 549.400
RL 549.600
RL 549.800
RL 550.000
RL 550.200
RL 550.400
RL 550.600
RL 550.800
RL 551.000
RL 551.200
RL 551.400
RL 551.600
RL 551.800
RL 552.000
RL 552.200
RL 552.400
RL 552.600
RL 552.800
RL 553.000
RL 553.200
RL 553.400
RL 553.600
RL 553.800
RL 554.000
RL 554.200
RL 554.400
RL 554.600
RL 554.800
RL 555.000
RL 555.200
RL 555.400
RL 555.600
RL 555.800
RL 556.000
RL 556.200
RL 556.400
RL 556.600
RL 556.800
RL 557.000
RL 557.200
RL 557.400
RL 557.600
RL 557.800
RL 558.000
RL 558.200
RL 558.400
RL 558.600
RL 558.800
RL 559.000
RL 559.200
RL 559.400
RL 559.600
RL 559.800
RL 560.000
RL 560.200
RL 560.400
RL 560.600
RL 560.800
RL 561.000
RL 561.200
RL 561.400
RL 561.600
RL 561.800
RL 562.000
RL 562.200
RL 562.400
RL 562.600
RL 562.800
RL 563.000
RL 563.200
RL 563.400
RL 563.600
RL 563.800
RL 564.000
RL 564.200
RL 564.400
RL 564.600
RL 564.800
RL 565.000
RL 565.200
RL 565.400
RL 565.600
RL 565.800
RL 566.000
RL 566.200
RL 566.400
RL 566.600
RL 566.800
RL 567.000
RL 567.200
RL 567.400
RL 567.600
RL 567.800
RL 568.000
RL 568.200
RL 568.400
RL 568.600
RL 568.800
RL 569.000
RL 569.200
RL 569.400
RL 569.600
RL 569.800
RL 570.000
RL 570

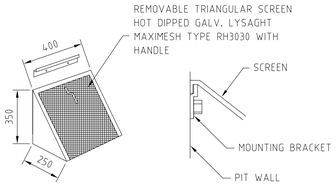


SILT ARRESTOR PIT-SECTION

SCALE 1:10

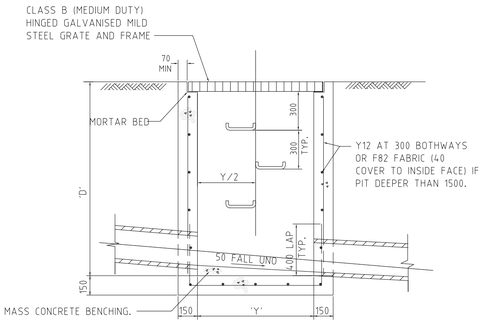
PIT DIMENSIONS		
"D"	"X"	"Y"
300<D<450	450	450*
450<D<600	600	600*
600<D<900	900	900
900<D<1200	900	900
D<2400	900	1200

NOTE: PITS DENOTED * SHALL BE USED ONLY WHERE SPECIFIED IN DRAINAGE SCHEDULE OR ON PLAN.



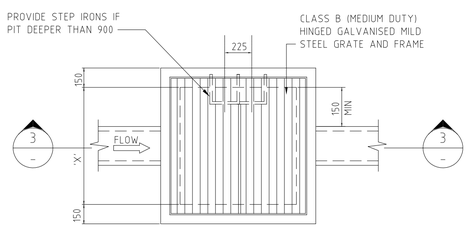
MULTI PURPOSE FILTER SCREEN

SCALE 1:20
PRODUCT CODE: MMMPS (MASCOT ENGINEERING)



SECTION 3

SCALE 1:20



PLAN

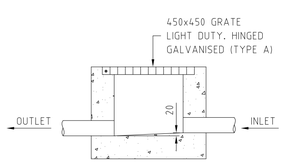
SURFACE INLET

SUMMARY CALCULATIONS

TOTAL SITE AREA = 23000m2
CATCHMENT AREA = 13800m2
AREA PER CATCHMENT = 6900m2

ARI	Qpre	FROM OSD 1	FROM OSD 2	Qpost total	VOL OSD 1	VOL OSD 2
5	226	107	104	211	20	20
100	590	199	197	396	75	75

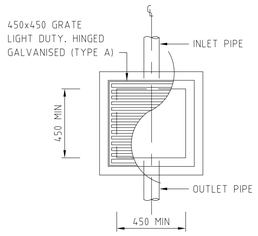
- REFER TO DRAINS FILES FOR ALL STORM EVENTS
- POST DEVELOPMENT FLOWS RESTRICTED TO PRE DEVELOPMENT FLOWS
- ADD 20% VOLUME TO OSD IN LANDSCAPED AREAS - N/A
- IMPERVIOUS AREA USED IN CALCULATION = 0%



