

COMMUNICATION NETWORK SPECIFICATIONS

BACKGROUND

The Sandhurst Fibre Optic Network

The Sandhurst communication network provides a range of services, including distribution of analogue and digital free-to-air television, free-to-air satellite channels, FOXTEL, Ultra-High-Speed Internet, IP Telephony, security monitoring for all residents and golf view camera, plus gate operation for those who live in a Gated Community Precinct.

Further services, such as a Club Intranet and new entertainment services such as Video-on-Demand, are all possibilities with this latest technology.

Wiring Your Home

To be able to connect to the Club's Optical Fibre Network, you **must** wire your home in accordance with the specifications provided. These specifications outline the use of quality materials and also requires all wiring in your home to terminate in a Wired Services Cabinet (WSC) installed in your garage. Your Builder/Telecommunications Contractor **must** strictly follow the specifications and not substitute "equivalent" materials unless approved in writing by the Sandhurst Club Architectural Review Committee. The wiring system specified will future-proof your home for some time to come and is likely to add value to your home. *If you are about to commence construction, wiring your home correctly during initial construction will save you considerable expense when compared to the cost of rewiring your home once you have moved in.*

Connecting Your Home to the Sandhurst network

It is also important during construction of your home that your Builder/Contractor provides the appropriate connections between your home and the street. During discussions with the Sandhurst Club Architectural Review Committee and your Builder/Telecommunications Contractor you need to decide, prior to construction, whether you will connect both to Telstra and the Club's Optical Fibre Network. A trench is dug to allow a conduit to be installed to connect your home to the Club's Optical Fibre Network pit for your lot. Once the Club's Optical Fibre Network is connected to the WSC in your garage, Telephone, Internet and TV services, including FOXTEL, are available from the Club's service provider ClubCOM Utilities Pty Ltd. If you require a separate telephone service from Telstra, a second conduit should be installed in the trench to connect the Telstra copper service to your home. Your Builder/Telecommunications Contractor is responsible for providing these conduits (see diagram on page 4).

The Club recommends ClubLINKS Security as a preferred contractor for home wiring and Security module installation.

Contact Details:

ClubCOM Utilities Pty Ltd:	General Enquiries	1300 880 809
ClubLINKS Security Pty Ltd	Quotations for comms & security home wiring	1300 880 809
Email:	shcsecurity@clublinks.com.au	

Alternatively you may wish to contact Converge for a quote:

Converge:	Quotations for comms & security home wiring	8706 0000
Email:	helpdesk@converge.com.au	



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HOME WIRING GUIDELINES

This document is the technical specification and is to be provided to your Builder/Telecommunications Contractor. If you are unsure of any of the information contained herein, please contact ClubCOM Utilities (1300 880 809) to ensure the correct standards are followed. We are more than happy to provide you with the right advice and support so that you get it right the first time.

HOME WIRING – Star wired from WSC

All cabling shall use a star wire topology that is all cabling is wired from the Wired Services Cabinet (WSC) in the garage to the outlet plate or device as an individual feed without joints, tap offs or splitting.

All telecommunications cabling must be installed by a licensed contractor to TS009, AS3000, relevant Australian Standards and ACIF guidelines otherwise your home may not be compliant. These documents detail the correct separations and installation requirements.

CONDUIT (Club Optic Fibre Communications)

One minimum 32mm diameter ACA approved telecommunications conduit must be run from the telecommunications pit in the street to the Wired Service Cabinet located in the garage. If any bends are required in the conduit, they must be 90-degree sweep bends (not elbow bends). The conduit must be a single continuous length with a draw wire provided to allow the ClubCOM contractor to pull the fibre through to your WSC. This is in addition to Telstra's requirements. It is the responsibility of your Builder/Telecommunications Contractor to provide these works.

WIRED SERVICES CABINET

The Wired Services Cabinet (WSC) is the central hub of the telecommunications network of the home. Typically it is a steel cabinet installed in the garage with a lock that houses all of the passive and active equipment. All services enter and exit this cabinet. This allows for total flexibility to the home owner in the future. **It must be of a minimum size of 380mm wide (to fit between studs) 1000 high and 200mm deep.** Typically the bottom of the cabinet is mounted 1200mm above finished floor level and is recessed into the wall with bottom and top ventilation into the cavity wall.

