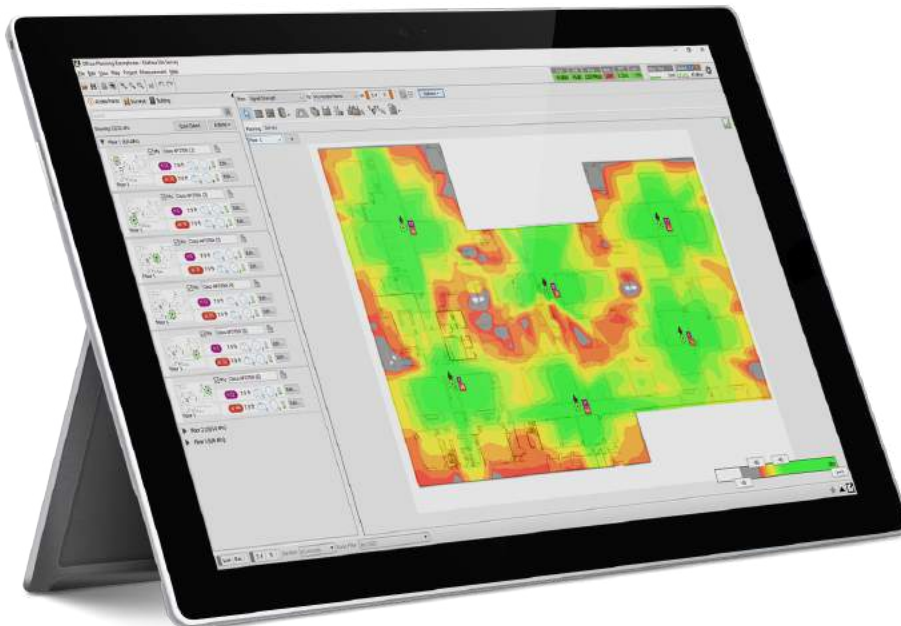


Sample Report on Wireless Network Design by Ekahau

# Sample Report on Wireless Network Design by Ekahau



Name: **Design at TH IT level 1**

Location: **LOT 13, JALAN TP 5A, TAMAN PERINDUSTRIAN UEP, 47600 SUBANG JAYA.**

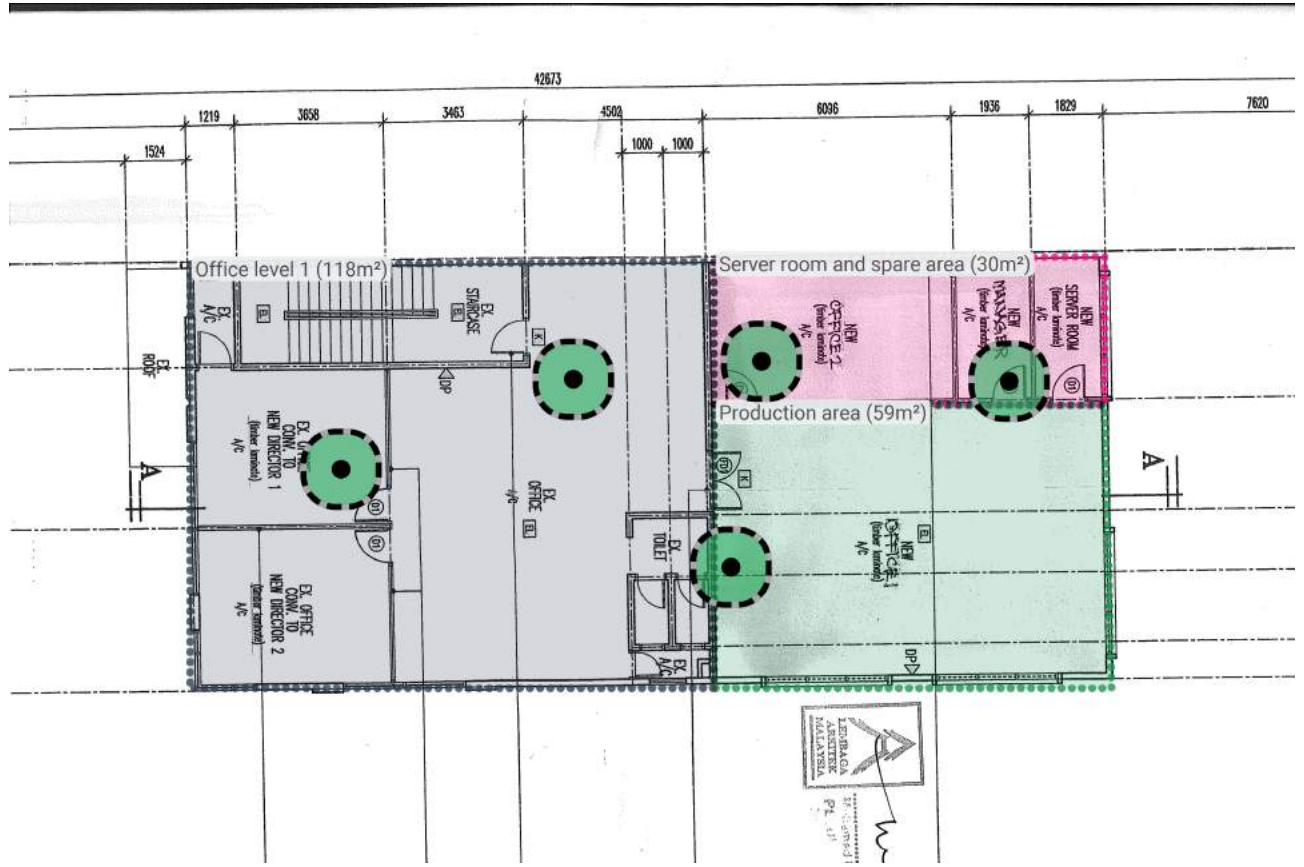
Responsible Person: **LEE TE HUA**

## Sample Report on Wireless Network Design by Ekahau

Project description
LEE TE HUA (11/5/20, 6:10 PM): This design is using Ekahau auto planner after loading the 3 different areas with the corresponding number of devices. The requirement is following Cisco design requirement and Cisco 2802i is selected. After the auto planner is created, a small tweak to turn off the AP3's 2.4 GHz to avoid channel interference.

# TH IT Prestij 16 level 1

## Survey routes and Access Points for TH IT Prestij 16 level 1



View as / Project Offset:	Measured
---------------------------	----------

### Office level 1 (118 m<sup>2</sup>)

Coverage Requirement: Cisco Design Guideline		
<b>2.4 GHz</b>	Signal Strength Min	<b>-65.0 dBm</b>
	Secondary Signal Strength Min	<b>-75.0 dBm</b>
	Signal-to-Noise Ratio Min	<b>25.0 dB</b>
	Data Rate Min	<b>12 Mbps</b>
	Channel Interference Max	<b>1 at min. -86.0 dBm</b>
	Round Trip Time (RTT) Max	<b>300 ms</b>
	Packet Loss Max	<b>2.0 %</b>

## Sample Report on Wireless Network Design by Ekahau

<b>5 GHz</b>	Signal Strength Min	<b>-65.0 dBm</b>
