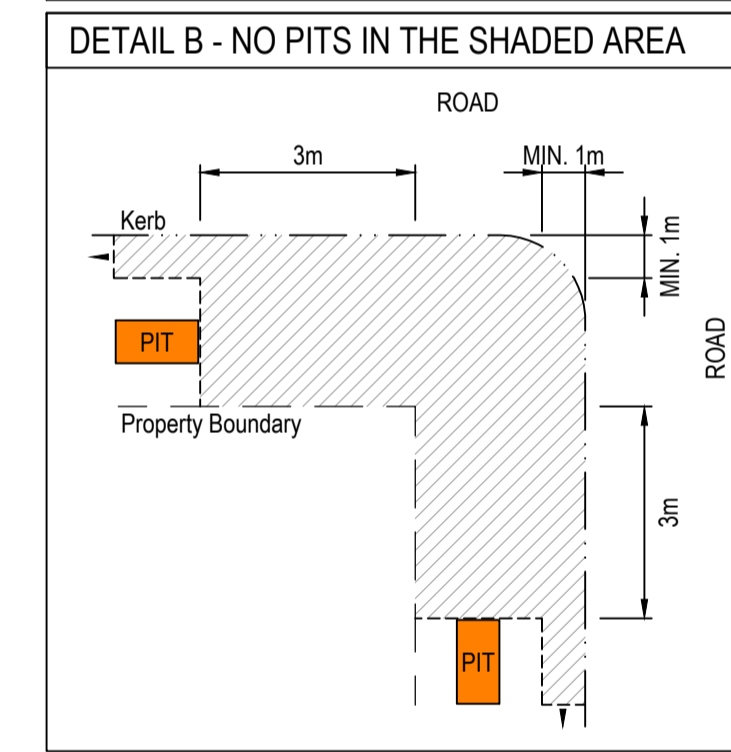


MINIMUM CONDUIT DEPTH *		
LOCATION	A	B
Verge	450mm	750mm
Local Road	600mm	Energex 800mm; Ergon 900mm
DTMR Road	800mm	1200mm

\* supersedes Energex/Ergon requirements



- LEGEND: NBN CONDUITS & PITS**
- Fibre Access Node (FAN) site
  - Fibre Distribution Hub (FDH) site - 1m x 1m
  - Proposed 100mm Main Conduit
  - Proposed 50mm Lateral Conduit
  - Proposed 23mm Service Drop
  - Proposed length of bored conduit
  - Conduits by Civil Contractor
  - Proposed shared trench
  - Service Drop Access Pit
  - Local Network Pit Premises Connection (Houses an MPT)
  - Boundary Pit Cross-Road & Other Premises Connection (No MPT)
  - Local Network Connection Pit Premises Connection & Fibre Splice Closure
  - Distribution / Local Network Connection Pit at entry/exit to estate; @ 250m ccs on distribution conduit
  - Fibre Distribution Hub (FDH) Pit Within 5m of FDH Site
  - Multi Dwelling Unit (MDU)
  - Marker Post (Post to be numbered)
  - Depth over alignment indicator (used with every Marker Post)
  - Descriptor Box (Description of type of work & Quantity involved)
  - Transformer Pad Mount / Pole Mount
  - Existing Telstra conduit trench layout (Proposed conduit indicated for comms cable)
  - Existing NBN 100mm conduit
  - Existing Telstra P100 conduit
  - Existing or proposed Energex pole (& pole ID)
  - Existing Telstra Exchange
  - Existing Telstra Pits (size 2,3,4,5,6,7,8 or 9)
  - Existing Telstra Manholes (Access Chambers)
  - Existing Traffic Signals Box
  - Existing network item to be removed/replaced
  - 'C' communications marker plate

**ORIGINAL ISSUE**

**"AS CONSTRUCTED" DOCUMENTS**  
The electrical contractor shall email the "as constructed" drawing, test results & closure documents to:  
• asconstructed@robus.com.au

**"AS CONSTRUCTED" CERTIFICATION**  
I certify as follows:  
The installation of NBN conduits and pits has been completed in accordance with this drawing & NBN specification NBN-TE-CTO-194, subject to any changes marked up in red. Mandrel testing of all conduits has been performed as detailed on the attached Mandrel Test Report. The minimum depths of conduits are as specified, except as marked up in red.  
signature of certifier:  
name of authorised certifier:  
date of certification:  
name of company:  
certifier's position:

**CONSTRUCTION CONTACTS**  
**ELECTRICAL ENGINEER**  
ROBIN RUSSELL & ASSOCIATES PTY LTD  
ELECTRICAL DESIGNER  
WILLIAM SCHARDT - 0419 718 552  
COMMS CONDUIT DESIGNER  
SHANE MILLS - 07 3353 4660  
CONSTRUCTION COORDINATOR  
SHANE HYDE - 0419 021 772  
**CIVIL ENGINEER**  
PEAK URBAN  
ALEX OOSTHUIZEN Ph: 0482 161 901  
**SURVEYOR**  
SAUNDERS HAVILL GROUP  
CLINTON URQUHART Ph: 0412 974 472

**SITE INFORMATION**

TOTAL NUMBER OF LOTS  
37

PROPERTY DESCRIPTION  
Proposed Lots 350-351, 364 - 375, 383 - 385, 415 - 425, 427 - 429 & 481 - 486  
Cancelling Lot 1002 on SP248537

**NBN CONDUIT SCHEDULE - CIVIL CONTRACTOR**

CODE	ITEM	Refer: AS/NZS 1477:2006 - Table 4.2(A)			QUANTITY (metres)
		WALL THICKNESS	MEAN OUTSIDE DIA.	MEAN INSIDE DIA.	
P20	SDU service drop	PN12	27mm	24mm	-
P50	MDU service drop	PN12	60mm	54mm	-
P50	road crossing	PN12	60mm	54mm	70
P100	road crossing	PN9	114mm	104mm	132
P100	footpath conduits adj. retaining walls	PN9	114mm	104mm	92
	Additional trenching				15

**NBN CONDUIT SCHEDULE - ELECTRICAL CONTRACTOR**

CODE	ITEM	Refer: AS/NZS 1477:2006 - Table 4.2(A)			QUANTITY (metres)
		WALL THICKNESS	MEAN OUTSIDE DIA.	MEAN INSIDE DIA.	
P20	SDU service drop	PN12	27mm	24mm	189
P50	MDU service drop	PN12	60mm	54mm	-
P50	footpath	PN12	60mm	54mm	86
P100	footpath	PN9	114mm	104mm	290
P100	distribution network	PN9	114mm	104mm	-
	Additional trenching				66

**NOTES - NBN**

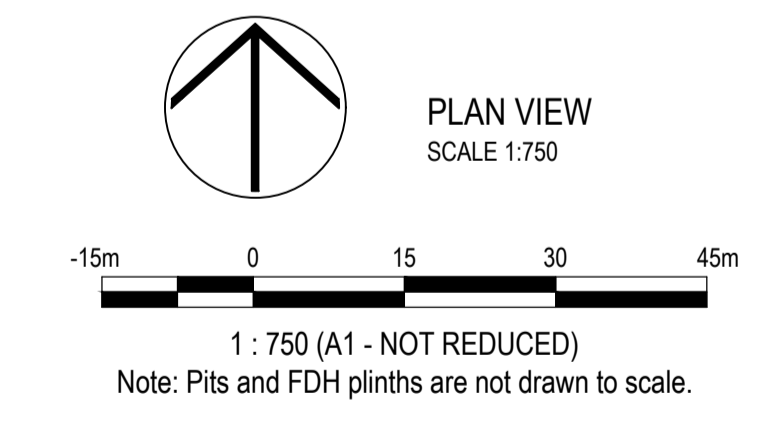
NBN conduits and pits shall be installed in compliance with NBN Co specification: NBN-TE-CTO-194 V 11.0 *New Developments: Deployment of the NBN Co Conduit and Pit Network - Guidelines for Developers*. This can be downloaded at: <http://www.nbnco.com.au/develop-or-plan-with-the-nbn/new-developments/design-build-install/pit-and-pipe-build-process.html>  
Additional requirements and explanatory information are contained in Robin Russell & Associates' *General Specification for Installation of Electricity Reticulation and Street Lighting - Issue 'AA'*.  
For details of trenching and electrical conduits, refer associated RRA works plan.  
In residential subdivisions, NBN conduits shall be laid in shared trenches, above electricity conduits. The Civil Contractor shall install road-crossing conduits and other conduits as shown (see legend).  
In commercial subdivisions, or where no electricity conduit is present, NBN conduits shall be laid on the standard telecommunications alignment, as specified.  
On State roads, the required cover of 1200mm precludes the use of shared trenches.  
The installation of white warning tape is NOT required. If conduit is not installed in a shared trench with electricity, brass "C" markers shall be installed in the kerbs directly above road-crossing conduits.  
Contractors shall not access existing Telstra pits or conduits.  
Pits shall be installed relative to the property boundary as shown, immediately outside the exclusion zone of the electricity pillar.  
The Electrical Contractor shall ascertain final verge levels from the Civil Contractor before installing conduits & pits.  
The Electrical Contractor shall give the Superintendent written notice (a) 10 business days before it anticipates achieving Practical Completion of the conduit and pit installation, and (b) on achieving Practical Completion, to allow the required notices to be given to NBN Co.  
Conduit lengths are nominal horizontal distances only. Fibre lengths shall be verified in advance by actual measurement.  
The electrical contractor shall perform mandrel testing of all telecommunications conduits, including cross-road and lead-in conduits installed by the civil contractor.