PITS DEEPER THAN 900mm TO HAVE STEP RUNGS AND A CHILD PROOF LOCK WITH SPRUNG J BOLT

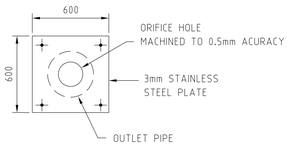
TYPICAL PIT SECTION

SCALE 1:20



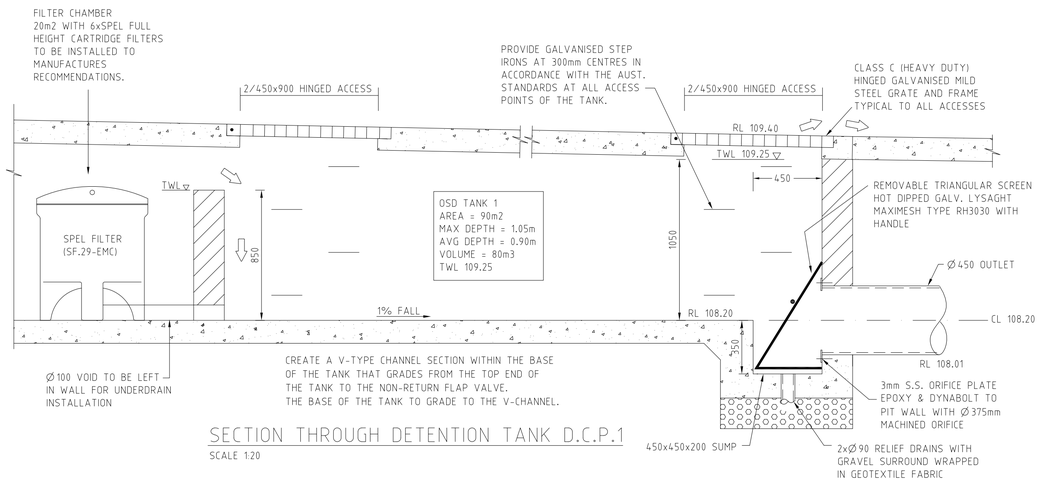
STANDARD PIT

SCALE 1:20



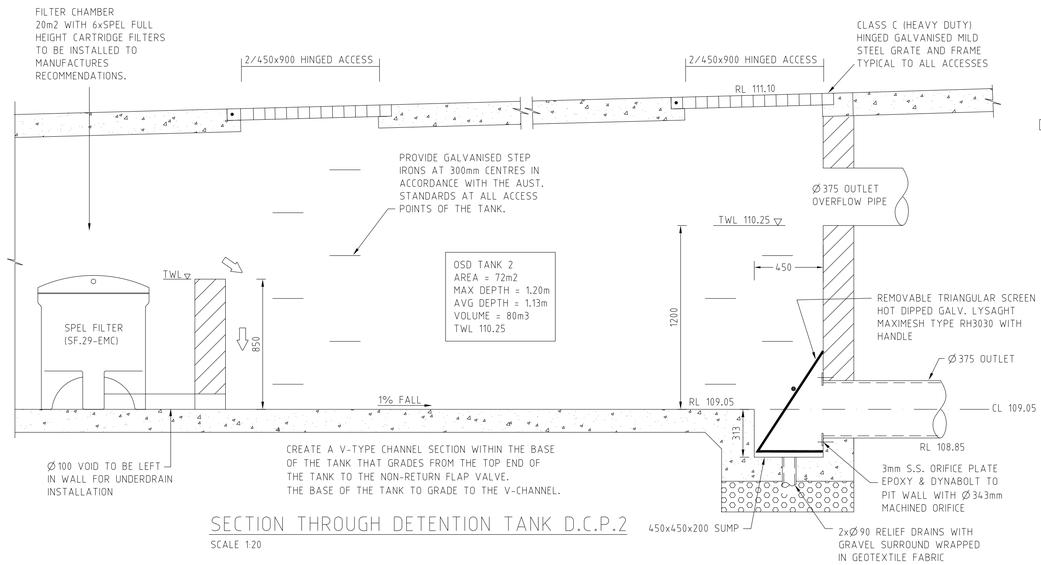
ORIFICE PLATE ELEVATION

SCALE 1:10



SECTION THROUGH DETENTION TANK D.C.P.1

SCALE 1:20



SECTION THROUGH DETENTION TANK D.C.P.2

SCALE 1:20



CONFINED SPACE WARNING SIGN

A CONFINED SPACE DANGER SIGN SHALL BE PROVIDED AT EACH ACCESS GRATE OF THE BELOW GROUND DETENTION TANK

COLOURS.-
"DANGER" AND BACKGROUND - WHITE
ELLIPTICAL AREA - RED
RECTANGLE CONTAINING ELLIPSE - BLACK
OTHER LETTING AND BORDER - BLACK

A. A CONFINED SPACE DANGER SIGN SHALL BE POSITIONED IN A LOCATION AT ALL ACCESS POINTS, SUCH THAT IT IS CLEARLY VISIBLE TO PERSONS PROPOSING TO ENTER THE BELOW GROUND TANK/S CONFINED SPACE.

B. MINIMUM DIMENSIONS OF THE SIGN - 300mm x 450mm (LARGE ENTRIES, SUCH AS DOORS)
- 250mm x 180mm (SMALL ENTRIES SUCH AS GATES & MANHOLES)

C. THE SIGN SHALL BE MANUFACTURED FROM COLOUR BONDED ALUMINIUM OR POLYPROPYLENE.

D. SIGN SHALL BE AFFIXED USING SCREWS AT EACH CORNER OF THE SIGN AND/OR SUITABLE EPOXY GLUE/CEMENT.

Revisions		
E	26/04/21	UPDATED ARCHITECTURALS
D	2/08/19	UPDATED ARCHITECTURALS
C	20/03/19	UPDATED ARCHITECTURALS
B	12/11/18	UPDATED ARCHITECTURALS
A	10/01/17	CONCEPT FOR COUNCIL

EROSION CONTROL NOTES

1. ALL EROSION AND SILTATION CONTROL DEVICES ARE TO BE PLACED PRIOR TO THE COMMENCEMENT OF ANY CONSTRUCTION WORKS, AND ALL SILT TRAPS ARE TO HAVE DEPOSITED SILT REMOVED REGULARLY DURING CONSTRUCTION.
2. ALL TREES ARE TO BE PRESERVED UNLESS INDICATED OTHERWISE ON THE ARCHITECT'S OR LANDSCAPE ARCHITECT'S DRAWINGS. EXISTING GRASS COVER SHALL BE MAINTAINED EXCEPT IN AREAS CLEARED FOR BUILDINGS, PAVEMENTS ETC.
3. INSTALL TEMPORARY SEDIMENT BARRIERS TO ALL INLET PITS LIKELY TO COLLECT SILT LADDEN WATER, TO COUNCIL'S STANDARDS
4. NOT WITHSTANDING DETAILS SHOWN IT IS THE CONTRACTORS SOLE RESPONSIBILITY TO ENSURE THAT ALL SITE ACTIVITIES COMPLY WITH THE REQUIREMENTS OF THE CLEAN WATERS ACT.
5. ALL TOPSOIL TO BE CONSERVED FOR RE-USE ON SITE

NOTES

1. ALL LINES ARE TO BE Ø100 U.P.V.C @ MIN 1.0% GRADE UNLESS NOTED OTHERWISE. CHARGED LINES TO BE SEWER GRADE & SEALED.
2. IT IS THE CONTRACTORS RESPONSIBILITY TO LOCATE & LEVEL ALL EXISTING SERVICES PRIOR TO THE COMMENCEMENT OF ANY EARTHWORKS.
3. ALL PIPES TO HAVE MIN 150mm COVER IF LOCATED WITHIN PROPERTY.
4. ALL PITS IN DRIVEWAYS TO BE 450x450 CONCRETE AND ALL PITS IN LANDSCAPED AREAS TO BE 450x450 PLASTIC.
5. PITS LESS THAN 600 DEEP MAY BE BRICK, PRECAST OR CONCRETE.
6. PITS DEEPER THAN 900 MUST BE 900x900 AND HAVE STEP RUNGS AT 300 CENTRES.
7. ALL BALCONIES AND ROOFS TO BE DRAINED AND TO HAVE SAFETY OVERFLOWS IN ACCORDANCE WITH RELEVANT AUSTRALIAN STANDARDS.
8. ALL EXTERNAL SLABS TO BE WATERPROOFED.
9. ALL GRATES TO HAVE CHILD PROOF LOCKS.
10. ALL DRAINAGE WORKS TO AVOID TREE ROOTS.
11. ALL DP'S TO HAVE LEAF GUARDS
12. ALL EXISTING LEVELS TO BE CONFIRMED BY BUILDER PRIOR TO CONSTRUCTION.
13. ALL WORK WITHIN COUNCIL RESERVE TO BE INSPECTED BY COUNCIL PRIOR TO CONSTRUCTION.
14. COUNCIL'S ISSUED FOOTWAY DESIGN LEVELS TO BE INCORPORATED INTO THE FINISHED LEVELS ONCE ISSUED BY COUNCIL.
15. ALL WORK SHALL BE IN ACCORDANCE WITH B.C.A. AND A.S.3500.3.
16. EXISTING STORMWATER PIPE LOCATIONS HAVE BEEN ASSUMED. PLUMBER TO INSPECT PRIOR TO WORKS AND UPGRADE PIPES AS NECESSARY.