	Secondary Signal Strength Min	<b>-75.0 dBm</b>
	Signal-to-Noise Ratio Min	<b>25.0 dB</b>
	Data Rate Min	<b>12 Mbps</b>
	Channel Interference Max	<b>1 at min. -86.0 dBm</b>
	Round Trip Time (RTT) Max	<b>300 ms</b>
	Packet Loss Max	<b>2.0 %</b>
<b>Capacity Requirement</b>	<p><b>10</b>      Generic Laptop [File Sharing, Normal (10 Mbps)]</p> <p><b>10</b>      Generic Smartphone [Very High SLA (10 Mbps)]</p> <p><b>Total: 20 (200 Mbits/s)</b></p>	
<b>Notes</b>		

### Production area (59 m<sup>2</sup>)

Coverage Requirement: Cisco Design Guideline		
<b>2.4 GHz</b>	Signal Strength Min	<b>-65.0 dBm</b>
	Secondary Signal Strength Min	<b>-75.0 dBm</b>
	Signal-to-Noise Ratio Min	<b>25.0 dB</b>
	Data Rate Min	<b>12 Mbps</b>
	Channel Interference Max	<b>1 at min. -86.0 dBm</b>
	Round Trip Time (RTT) Max	<b>300 ms</b>
	Packet Loss Max	<b>2.0 %</b>
<b>5 GHz</b>	Signal Strength Min	<b>-65.0 dBm</b>
	Secondary Signal Strength Min	<b>-75.0 dBm</b>
	Signal-to-Noise Ratio Min	<b>25.0 dB</b>
	Data Rate Min	<b>12 Mbps</b>
	Channel Interference Max	<b>1 at min. -86.0 dBm</b>
	Round Trip Time (RTT) Max	<b>300 ms</b>
	Packet Loss Max	<b>2.0 %</b>
<b>Capacity Requirement</b>	<p><b>3</b>      Generic Laptop [Background Sync]</p> <p><b>3</b>      Generic Smartphone [Background Sync]</p> <p><b>Total: 6 (3 Mbits/s)</b></p>	
<b>Notes</b>		