**SOURCE DOCUMENTS**

CREATOR	DRAWING	DWG. NO.	REV. NO.	DATE
ROBIN RUSSELL & ASSOCIATES	ELECTRICAL	F228	A	30/11/2023
COLLIERS	CIVIL	21-0265_X_BASE_DESIGN	-	21/10/2022
COLLIERS	CIVIL	21-0268_X_BASE_DESIGN	-	07/02/2023
COLLIERS	CIVIL	23-0271_X_BASE_DESIGN	-	27/11/2023

**NBN PIT SCHEDULE - ELECTRICAL CONTRACTOR**

PIT CODE	ITEM	NOMINAL EXTERNAL DIMENSIONS	QUANTITY
2	service drop access pit	650 x 280 x 565mm	6
5	service/boundary pit (single lid)	700 x 450 x 650mm	10
6	local network connection pit (dual lid)	1360 x 555 x 650mm	5
8	distribution/local network connection pit (dual lid)	1360 x 555 x 860mm	1



**NBN PITS**  
NBN PITS MUST BE INSTALLED IMMEDIATELY OUTSIDE THE EXCLUSION ZONE (ERGON 400mm & ENERGEX 600mm) OF THE ELECTRICITY PILLAR & EXACTLY 3m FROM CORNER TRUNCATIONS AS PER DETAIL B.

DATE	REV	REVISION	APP.	DATE	REV	REVISION	APP.	CURRENT REVISION CHANGES:
04/12/2023	A	INITIAL ISSUE	RR					

**ROBIN RUSSELL & ASSOCIATES PTY. LTD.**  
CONSULTING ENGINEERS - ELECTRICAL

**SUBDIVISION ELECTRICAL SERVICES**  
204/5 Seaview Street, Stafford, QLD 4053  
Tel: (07) 3872 5556  
Fax: (07) 3872 5566  
Email: rr@robus.com.au  
www.robus.com.au  
A.B.N. 78 010 589 661

COUNCIL	IPSWICH CITY	DESIGNED	SHANE MILLS	DESCRIPTION
COUNCIL REF	9332/2019/POA	DRAWN	SHANE MILLS	<b>TELECOMMUNICATION</b>
UBD REF	Map Gnd	CHECKED	K.R.	
DWT REV	V48 20210504	APPROVED BY	ROBIN RUSSELL RREQ 1546	CLIENT
DATE	04/12/2023	SIGNED	<i>R.R. Russell</i>	<b>HB Doncaster Pty. Ltd.</b>

LOCATION  
**BELLEVUE ESTATE - STAGE 12**  
**323 - 395 RIPLEY ROAD**  
**RIPLEY, 4306**

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DRAWING No.  
**F228-N-01A**

NBN ID REQUEST NO./TELSTRA AFR SHEET No.  
**STG-M000147578 1 OF 1**