It needs to be sufficient in size so that it can cater for any active device such as alarm panels, television amplifiers, data switches and 240Vac power outlets and have enough room for cable looms, IDC blocks, splitters and couplers. Also the cabinet must have access **Sandhurst Club's** Optic Fibre communications network via underground conduit as described in above **Conduit** section.

Within the WSC, a space is required for the Optical Receiver of 300mm wide by 500mm high by 80mm deep. You must allow for this space over and above other equipment that your Builder/Telecommunications Contractor may install into the WSC. The Optical Receiver can be mounted on the inside of the door of the cabinet if required. If this option is chosen, your Builder/Telecommunications Contractor will need to provide a mounting plate on the door.

It is a requirement that your WSC is protected with a movement detector. For additional information please refer to the information sheet 'IS-9 Security System Requirements'.

NB: Two 10 Amp double GPOs are required to power the optical receiver and other equipment in the WSC.

It is the responsibility of your Builder/Telecommunications Contractor to provide these works.

TELEPHONE SERVICES

One of Sandhurst Club's key features is its own, world-class Telephony service, delivered exclusively via the Club's Optical Fibre Network. (Residents also have an option to choose a 2nd copper wire service provided by Telstra, in addition to the Club's own Telephony service.)

Telephone Service via the Optic Fibre – At pre-plaster stage, your Builder/Telecommunications Contractor must provide **Cat5e** cable from each telephone point in the home to meet (star wired) at the WSC. A Telephone socket (**RJ45**) socket must also be installed in the WSC configured in a 'mode 3' format for the security monitoring device.

Optional Telephone Service via Telstra – A Telstra box will be located on the outside wall of the home where the underground Telstra telephone conduit joins the home. This should be located 500mm above ground level within 1 metre of the **electrical** meter box on your home. From that point the Telstra line will continue directly to the WSC. This wiring will allow the Resident to choose at any time to use either a copper wire service from Telstra or the VoIP Service provided through the Club Fibre infrastructure. Please contact B-linked Communications (9558 1213) or Monash Communications (9560 4420) for any Telstra telephone connections that may be required.



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GATE INTERCOM (Gated Communities only)

If Residents build a home in a Gated Community using the ClubCOM Utilities Telephony Service (via the Club's Optical Fibre Network), every telephone within the home can be used as a Gate Intercom. (In other words, every telephone can be used as a Gate Intercom and the remaining specifications below, regarding a nominated gate Intercom, can be ignored.)

For Gated Communities electing to use Telstra rather than the Club's Telephony Service, an additional handset must be nominated as the Gate Intercom. This telephone handset must terminate at the WSC to allow communication with the gate. A normal analogue handset located in a general area wired with **Cat5e** cable is the typical installation. The presentation to the optical receiver in the WSC is by one **RJ45** plug. It is the responsibility of your Builder/Telecommunications Contractor to provide these works.

If the resident requires a local monitor at the intercom handset a **RG6** Quad shield cable will also need to be run from the WSC and integrated with the television network.

TELEVISION

RG6 Quad Shield cable star wired (not loop or tap and drop) needs to run from each TV outlet location to the WSC. **All terminations are to be F type and all splitters/couplers need to be located within the WSC.** The presentation to the optical receiver is via one **F type connector** to be provided by the Builder or Telecommunications Contractor. The typical RF output level is 75dBµV +/- 2 dB. A high quality amplifier (capable of handling 60+ channels) may be required if a large number of outlets are required.

To take advantage of any future Video on demand services, it is recommended that you have installed a multi-media socket (Two RJ45 and two RG6 plugs), with two **Cat5e** cables from each television outlet terminated **RJ45** to the WSC either unterminated or terminated on a high band IDC block and two RG6 Quad Shield star wired to the WSC. This will allow any combination of Digital or Analogue channels, FOXTEL or VIDEO on Demand to be delivered to your TV.

ALARM

All cabling must be a minimum 6 core 7/0.20 ACA approved alarm cabling to be installed from WSC to each device. Cabling needs to be provided for any motion detectors, reed switches, duress buttons, smoke detectors, door locks etc. **Cat5** (or alarm panel specific) cable needs to be run for the keypad.