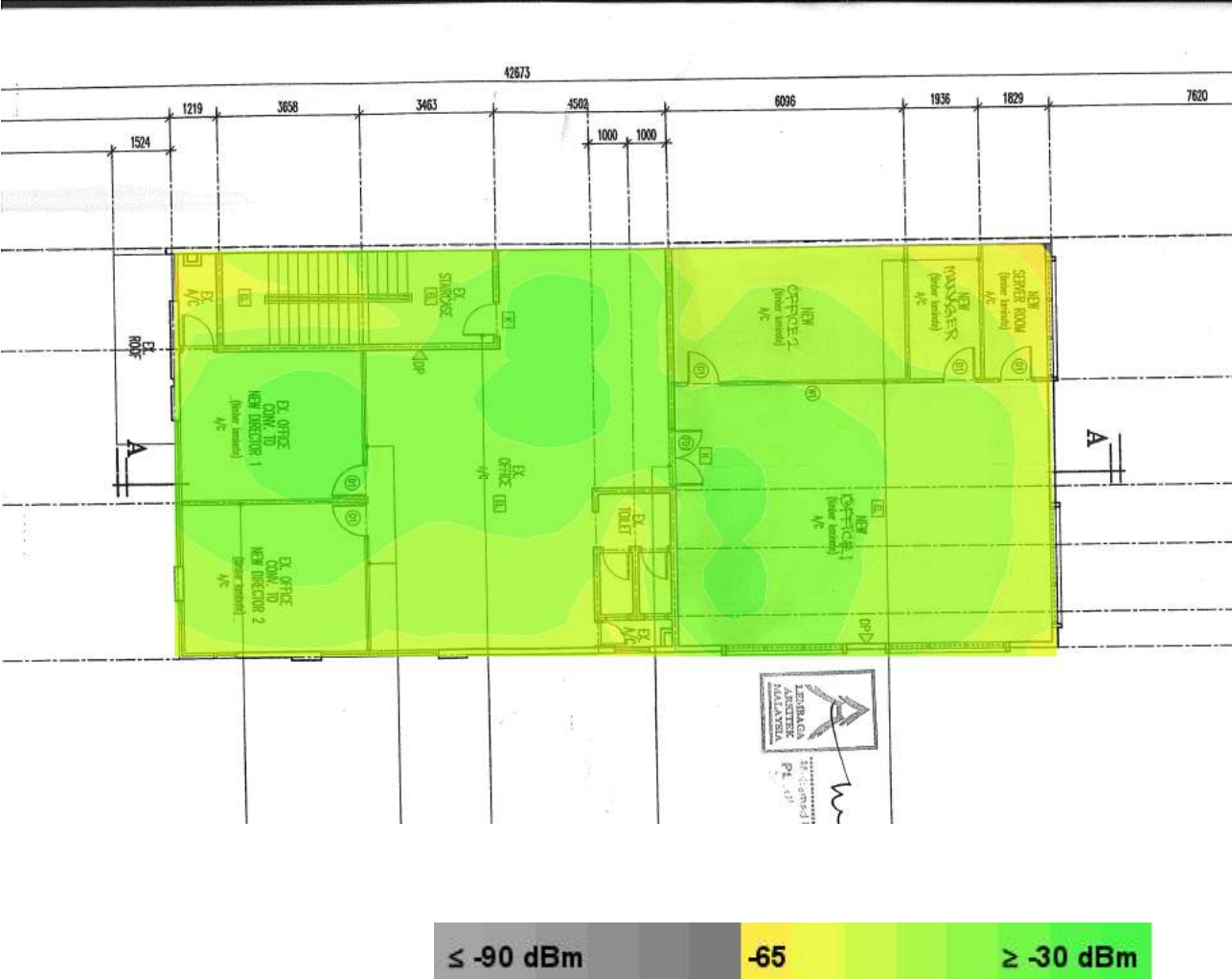
### Server room and spare area (30 m<sup>2</sup>)

## Sample Report on Wireless Network Design by Ekahau

Coverage Requirement: Cisco Design Guideline	
<b>2.4 GHz</b>	Signal Strength Min <b>-65.0 dBm</b>
	Secondary Signal Strength Min <b>-75.0 dBm</b>
	Signal-to-Noise Ratio Min <b>25.0 dB</b>
	Data Rate Min <b>12 Mbps</b>
	Channel Interference Max <b>1 at min. -86.0 dBm</b>
	Round Trip Time (RTT) Max <b>300 ms</b>
	Packet Loss Max <b>2.0 %</b>
<b>5 GHz</b>	Signal Strength Min <b>-65.0 dBm</b>
	Secondary Signal Strength Min <b>-75.0 dBm</b>
	Signal-to-Noise Ratio Min <b>25.0 dB</b>
	Data Rate Min <b>12 Mbps</b>
	Channel Interference Max <b>1 at min. -86.0 dBm</b>
	Round Trip Time (RTT) Max <b>300 ms</b>
	Packet Loss Max <b>2.0 %</b>
<b>Capacity Requirement</b>	<p><b>2</b> Generic Laptop [File Sharing, Normal (10 Mbps)]</p> <p><b>2</b> Generic Smartphone [Very High SLA (10 Mbps)]</p> <p><b>Total: 4 (40 Mbits/s)</b></p>
<b>Notes</b>	