SYMBOLS

F.F.L.	FINISHED FLOOR LEVEL
F.G.L.	FINISHED GARAGE LEVEL
T.K.	TOP OF KERB
* 11.0	FINISHED LEVEL
* 11.0	EXISTING LEVEL
S.L.	SURFACE LEVEL
I.L.	INVERT LEVEL
20 R	ROOF CATCHMENT AREA (m2)
20 I	IMPERVIOUS CATCHMENT AREA (m2)
20 L	LANDSCAPED CATCHMENT AREA (m2)
DP	Ø100 DOWN PIPE OR EQUIVALENT
SP	SPREADER
VD	VERTICAL DROP
VR	VERTICAL RISER
	RAIN WATER HEAD & DOWN PIPE
	CLEAN OUT POINT
SUMP	Ø150 SUMP
	CONCRETE COVER JUNCTION PIT
	GRATED INLET PIT 450x450
	200Wx100D GRATED DRAIN WITH 2% BTM SLOPE
	STORMWATER PIPE
	SUSPENDED STORMWATER PIPE
	CHARGED STORMWATER PIPE
	PUMP LINE
	Ø100 SUBSOIL PIPE
	SILT FENCE
	OVERLAND FLOW

CLIENT
CAPITAL DEVELOPMENT

PROJECT
PROPOSED DEVELOPMENT
RAITH - Lot 101 FERN AVE, BRADBURY

TITLE
DRAINAGE DETAILS

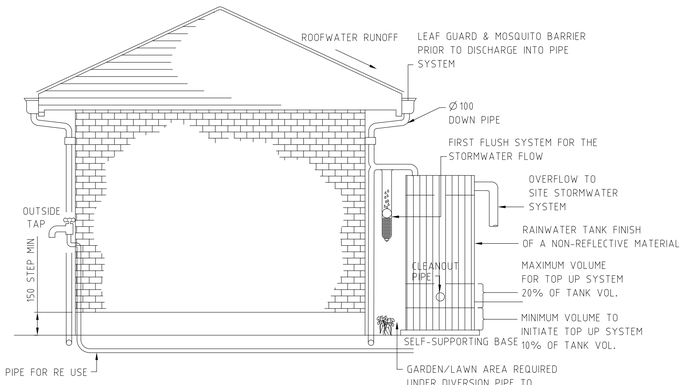
FOR D.A. ONLY
CAMPBELLTOWN COUNCIL

DIAL 1100 BEFORE YOU DIG
NO SUBSURFACE INVESTIGATION HAS BEEN MADE IT IS YOUR RESPONSIBILITY TO OBTAIN SERVICE DIAGRAMS FROM RELEVANT AUTHORITIES

A.C.N. 090 572 973
UNITED
UNITED CONSULTING ENGINEERS PTY LTD
Civil/Structural Engineers
Shop 1, 147-153 Liverpool Rd, Burwood
Burwood NSW, 2134
Telephone: (02) 9715 5111
Facsimile: (02) 9715 6222
Mobile: 0411 453 012
Email: united_eng@bigpond.com
Copyright

Approved: Mark Anthony Boudib MIEAust. CPEng. NPER

North	Designed	Drawn	
	MAB	F.B.	
	Checked	Scale	
	MAB	1:100	
	Drawing No	Sheet	Issue
	16MB7088/D08	8 of 11	E

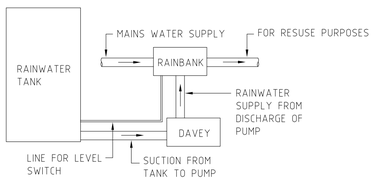


RAINWATER TANK DETAIL

N.T.S.
INSTALLATION OF TANKS TO BE IN ACCORDANCE WITH MANUFACTURER SPECIFICATION.

STORAGE TANK NOTES

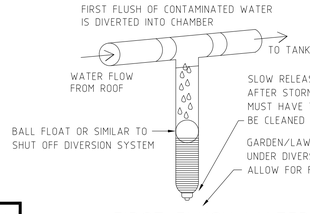
1. TANK WATER TAPS SHALL BE MARKED "RAINWATER NOT TO BE USED FOR HUMAN CONSUMPTION"
2. MINIMUM TANK SIZE:
   - EXISTING SINGLE DWELLINGS 3,000 LITRES EACH,
   - PROPOSED DEVELOPMENT 10,000 CENTRAL TANK (2 x 5,000 LITRE TANKS PROVIDED)
3. RAINWATER TANKS SHALL BE CONNECTED TO MAINS WATER SUPPLY AS BACKUP
4. THE PUMPS ARE TO BE INSULATED IN ACCORDANCE WITH COUNCIL POLICY
5. PUMPS SHALL PROVIDE MINIMUM 150 kPa PRESSURE
6. TANK TO BE CONNECTED TO AN OUTDOOR TAP FOR IRRIGATION USE
7. RAINWATER TANKS TO BE CLEANED OUT EVERY 6 MONTHS
8. WATER TANK AND ASSOCIATED STRUCTURE TO BE THE SAME COLOUR, OR A COLOUR COMPLEMENTARY TO THE DWELLING
9. TOP OF TANK TO BE BELOW TOP OF NEAREST FENCE, OR 1.8 METRES, WHICHEVER IS LESSER.
10. THE WATER TANK SHOULD BE LOCATED AT LEAST 900mm FROM ANY PROPERTY BOUNDARY
11. PLUMBING FROM THE WATER TANK IS TO BE KEPT SEPARATE FROM THE RETICULATED WATER SUPPLY SYSTEM
12. TANK TO BUILT ON SELF-SUPPORTING BASE
13. PROVIDE BACK-FLOW PREVENTION DEVICE AT MAINS WATER METER
14. ROOF DRAINING TO TANK MUST NOT CONTAIN LEAD, TAR BASED PAINTS OR ASBESTOS
15. WATER TO BE DRAWN FROM ANAEROBIC ZONE OF TANK



PLAN

N.T.S.

RAINWATER TANK TO COMPLY WITH BASIX COMMITMENTS



FIRST FLUSH WATER DIVERTER DETAIL

NTS



SIGNAGE FOR RAINWATER TANKS AND OUTLETS

-DIMENSIONS: 120mm X 150mm
-background colour should be YELLOW.
-text is WHITE on a BLACK background;
-tap symbol is BLACK.

Revisions		
E	26/04/21	UPDATED ARCHITECTURALS
D	2/08/19	UPDATED ARCHITECTURALS
C	20/03/19	UPDATED ARCHITECTURALS
B	12/11/18	UPDATED ARCHITECTURALS
A	10/01/17	CONCEPT FOR COUNCIL

EROSION CONTROL NOTES

1. ALL EROSION AND SILTATION CONTROL DEVICES ARE TO BE PLACED PRIOR TO THE COMMENCEMENT OF ANY CONSTRUCTION WORKS, AND ALL SILT TRAPS ARE TO HAVE DEPOSITED SILT REMOVED REGULARLY DURING CONSTRUCTION.
2. ALL TREES ARE TO BE PRESERVED UNLESS INDICATED OTHERWISE ON THE ARCHITECT'S OR LANDSCAPE ARCHITECT'S DRAWINGS. EXISTING GRASS COVER SHALL BE MAINTAINED EXCEPT IN AREAS CLEARED FOR BUILDINGS, PAVEMENTS ETC.
3. INSTALL TEMPORARY SEDIMENT BARRIERS TO ALL INLET PITS LIKELY TO COLLECT SILT LADDEN WATER, TO COUNCIL'S STANDARDS
4. NOT WITHSTANDING DETAILS SHOWN IT IS THE CONTRACTORS SOLE RESPONSIBILITY TO ENSURE THAT ALL SITE ACTIVITIES COMPLY WITH THE REQUIREMENTS OF THE CLEAN WATERS ACT.
5. ALL TOPSOIL TO BE CONSERVED FOR RE-USE ON SITE