It is recommended, but not essential, to locate the alarm panel in the WSC. A telephone line is necessary to connect the alarm panel to the telephone network in the WSC. It is the responsibility of your Builders/Telecommunications Contractor to provide these works.

NB: Your alarm system wherever mounted **must** have a telephone socket mounted alongside for connection to either the Club's Optic Fibre or Telstra telephone network at the WSC.

DATA SERVICES

To allow computers to access the Internet via the Club's Optical Fibre Network, your Builder/Telecommunications Contractor must provide **Cat5e** cable from each data point to the WSC. Two methods of cabling are suggested. Method one is to locate future data switches/routers in a study or computer room where tie cables need to be run from the WSC to the study with all outlets star wired from the WSC to the final outlets terminating in a **RJ45** outlet. Method two is to locate the data switch/router in the WSC with star wiring to all outlets terminating in a **RJ45** outlet.

POWER in the WSC

Note: Two 10 Amp double GPOs are required to power the optical receiver and other equipment in the WSC.

NOTE

It is your Builder/Telecommunications Contractor's responsibility to provide the space, power and patch leads within the WSC to allow the optical Receiver and ATA data/Voice translator to be installed in the WSC by PBN.

For television, terminate with one F type connection (male) ready to be connected to the optical receiver.

For data, terminate with one RJ45 plug ready to be connected to the optical receiver.

For telephone, terminate with one RJ45 plug ready to be connected to either the ATA or the Telstra Lead-in

IF a separate Gate phone is chosen as an option in Gated Communities only:

For separate Gate Intercom, terminate with one additional RJ45 plug ready to be connected to the optical receiver.



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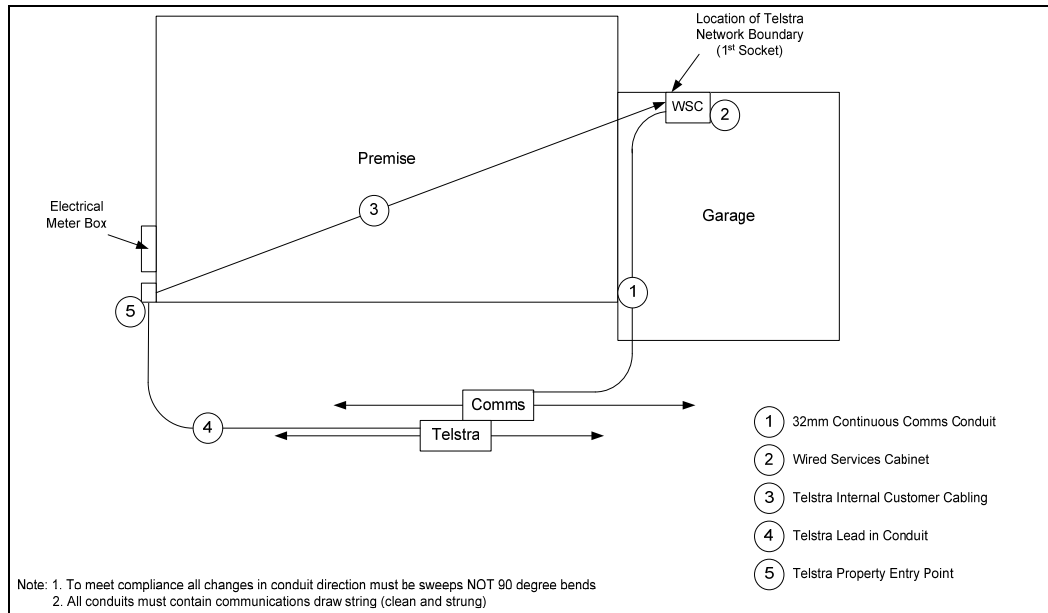
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COMMUNICATION NETWORK PIT AND PIPE LEAD DIAGRAMS

For Services delivered by the Club Optic Fibre Infrastructure or the option of Telephone services from Telstra:



Notes to Builders: See page 5 for details of contractors that can provide trench and conduits for Communications & Telstra

- Mandatory** - The 32mm conduit from the Communications PIT to the WSC must be one continuous conduit, clean and strung to allow the ClubCOM contractor to pull through the Fibre without damage. All TV and Data points should run from the WSC to the location in the room chosen by the resident (see note on TV and Data connections on previous page).
- Optional** (if Resident requires both ClubCOM and Telstra services to be connected to the property.) - The Telstra Leadin should be directly connected to the WSC as shown, and then any telephone lines within the home should be from the WSC to the location within the room. This will allow the resident to choose a copper wire telephone service or the ClubCOM Utilities Pty Ltd VoIP Service delivered via the Club Fibre infrastructure.