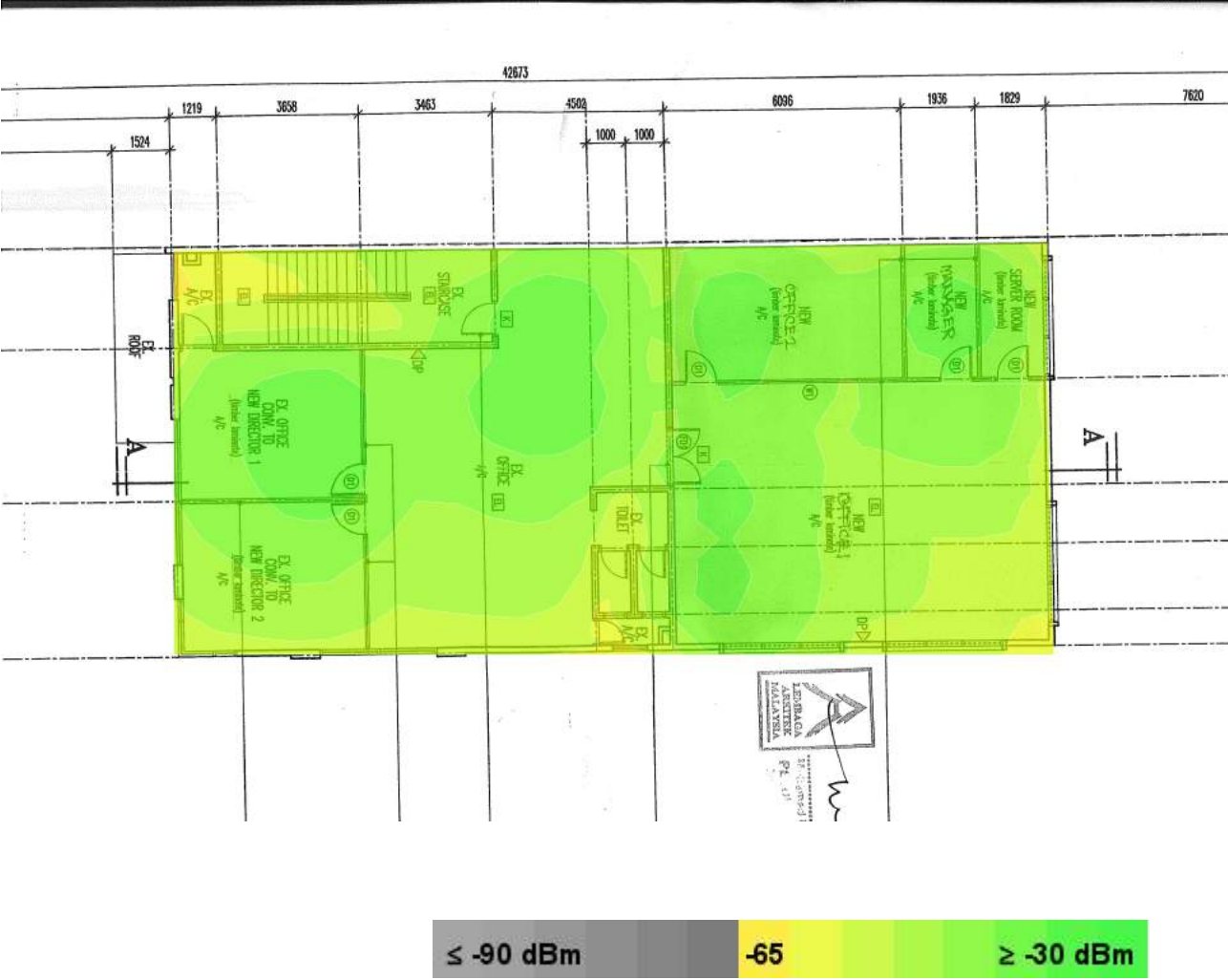
Signal Strength for TH IT Prestij 16 level 1 on 2.4 GHz band

Signal Strength - sometimes called coverage - is the most basic requirement for a wireless network. As a general guideline, low signal strength means unreliable connections, and low data throughput.



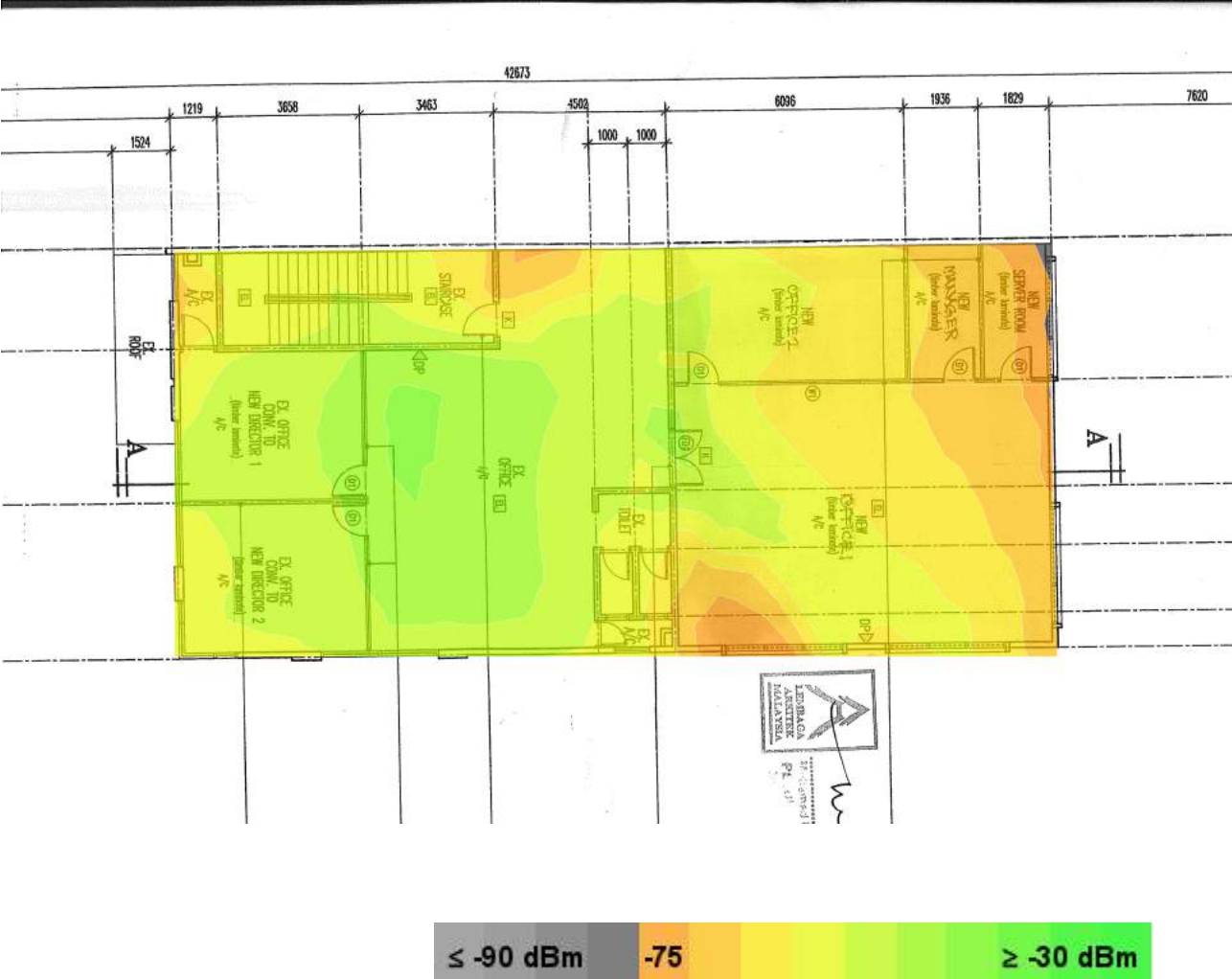
Signal Strength for TH IT Prestij 16 level 1 on 5 GHz band