NOTES

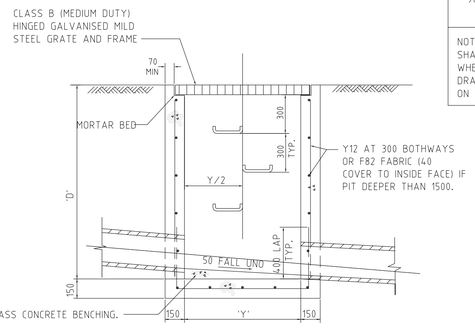
1. ALL LINES ARE TO BE Ø 100 U.P.V.C @ MIN 1.0% GRADE UNLESS NOTED OTHERWISE. CHARGED LINES TO BE SEWER GRADE & SEALED.
2. IT IS THE CONTRACTORS RESPONSIBILITY TO LOCATE & LEVEL ALL EXISTING SERVICES PRIOR TO THE COMMENCEMENT OF ANY EARTHWORKS.
3. ALL PIPES TO HAVE MIN 150mm COVER IF LOCATED WITHIN PROPERTY.
4. ALL PITS IN DRIVEWAYS TO BE 450x450 CONCRETE AND ALL PITS IN LANDSCAPED AREAS TO BE 450x450 PLASTIC.
5. PITS LESS THAN 600 DEEP MAY BE BRICK, PRECAST OR CONCRETE.
6. PITS DEEPER THAN 900 MUST BE 900x900 AND HAVE STEP RUNGS AT 300 CENTRES.
7. ALL BALCONIES AND ROOFS TO BE DRAINED AND TO HAVE SAFETY OVERFLOWS IN ACCORDANCE WITH RELEVANT AUSTRALIAN STANDARDS.
8. ALL EXTERNAL SLABS TO BE WATERPROOFED.
9. ALL GRATES TO HAVE CHILD PROOF LOCKS.
10. ALL DRAINAGE WORKS TO AVOID TREE ROOTS.
11. ALL DP'S TO HAVE LEAF GUARDS
12. ALL EXISTING LEVELS TO BE CONFIRMED BY BUILDER PRIOR TO CONSTRUCTION.
13. ALL WORK WITHIN COUNCIL RESERVE TO BE INSPECTED BY COUNCIL PRIOR TO CONSTRUCTION.
14. COUNCIL'S ISSUED FOOTWAY DESIGN LEVELS TO BE INCORPORATED INTO THE FINISHED LEVELS ONCE ISSUED BY COUNCIL.
15. ALL WORK SHALL BE IN ACCORDANCE WITH B.C.A. AND A.S.3500.3.
16. EXISTING STORMWATER PIPE LOCATIONS HAVE BEEN ASSUMED. PLUMBER TO INSPECT PRIOR TO WORKS AND UPGRADE PIPES AS NECESSARY.

SYMBOLS

F.F.L.	FINISHED FLOOR LEVEL
F.G.L.	FINISHED GARAGE LEVEL
T.K.	TOP OF KERB
* 11.0	FINISHED LEVEL
* 11.0	EXISTING LEVEL
S.L.	SURFACE LEVEL
I.L.	INVERT LEVEL
20 R	ROOF CATCHMENT AREA (m2)
20 I	IMPERVIOUS CATCHMENT AREA (m2)
20 L	LANDSCAPED CATCHMENT AREA (m2)
DP	Ø 100 DOWN PIPE OR EQUIVALENT
SP	SPREADER
VD	VERTICAL DROP
VR	VERTICAL RISER
	RAIN WATER HEAD & DOWN PIPE
	CLEAN OUT POINT
SUMP	Ø 150 SUMP
	CONCRETE COVER JUNCTION PIT
	GRATED INLET PIT 450x450
	200Wx100D GRATED DRAIN WITH 2% BTM SLOPE
	STORMWATER PIPE
	SUSPENDED STORMWATER PIPE
	CHARGED STORMWATER PIPE
	PUMP LINE
	Ø 100 SUBSOIL PIPE
	SILT FENCE
	OVERLAND FLOW

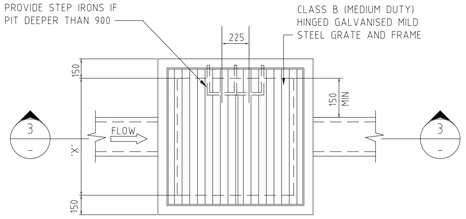
PIT DIMENSIONS		
"D"	"X"	"Y"
300<D<450	450	450*
450<D<600	600	600*
600<D<900	900	900
900<D<1200	900	900
D<2400	900	1200

NOTE: PITS DENOTED * SHALL BE USED ONLY WHERE SPECIFIED IN DRAINAGE SCHEDULE OR ON PLAN.



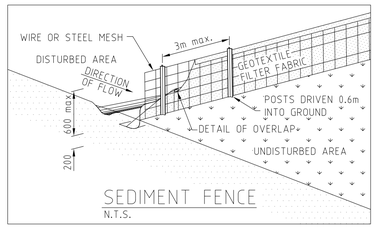
SECTION 3 / –

SCALE 1:20



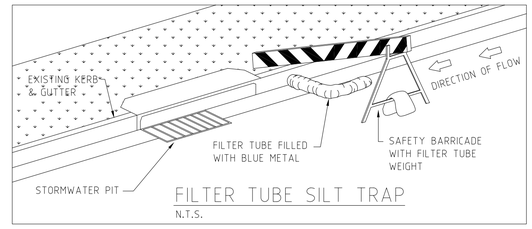
PLAN

SURFACE INLET



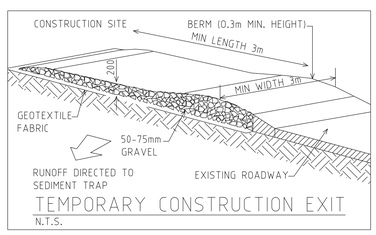
SEDIMENT FENCE

N.T.S.



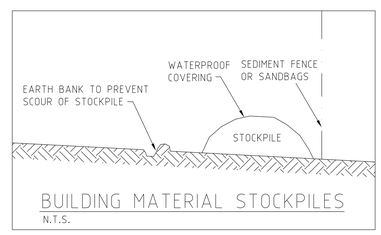
FILTER TUBE SILT TRAP

N.T.S.



TEMPORARY CONSTRUCTION EXIT

N.T.S.



BUILDING MATERIAL STOCKPILES

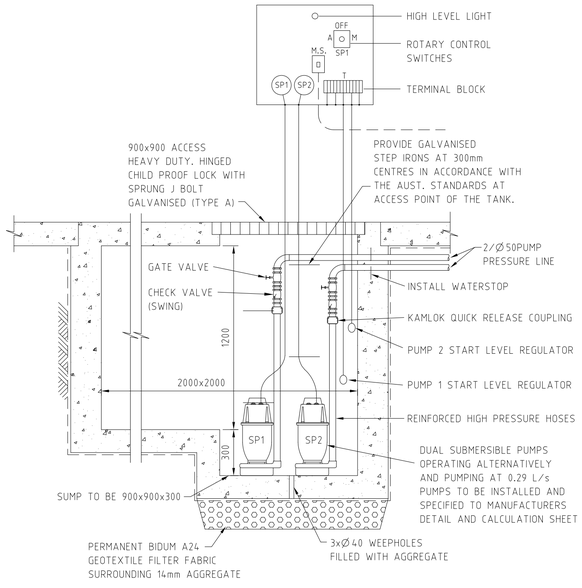
N.T.S.

PUMP WELL DETAILS

SUMP SIZE AND PUMP SIZE BASE ON 100 YEAR 4.5 HOURS STORM INTENSITY IS 34.7 mm/hr, AREA DRAINING TOWARDS SUMP IS 30m2
Q=CIA/3600 = 1.0x34.7x30/3600 = 0.29 L/s
VOLUME REQUIRED IS 0.29x(4.5x60x60) = 4,698 Litres
STORAGE PROVIDED 2000x2000x1200 = 4,800 Litres
THEREFORE ADEQUATE STROAGE PROVIDED

USE DUAL ZSS-040 PUMPS
TO BE INSTALLED IN SUMP AND CONNECTED TO CONTROL PANEL WHICH WILL ALLOW FOR THE PUMPS TO ACT ALTERNATIVELY AT 4.0m HEAD

PUMPS USED MUST BE CLASS ONE, ZONE 2.