Owners please note:

When you are ready to connect services, please call: ClubCOM Utilities on: 1300 880 809

Current costs for all services are shown on the web page www.clubcomutilities.com.au

Current Connection costs are:

Scenario	Fee Charged (GST Inc)
1 New connection to Telephone only that requires a technician to visit the home	\$250.00
2 New connection to Telephone & Internet that requires a technician to visit the home	\$350.00 (\$250.00 for Telephone, \$100 for Internet)
3 New connection to Internet that is a self-installation	\$140.00
4 New connection to Internet that requires technical assistance onsite	\$140.00 + \$75 Per Hr +GST minimum charge ½ Hr., plus parts if required.
5 Telephone connection where a connection has previously been made to the network (i.e. The account just needs to be setup by IP Systems)	\$55.00



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SANDHURST CLUB PROPERTY OWNERS MUST DO'S FOR COMMUNICATION NEEDS

COMMUNICATIONS CABLING REQUIREMENTS

Two types of underground conduit are required: *Telephone / Optical Fibre

Do not delay, as these **must** be organised at the earliest opportunity so that all conduits are in place before the garage slab and any other concrete is in place.

The following Contractors are approved by Sandhurst and Telstra to provide trench and cabling conduit connections work on the Sandhurst Estate;

Telephone - call: Monash Communications
Peter warren Tel: (03) 9560 4420 Mob: 0409 236 250

Or

B-Linked Communications
Mark Bailey Tel: (03) 9558 1213 Fax: (03) 9558 1910

For budget purposes the standard cost for a 20 metre installation Telco Pit to side of home is: \$300 plus GST or
If both a Telstra and a Club Communications conduit are installed at the same time the budget cost is: \$450 plus GST.

Note:

1. If your builder is wiring the home you will need to ensure that the conduits are connected during the build cycle. ***The Fibre cannot be connected to your home unless the conduits are completed as specified.***
2. If either of the preferred contractors are chosen to perform the home wiring and security installation, they will book the conduit installation as part of the complete home wiring.
3. We recommend that you book a meeting with the preferred wiring contractor who will provide a specific quotation for the work that you require.

Home wiring and Security packages

Sandhurst Communications Conduit and Wired Services Cabinet

Includes: Supply & installation of 32mm continuous white ACA approved conduit from the Communications access pit in the street to the WSC in the garage of the residence, complete with full length draw rope. Supply & installation of metal Wired Services Cabinet in garage.

Sandhurst Standard Residential Communications Package

1 x Multi-Media point (TV, Foxtel, Video on Demand);
3 x telephone points;
4 x Television points;
1 x data point;
1 x television distribution amplifier;
Above work includes all cabling and terminations tested and certified.

Sandhurst Standard Residential Security Package

1 x Alarm panel, incl. power and battery back-up & LCD keypad;
4 x PIR motion detectors;
3 x Flush mount door reed switches;
2 x Duress Buttons;
2 x Monitored smoke detectors incl. compliance module;
1 x Flush mount internal piezo siren;
1 x Weatherproof siren kit, external siren, blue flashing strobe light and siren tamper switch.

Please note: These are matters of **utmost importance** – and not normally included in your building contract, and must be organised by the owner. Estate requirements are that these infrastructure installations must be completed prior to building completion.

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Communication Network Notification Form

Please complete the Notification Form below and return it to Sandhurst Club Architectural Review Committee **prior to commencing construction of your new home**. Please ensure you have read the Communication Network Specifications information sheet prior to completing the Notification Form. Should you require assistance with Communication Network Specifications please contact ClubCOM Utilities (Tel: 1300 880 809).