Signal Strength - sometimes called coverage - is the most basic requirement for a wireless network. As a general guideline, low signal strength means unreliable connections, and low data throughput.



Secondary Signal Strength for TH IT Prestij 16 level 1 on 2.4 GHz band

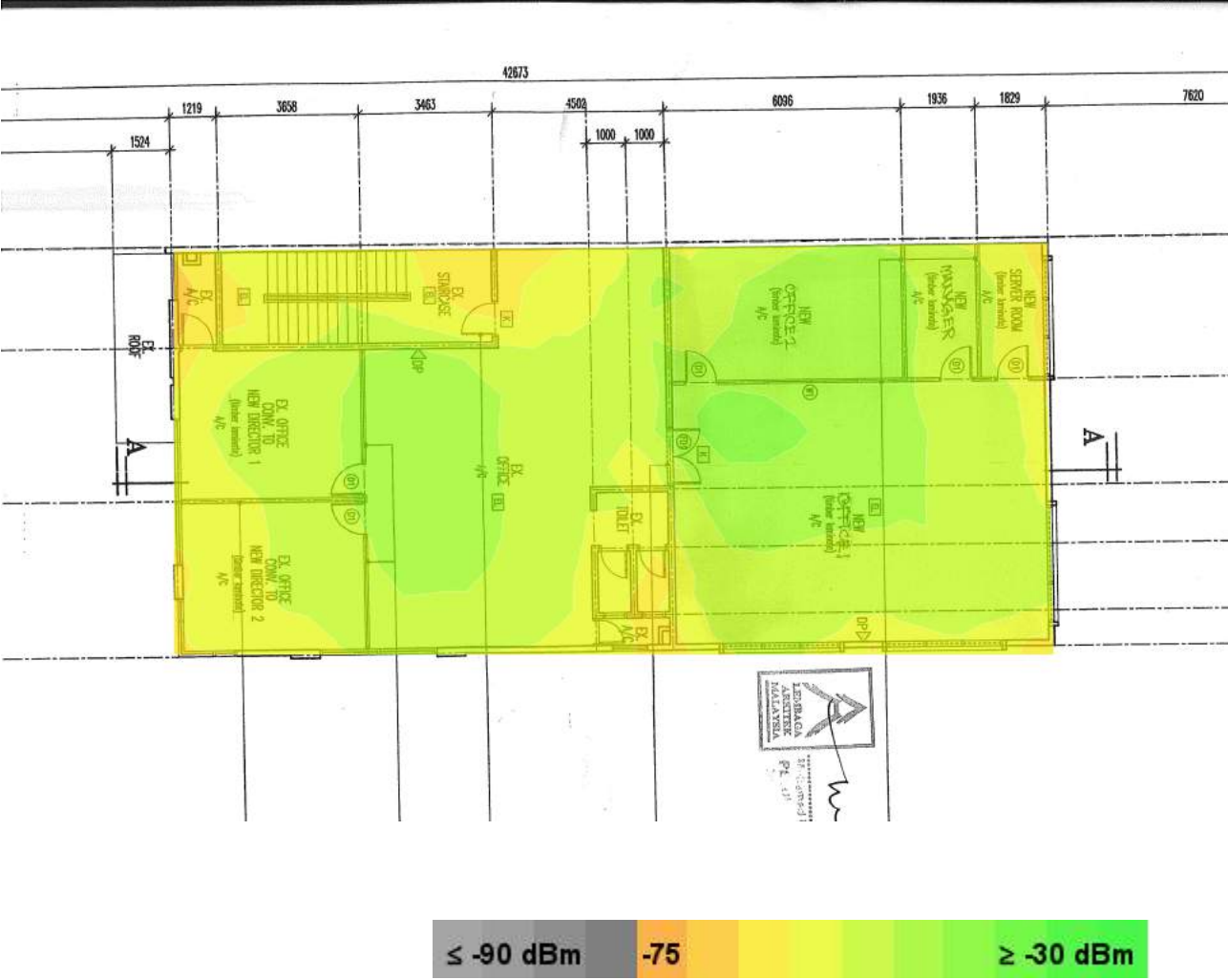
Secondary Signal Strength shows the second strongest RSSI on any given location on the map. This heatmap helps to ensure smooth roaming for clients and quality of service for certain latency-sensitive applications, such as VoIP calls.