SECTION THROUGH PUMP WELL

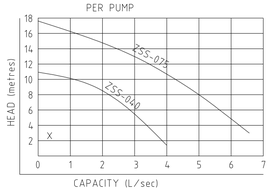
SCALE 1:20

COMPONENTS
1. TWO(2) PUMPS OMEGA SUBMERSIBLE PUMPS (240v)
2. ONE(1) PUMPS START CONTROL PANEL (CONTROL DESIGN TO ALTERNATE PUMPS ON START ON CONSECUTIVE START OPERATION)
3. TWO(2) GATE VALVES (BRONZE)
4. TWO(2) CHECK VALVES (SWING TYPE) (BRONZE)
5. TWO(2) SETS OF DISCHARGE HOSES WITH KAMLOK QUICK RELEASE COUPLINGS
6. ALL IN TANK PIT/PIPE AND PIPE FITTINGS, BRACKETS/SUPPORTS, HD GAL. CHAINS
7. FOUR(4) KWIK START KENRAHN MERCURY LEVEL FLOAT REGULATORS
8. INSTALLATION IN PROVIDED TANK/PIT

OPTIONS
1. TANK PACKAGE/COVERS/MANHOLE, ALARM BELL, LOW LEVEL ALARM REGULATOR

MODEL - ALINE	OUTLET SIZE	MAX FLOW	MAX HEAD	MOTOR SIZE	WEIGHT	POWER
OMEGA ZSS-040	50mm	3.9 L/sec	11m	0.40 kW	11 kg	240v
OMEGA ZSS-075	50mm	6.6 L/sec	18m	0.75 kW	18 kg	240v

PUMP SPECIFICATIONS



PUMP PERFORMANCE CURVES

SCALE 1:20

DANGER
CONFINED SPACE
NO ENTRY WITHOUT CONFINED SPACE TRAINING

CONFINED SPACE WARNING SIGN

A CONFINED SPACE DANGER SIGN SHALL BE PROVIDED AT EACH ACCESS GRATE OF THE BELOW GROUND DETENTION TANK

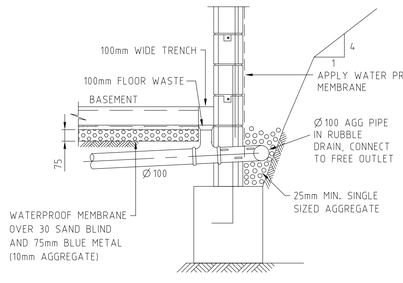
COLOURS.-
"DANGER" AND BACKGROUND - WHITE
ELLIPTICAL AREA - RED
RECTANGLE CONTAINING ELLIPSE - BLACK
OTHER LETTING AND BORDER - BLACK

A. A CONFINED SPACE DANGER SIGN SHALL BE POSITIONED IN A LOCATION AT ALL ACCESS POINTS, SUCH THAT IT IS CLEARLY VISIBLE TO PERSONS PROPOSING TO ENTER THE BELOW GROUND TANK/S CONFINED SPACE.

B. MINIMUM DIMENSIONS OF THE SIGN - 300mm x 450mm (LARGE ENTRIES, SUCH AS DOORS)
- 250mm x 180mm (SMALL ENTRIES SUCH AS GATES & MANHOLES)

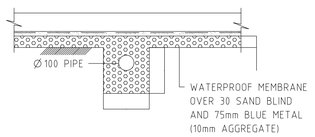
C. THE SIGN SHALL BE MANUFACTURED FROM COLOUR BONDED ALUMINIUM OR POLYPROPYLENE.

D. SIGN SHALL BE AFFIXED USING SCREWS AT EACH CORNER OF THE SIGN AND/OR SUITABLE EPOXY GLUE/CEMENT.



SECTION 2 / D05

SCALE 1:20



SECTION 1 / D05

SCALE 1:20

STANDARD PUMP OUT DESIGN NOTES

THE PUMP SHALL BE PROGRAMMED TO WORK ALTERNATIVELY SO AS TO ALLOW BOTH PUMPS TO HAVE AN EQUAL OPERATION LOAD AND PUMP LIFE.

A LOW LEVEL FLOAT SHALL BE PROVIDED TO ENSURE THAT THE MINIMUM REQUIRED WATER LEVEL IS MAINTAINED WITHIN THE SUMP AREA OF THE BELOW GROUND TANK. IN THIS REGARD THIS FLOAT WILL FUNCTION AS AN OFF SWITCH FOR THE PUMPS.

A SECOND FLOAT SHALL BE PROVIDED AT A HIGHER LEVEL, APPROXIMATELY 300mm ABOVE THE MINIMUM WATER LEVEL, WHEREBY ONE OF THE PUMPS WILL OPERATE AND DRAIN THE TANK TO THE LEVEL OF THE LOW LEVEL FLOAT.

A THIRD FLOAT SHALL BE PROVIDED AT A HIGH LEVEL WHICH IS APPROXIMATELY THE ROOF LEVEL

OF THE BELOW GROUND TANK. THIS FLOAT SHOULD START THE OTHER PUMP THAT IS NOT OPERATING AND ACTIVATE THE ALARM.

AN ALARM SYSTEM SHALL BE PROVIDED WITH A FLASHING STROBE LIGHT AN A PUMP FAILURE WARNING SIGN WHICH ARE TO BE LOCATED AT THE DRIVEWAY ENTRANCE TO THE BASEMENT LEVEL. THE ALARM SYSTEM SHALL BE PROVIDED WITH A BATTERY BACK-UP IN CASE OF POWER FAILURE.

FOR D.A. ONLY
CAMPBELLTOWN COUNCIL

DIAL 1100 BEFORE YOU DIG
NO SUBSURFACE INVESTIGATION HAS BEEN MADE IT IS YOUR RESPONSIBILITY TO OBTAIN SERVICE DIAGRAMS FROM RELEVANT AUTHORITIES