OWNER DETAILS

Lot Number: _____ Date: _____

Contact Name: _____

Mailing Address: _____

Postcode: _____

Phone (AH): _____ Phone (BUS): _____

Mobile: _____ Facsimile: _____

Email:

INSTALLER DETAILS (Contact details of the Company responsible for comms wiring).

Company Installer: _____

Company Name: _____

Contact Name: _____

Mailing Address: _____

Postcode: _____

Phone (BUS): _____ Mobile: _____

Facsimile: _____

Email:

ACA or equivalent Licence No. _____

Electrical Contractor Licence No. _____



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DESCRIPTION	YES	NO
I the owner have read and understood Sandhurst Club information sheet Communication Network Specifications.	<input type="checkbox"/>	<input type="checkbox"/>
I have given my Builder and/or Telecommunications Contractor a copy of Sandhurst Club information sheet Communication Network Specifications to ensure compliance.	<input type="checkbox"/>	<input type="checkbox"/>
I have discussed with my Builder and/or Telecommunications Contractor my requirements for security and communications within my home.	<input type="checkbox"/>	<input type="checkbox"/>
I have arranged for the following requirements to be installed in my home as part of the Communication Network-:	<input type="checkbox"/>	<input type="checkbox"/>
CONDUIT (Club Optic Fibre Communications)		
One continuous length of 32mm Diameter ACA approved conduit installed from the telecommunications pit to the Wired Services Cabinet installed.	<input type="checkbox"/>	<input type="checkbox"/>
WIRED SERVICES CABINET (WSC)		
Installed minimum 380mm wide, 1,000mm high & 200mm deep WSC in garage (larger if required)	<input type="checkbox"/>	<input type="checkbox"/>
240Vac power installed inside cabinet.	<input type="checkbox"/>	<input type="checkbox"/>
TELEPHONE SERVICES		
Telephone installation arranged	<input type="checkbox"/>	<input type="checkbox"/>
First telephone point installed in WSC	<input type="checkbox"/>	<input type="checkbox"/>
Install other outlets as required.	<input type="checkbox"/>	<input type="checkbox"/>
GATE INTERCOM (Gated Communities ONLY)		
Intercom cabling installed from WSC to required outlets (star wired).	<input type="checkbox"/>	<input type="checkbox"/>
Cabling is terminated as per Communications Network Specifications information sheet.	<input type="checkbox"/>	<input type="checkbox"/>
TELEVISION		
Wired in a star configuration back to the WSC, combined and an amplifier installed if required.	<input type="checkbox"/>	<input type="checkbox"/>
Ensure cabling is terminated as per Communications Network Specifications information sheet.	<input type="checkbox"/>	<input type="checkbox"/>
ALARM		
Read and understood Security System Requirements information sheet and installed to Sandhurst Club's minimum requirements.	<input type="checkbox"/>	<input type="checkbox"/>
Please note: It is a requirement that your Wired Services Cabinet be protected with a movement detector.	<input type="checkbox"/>	<input type="checkbox"/>
DATA SERVICES		
Cat5e Data cabling installed as required and terminated as per the Communications Network Specifications information sheet.	<input type="checkbox"/>	<input type="checkbox"/>
POWER		
Two 10 Amp double GPOs are required to power the optical receiver and other equipment in the WSC.	<input type="checkbox"/>	<input type="checkbox"/>
NOTE		
It is your Builder/Telecommunications Contractor responsibility to provide the space, power and patch leads to the optical receiver.	<input type="checkbox"/>	<input type="checkbox"/>
For television terminate with one F type connection (male) into the optical receiver.	<input type="checkbox"/>	<input type="checkbox"/>
For Sandhurst Intercom terminate with one RJ45 plug into the optical receiver.	<input type="checkbox"/>	<input type="checkbox"/>
For Data terminate with one RJ45 plug into the optical receiver.	<input type="checkbox"/>	<input type="checkbox"/>
OPTICAL RECEIVER INSTALLATION		
To arrange installation please contact PBN.	<input type="checkbox"/>	<input type="checkbox"/>

I / We the owner(s) of lot number _____ at Sandhurst Club agree that we have adhered to the requirements as set out in the Communication Network Specification information sheet.

Applicant Signature: _____ Date: _____

OFFICE USE ONLY	
Notification Form Received	Forwarded to ClubCOM Utilities



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