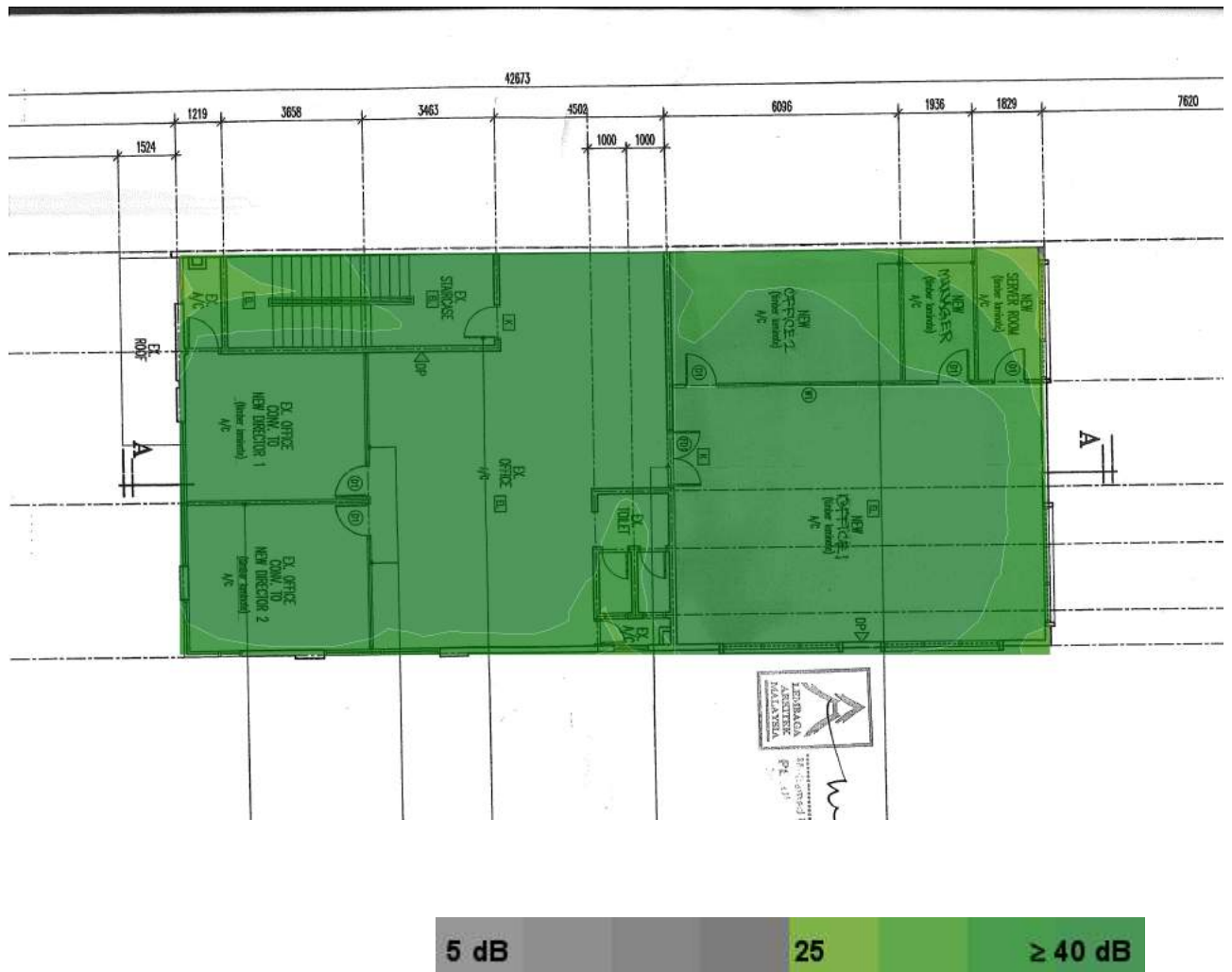
Secondary Signal Strength for TH IT Prestij 16 level 1 on 5 GHz band

Secondary Signal Strength shows the second strongest RSSI on any given location on the map. This heatmap helps to ensure smooth roaming for clients and quality of service for certain latency-sensitive applications, such as VoIP calls.