CLIENT
CAPITAL DEVELOPMENT

PROJECT
PROPOSED DEVELOPMENT
RAITH - Lot 101 FERN AVE, BRADBURY

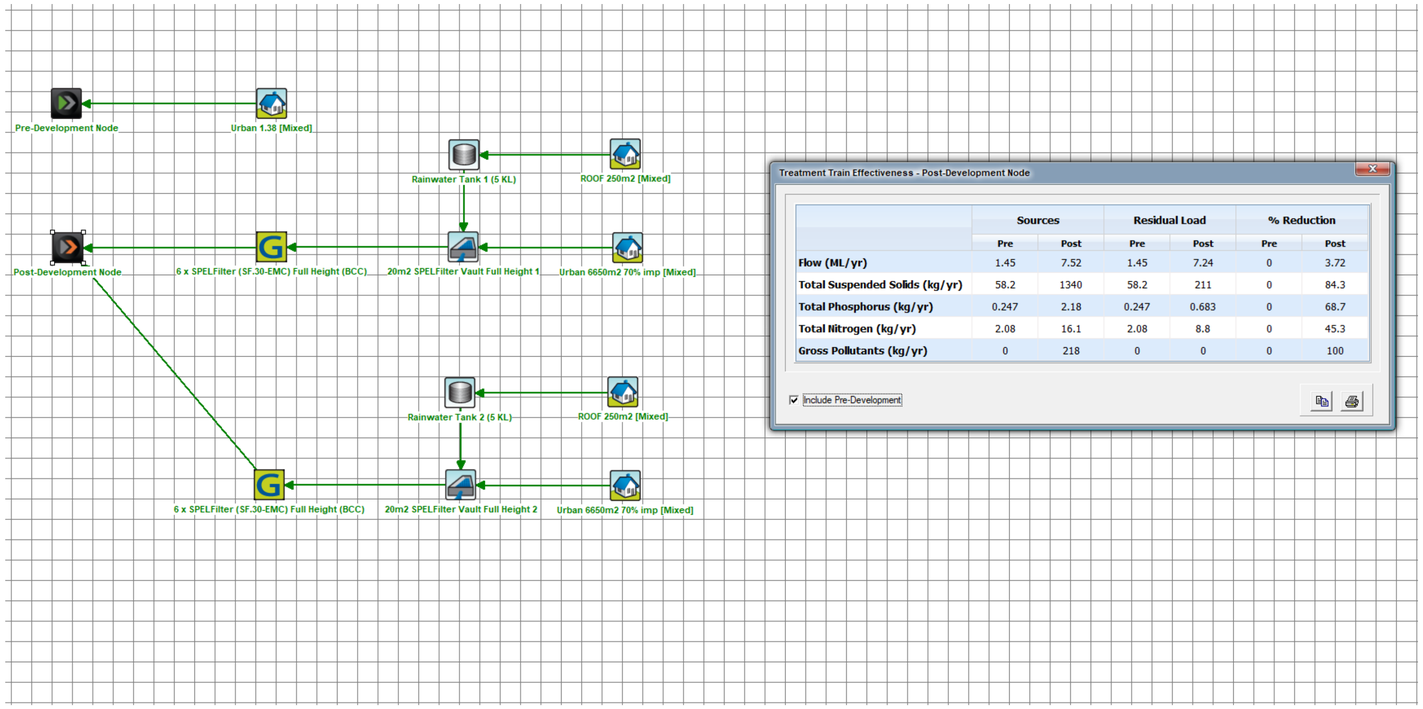
TITLE
DRAINAGE DETAILS

A.C.N. 090 572 973
UNITED
UNITED CONSULTING ENGINEERS PTY LTD
Civil/Structural Engineers
Shop 1, 147-153 Liverpool Rd, Burwood
Burwood NSW, 2134
Telephone: (02) 9715 5111
Facsimile: (02) 9715 6222
Mobile: 0411 453 012
Email: united_eng@bigpond.com

Copyright

Approved: Mark Anthony Boudib MIEAust, CPEng, NPER

North	Designed	Drawn	
	MAB	F.B.	
	Checked	Scale	
	MAB	1:100	
	Drawing No	Sheet	Issue
	16MB7088/D09	9 of 11	E

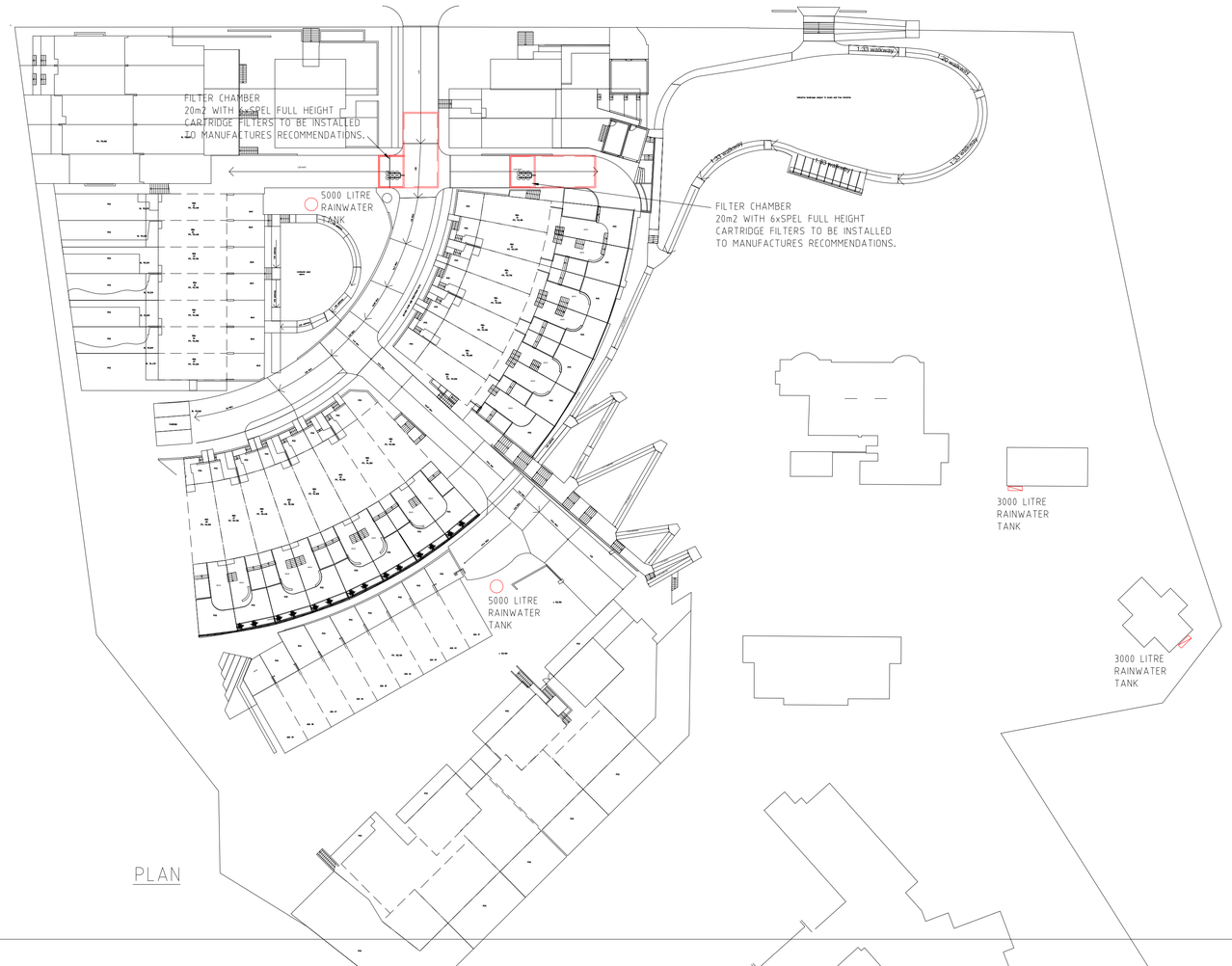


Treatment Train Effectiveness - Post-Development Node

	Sources		Residual Load		% Reduction	
	Pre	Post	Pre	Post	Pre	Post
Flow (ML/yr)	1.45	7.52	1.45	7.24	0	3.72
Total Suspended Solids (kg/yr)	58.2	1340	58.2	211	0	84.3
Total Phosphorus (kg/yr)	0.247	2.18	0.247	0.683	0	68.7
Total Nitrogen (kg/yr)	2.08	16.1	2.08	8.8	0	45.3
Gross Pollutants (kg/yr)	0	218	0	0	0	100

Include Pre-Development

MUSIC MODELLING LAYOUT AND RESULTS



PLAN

STORMWATER TREATMENT SUMMARY

TOTAL SITE AREA = 1070m2
"MUSIC" HAS BEEN USED FOR WATER QUALITY TREATMENT ANALYSIS.

AS PER COUNCIL'S REQUEST PLEASE SEE TREATMENT DESIGN FOR THE DEVELOPMENT SITE. THE CATCHMENT IN MUSIC IS MODELLED IN ACCORDANCE WITH THE FOLLOWING GUIDELINES AND PARAMETERS.