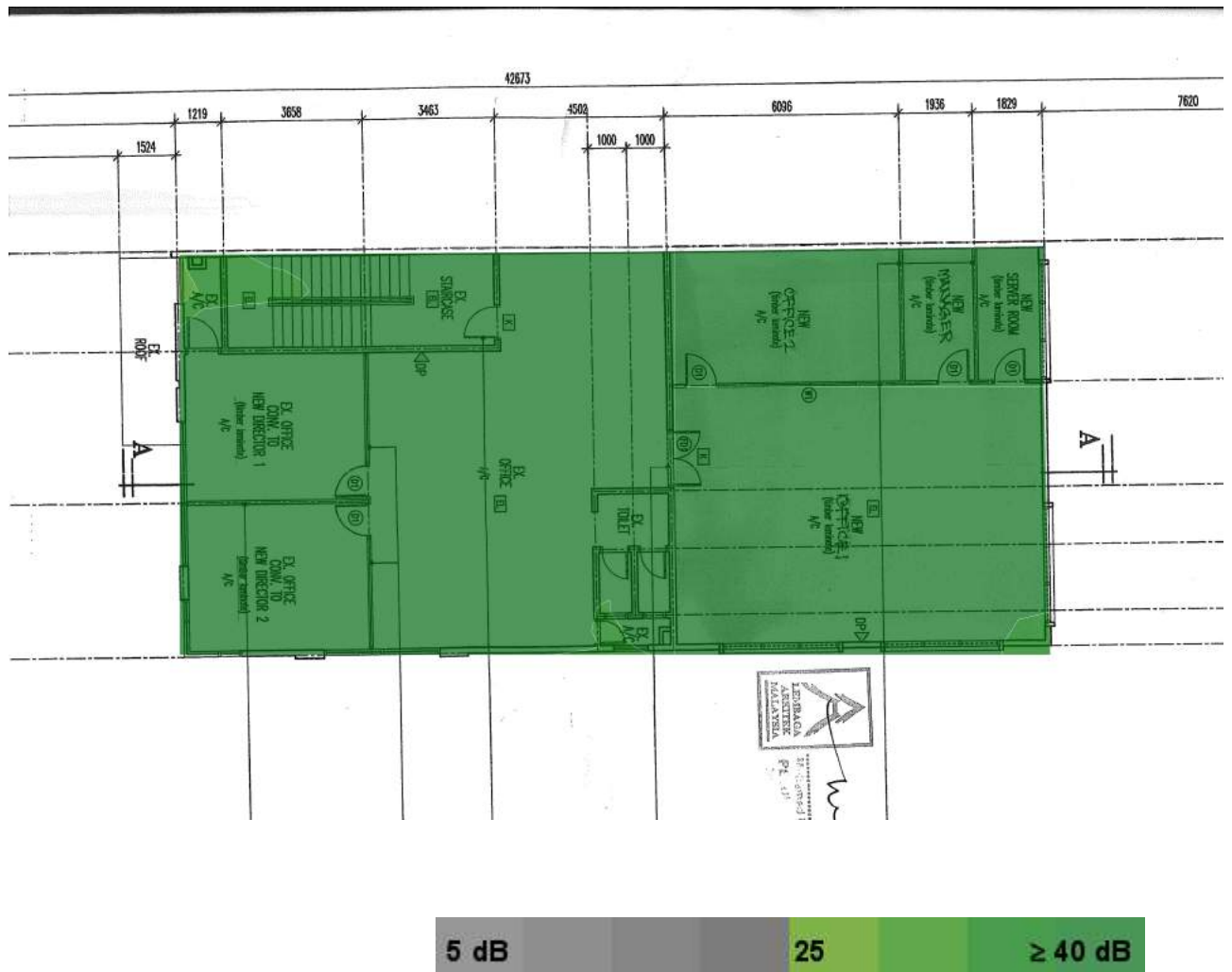
**Signal To Noise Ratio (SNR) for TH IT Prestij 16 level 1 on 2.4 GHz band**

Signal-To-Noise Ratio indicates how much the signal strength is stronger than the noise (co-channel interference). Signal must be stronger than noise (SNR greater than zero) for data transfer to be possible. If the signal is only barely stronger than noise, you may encounter occasional connection drop-offs.



**Signal To Noise Ratio (SNR) for TH IT Prestij 16 level 1 on 5 GHz band**

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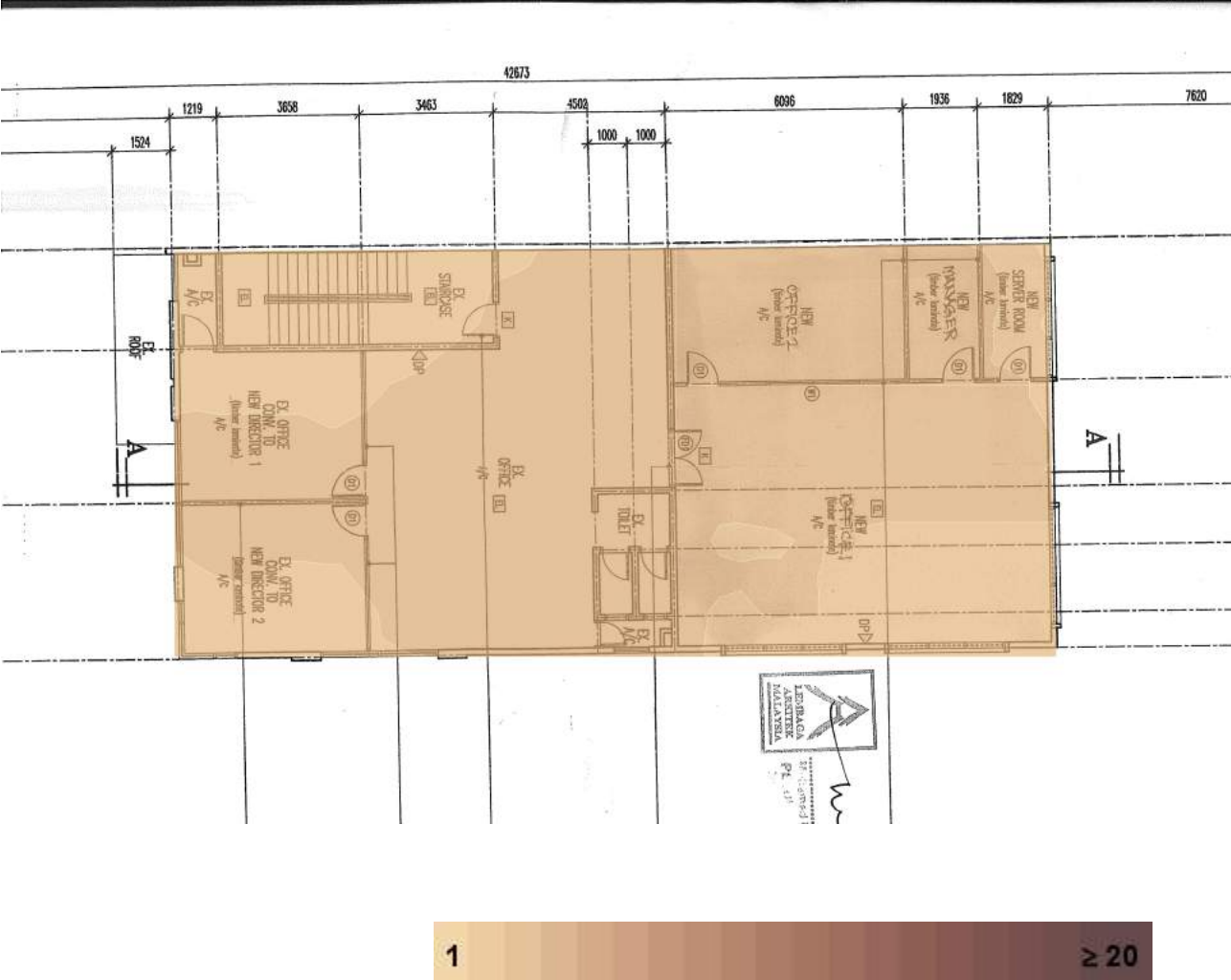