- MUSIC VERSION 6.3
- "DRAFT NEW MUSIC MODELING GUIDELINES" SYDNEY CATCHMENT MANAGEMENT AUTHORITY (AUGUST 2010)
- SF CHAMBER NODE MODELLED WITH 'K' VALUES SET TO 1
- RAINFALL STATION 66.062 SYDNEY OBSERVATORY HILL, 6 MINUTE TIME STEP 1962 TO 1966
- SYDNEY CATCHMENT MANAGEMENT AUTHORITY (CMA) SOURCE NODE(S) UTILIZING MODIFIED % IMPERVIOUS AREA, RAINFALL THRESHOLD, SOIL PROPERTIES & POLLUTANT CONCENTRATIONS
- NO DRAINAGE ROUTING BETWEEN NODES.

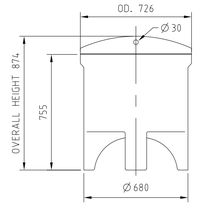
THE SYSTEM HAS BEEN MODELLED IN ACCORDANCE WITH COUNCIL'S SUSTAINABLE CITY DCP AND ENGINEERING DESIGN FOR DEVELOPMENTS.

TSS 80% REDUCTION
TP 45% REDUCTION
TN 45% REDUCTION

TREATMENT DEVICES;
1. 2 x 20m2 CHAMBERS
2. 2 x 6 SPELL FILTER FULL HEIGHT CARTRIDGE
3. 2 x 5 kL RAINWATER TANKS (COMMON AREA)
4. 2 x 3 kL RAINWATER TANKS EXISTING BUILDINGS

WSUD SUMMARY

THE PROPOSED STORMWATER QUALITY TREATMENT TRAIN COMPRISES OF 2 20m2 CHAMBERS WITH 6 x SPELL FILTER FULL HEIGHT CARTRIDGES IN EACH CHAMBER TO REMOVE DIFFERENT SOURCE POLLUTANTS. IT IS OUR OPINION THAT IF THESE MEASURES ARE IMPLEMENTED, THE PROPOSED DEVELOPMENT WILL COMPLY WITH THE INTENT OF THE SUTHERLAND SHIRE COUNCIL REQUIREMENT. IN ADDITION, THE PROPOSED STORMWATER QUALITY TREATMENT TRAIN SHALL BE MAINTAINED AND SERVICED BY THE OWNERS CORPORATION OF THE PROPOSED DEVELOPMENT AT NO COST TO COUNCIL.



SPEL FILTER SF.29-EMC DETAIL
SCALE 1:20
BY SPEL ENVIRONMENTAL CONTACT INFORMATION:
(AU) PHONE: 1300 773 500
100 SILVERWATER RD, SILVERWATER 2128

Revisions		
E	26/04/21	UPDATED ARCHITECTURALS
D	2/08/19	UPDATED ARCHITECTURALS
C	20/03/19	UPDATED ARCHITECTURALS
B	12/11/18	UPDATED ARCHITECTURALS
A	10/01/17	CONCEPT FOR COUNCIL

EROSION CONTROL NOTES

1. ALL EROSION AND SILTATION CONTROL DEVICES ARE TO BE PLACED PRIOR TO THE COMMENCEMENT OF ANY CONSTRUCTION WORKS, AND ALL SILT TRAPS ARE TO HAVE DEPOSITED SILT REMOVED REGULARLY DURING CONSTRUCTION.
2. ALL TREES ARE TO BE PRESERVED UNLESS INDICATED OTHERWISE ON THE ARCHITECT'S OR LANDSCAPE ARCHITECT'S DRAWINGS. EXISTING GRASS COVER SHALL BE MAINTAINED EXCEPT IN AREAS CLEARED FOR BUILDINGS, PAVEMENTS ETC.
3. INSTALL TEMPORARY SEDIMENT BARRIERS TO ALL INLET PITS LIKELY TO COLLECT SILT LADDEN WATER, TO COUNCIL'S STANDARDS
4. NOT WITHSTANDING DETAILS SHOWN IT IS THE CONTRACTORS SOLE RESPONSIBILITY TO ENSURE THAT ALL SITE ACTIVITIES COMPLY WITH THE REQUIREMENTS OF THE CLEAN WATERS ACT.
5. ALL TOPSOIL TO BE CONSERVED FOR RE-USE ON SITE

NOTES

1. ALL LINES ARE TO BE Ø100 U.P.V.C @ MIN 1.0% GRADE UNLESS NOTED OTHERWISE. CHARGED LINES TO BE SEWER GRADE & SEALED.
2. IT IS THE CONTRACTORS RESPONSIBILITY TO LOCATE & LEVEL ALL EXISTING SERVICES PRIOR TO THE COMMENCEMENT OF ANY EARTHWORKS.
3. ALL PIPES TO HAVE MIN 150mm COVER IF LOCATED WITHIN PROPERTY.
4. ALL PITS IN DRIVEWAYS TO BE 450x450 CONCRETE AND ALL PITS IN LANDSCAPED AREAS TO BE 450x450 PLASTIC.
5. PITS LESS THAN 600 DEEP MAY BE BRICK, PRECAST OR CONCRETE.
6. PITS DEEPER THAN 900 MUST BE 900x900 AND HAVE STEP RUNGS AT 300 CENTRES.
7. ALL BALCONIES AND ROOFS TO BE DRAINED AND TO HAVE SAFETY OVERFLOWS IN ACCORDANCE WITH RELEVANT AUSTRALIAN STANDARDS.
8. ALL EXTERNAL SLABS TO BE WATERPROOFED.
9. ALL GRATES TO HAVE CHILD PROOF LOCKS.
10. ALL DRAINAGE WORKS TO AVOID TREE ROOTS.
11. ALL DP'S TO HAVE LEAF GUARDS
12. ALL EXISTING LEVELS TO BE CONFIRMED BY BUILDER PRIOR TO CONSTRUCTION.
13. ALL WORK WITHIN COUNCIL RESERVE TO BE INSPECTED BY COUNCIL PRIOR TO CONSTRUCTION.
14. COUNCIL'S ISSUED FOOTWAY DESIGN LEVELS TO BE INCORPORATED INTO THE FINISHED LEVELS ONCE ISSUED BY COUNCIL.
15. ALL WORK SHALL BE IN ACCORDANCE WITH B.C.A. AND A.S.3500.3.
16. EXISTING STORMWATER PIPE LOCATIONS HAVE BEEN ASSUMED. PLUMBER TO INSPECT PRIOR TO WORKS AND UPGRADE PIPES AS NECESSARY.

SYMBOLS

F.F.L.	FINISHED FLOOR LEVEL
F.G.L.	FINISHED GARAGE LEVEL
T.K.	TOP OF KERB
* 11.0	FINISHED LEVEL
+ 11.0	EXISTING LEVEL
S.L.	SURFACE LEVEL
I.L.	INVERT LEVEL
20 R	ROOF CATCHMENT AREA (m2)
20 I	IMPERVIOUS CATCHMENT AREA (m2)
20 L	LANDSCAPED CATCHMENT AREA (m2)
● DP	Ø 100 DOWN PIPE OR EQUIVALENT
SP	SPREADER
● VD	VERTICAL DROP
● VR	VERTICAL RISER
	RAIN WATER HEAD & DOWN PIPE
	CLEAN OUT POINT
SUMP	Ø 150 SUMP
	CONCRETE COVER JUNCTION PIT
	GRATED INLET PIT 450x450
	200Wx100D GRATED DRAIN WITH 2% BTM SLOPE
	STORMWATER PIPE
	SUSPENDED STORMWATER PIPE
	CHARGED STORMWATER PIPE
	PUMP LINE
	Ø 100 SUBSOIL PIPE
	SILT FENCE
	OVERLAND FLOW

CLIENT
CAPITAL DEVELOPMENT

PROJECT
PROPOSED DEVELOPMENT
RAITH - Lot 101 FERN AVE, BRADBURY

TITLE
MUSIC RESULTS DETAILS

A.C.N. 090 572 973
UNITED
UNITED CONSULTING ENGINEERS
PTY LTD
Civil/Structural Engineers
Shop 1, 147-153 Liverpool Rd, Burwood
Burwood NSW, 2134
Telephone: (02) 9715 5111
Facsimile: (02) 9715 6222
Mobile: 0411 453 012
Email: united_eng@bigpond.com

Copyright

Approved: Mark Anthony Boudib MIEAust, CPEng, NPER

North	Designed	Drawn
	MAB	F.B.
	Checked	Scale
	MAB	1:100
	Drawing No	Sheet / Issue
	16MB7088/D010	10 of 11 / E

FOR D.A. ONLY
CAMPBELLTOWN COUNCIL

DIAL 1100 BEFORE YOU DIG
NO SUBSURFACE INVESTIGATION HAS BEEN MADE IT IS YOUR RESPONSIBILITY TO OBTAIN SERVICE DIAGRAMS FROM RELEVANT AUTHORITIES



Revisions		
E	26/04/21	UPDATED ARCHITECTURALS
D	2/08/19	UPDATED ARCHITECTURALS
C	20/03/19	UPDATED ARCHITECTURALS
B	12/11/18	UPDATED ARCHITECTURALS
A	10/01/17	CONCEPT FOR COUNCIL

EROSION CONTROL NOTES

1. ALL EROSION AND SILTATION CONTROL DEVICES ARE TO BE PLACED PRIOR TO THE COMMENCEMENT OF ANY CONSTRUCTION WORKS, AND ALL SILT TRAPS ARE TO HAVE DEPOSITED SILT REMOVED REGULARLY DURING CONSTRUCTION.
2. ALL TREES ARE TO BE PRESERVED UNLESS INDICATED OTHERWISE ON THE ARCHITECT'S OR LANDSCAPE ARCHITECT'S DRAWINGS. EXISTING GRASS COVER SHALL BE MAINTAINED EXCEPT IN AREAS CLEARED FOR BUILDINGS, PAVEMENTS ETC.
3. INSTALL TEMPORARY SEDIMENT BARRIERS TO ALL INLET PITS LIKELY TO COLLECT SILT LADDEN WATER, TO COUNCIL'S STANDARDS
4. NOT WITHSTANDING DETAILS SHOWN IT IS THE CONTRACTORS SOLE RESPONSIBILITY TO ENSURE THAT ALL SITE ACTIVITIES COMPLY WITH THE REQUIREMENTS OF THE CLEAN WATERS ACT.
5. ALL TOPSOIL TO BE CONSERVED FOR RE-USE ON SITE

NOTES

1. ALL LINES ARE TO BE Ø100 U.P.V.C @ MIN 1.0% GRADE UNLESS NOTED OTHERWISE. CHARGED LINES TO BE SEWER GRADE & SEALED.
2. IT IS THE CONTRACTORS RESPONSIBILITY TO LOCATE & LEVEL ALL EXISTING SERVICES PRIOR TO THE COMMENCEMENT OF ANY EARTHWORKS.
3. ALL PIPES TO HAVE MIN 150mm COVER IF LOCATED WITHIN PROPERTY.
4. ALL PITS IN DRIVEWAYS TO BE 450x450 CONCRETE AND ALL PITS IN LANDSCAPED AREAS TO BE 450x450 PLASTIC.
5. PITS LESS THAN 600 DEEP MAY BE BRICK, PRECAST OR CONCRETE.
6. PITS DEEPER THAN 900 MUST BE 900x900 AND HAVE STEP RUNGS AT 300 CENTRES.
7. ALL BALCONIES AND ROOFS TO BE DRAINED AND TO HAVE SAFETY OVERFLOWS IN ACCORDANCE WITH RELEVANT AUSTRALIAN STANDARDS.
8. ALL EXTERNAL SLABS TO BE WATERPROOFED.
9. ALL GRATES TO HAVE CHILD PROOF LOCKS.
10. ALL DRAINAGE WORKS TO AVOID TREE ROOTS.
11. ALL DP'S TO HAVE LEAF GUARDS
12. ALL EXISTING LEVELS TO BE CONFIRMED BY BUILDER PRIOR TO CONSTRUCTION.
13. ALL WORK WITHIN COUNCIL RESERVE TO BE INSPECTED BY COUNCIL PRIOR TO CONSTRUCTION.
14. COUNCIL'S ISSUED FOOTWAY DESIGN LEVELS TO BE INCORPORATED INTO THE FINISHED LEVELS ONCE ISSUED BY COUNCIL.
15. ALL WORK SHALL BE IN ACCORDANCE WITH B.C.A. AND A.S.3500.3.
16. EXISTING STORMWATER PIPE LOCATIONS HAVE BEEN ASSUMED. PLUMBER TO INSPECT PRIOR TO WORKS AND UPGRADE PIPES AS NECESSARY.

SYMBOLS

F.F.L.	FINISHED FLOOR LEVEL
F.G.L.	FINISHED GARAGE LEVEL
T.K.	TOP OF KERB
* 11.0	FINISHED LEVEL
+ 11.0	EXISTING LEVEL
S.L.	SURFACE LEVEL
I.L.	INVERT LEVEL
20 R	ROOF CATCHMENT AREA (m2)
20 I	IMPERVIOUS CATCHMENT AREA (m2)
20 L	LANDSCAPED CATCHMENT AREA (m2)
DP	Ø100 DOWN PIPE OR EQUIVALENT
SP	SPREADER
VD	VERTICAL DROP
VR	VERTICAL RISER
	RAIN WATER HEAD & DOWN PIPE
	CLEAN OUT POINT
SUMP	Ø150 SUMP
	CONCRETE COVER JUNCTION PIT
	GRATED INLET PIT 450x450
	200Wx100D GRATED DRAIN WITH 2% BTM SLOPE
	STORMWATER PIPE
	SUSPENDED STORMWATER PIPE
	CHARGED STORMWATER PIPE
	PUMP LINE
	Ø100 SUBSOIL PIPE
	SILT FENCE
	OVERLAND FLOW

REFER TO DRAWING 16MB7088/D08 & D09 FOR DRAINAGE DETAILS

FOR D.A. ONLY
CAMPBELLTOWN COUNCIL

DIAL 1100 BEFORE YOU DIG
NO SUBSURFACE INVESTIGATION HAS BEEN MADE IT IS YOUR RESPONSIBILITY TO OBTAIN SERVICE DIAGRAMS FROM RELEVANT AUTHORITIES

SOIL AND WATER MANAGEMENT PLAN

SCALE 1:400

CLIENT
CAPITAL DEVELOPMENT

PROJECT
PROPOSED DEVELOPMENT
RAITH - Lot 101 FERN AVE, BRADBURY

TITLE
SOIL AND WATER MANAGEMENT PLAN

A.C.N. 090 572 973
UNITED
UNITED CONSULTING ENGINEERS PTY LTD
Civil/Structural Engineers
Shop 1, 147-153 Liverpool Rd, Burwood
Burwood NSW, 2134
Telephone: (02) 9715 5111
Facsimile: (02) 9715 6222
Mobile: 0411 453 012
Email: united_eng@bigpond.com
Copyright

Approved: Mark Anthony Boutib MIEAust. CPEng. NPER

North	Designed MAB	Drawn F.B.	
	Checked MAB	Scale 1:400	
	Drawing No 16MB7088/D011	Sheet 11 of 11	Issue E