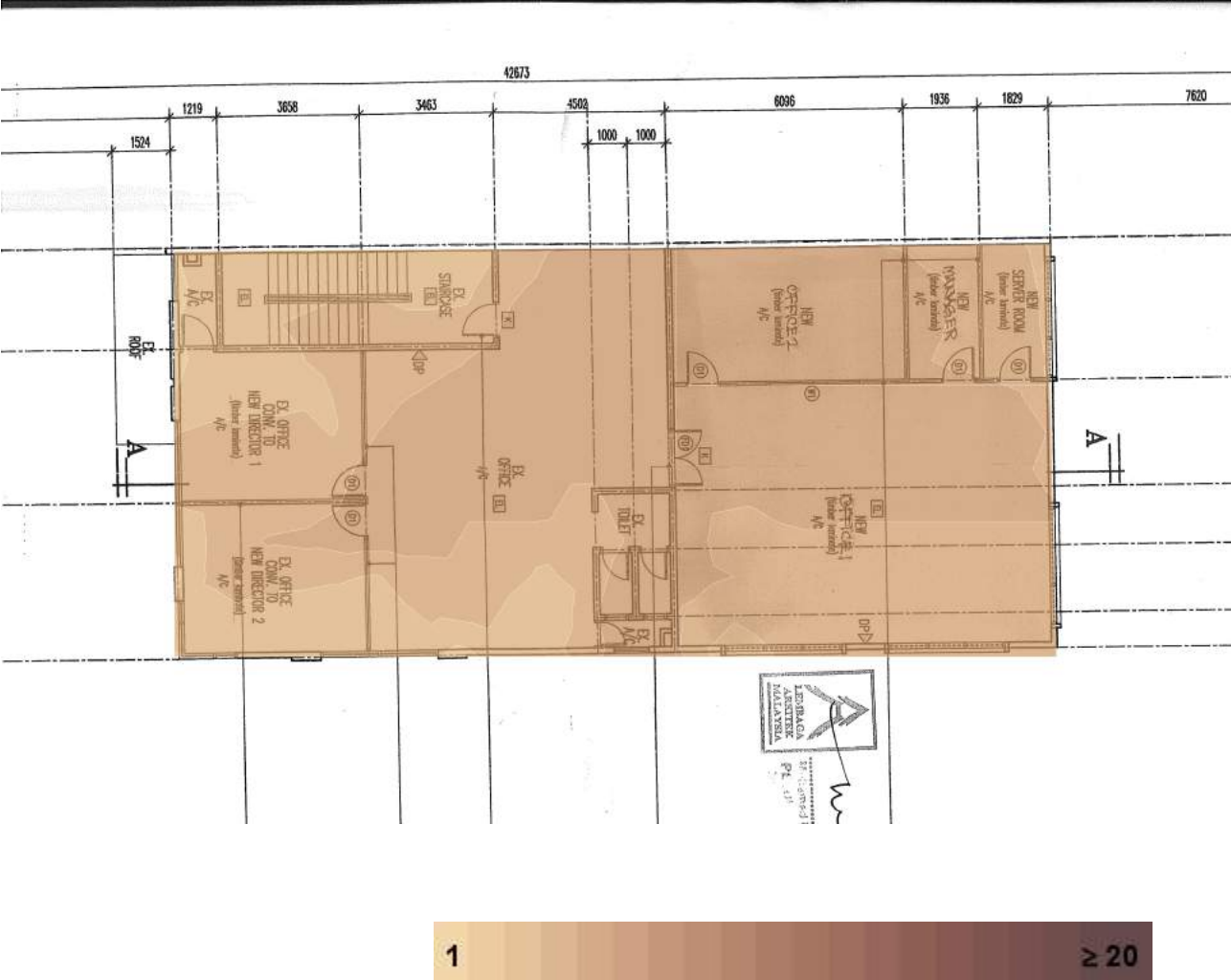
Number of APs for TH IT Prestij 16 level 1 on 2.4 GHz band

Number of Access Points indicates the number of access points audible at each location.



**Number of APs for TH IT Prestij 16 level 1 on 5 GHz band**

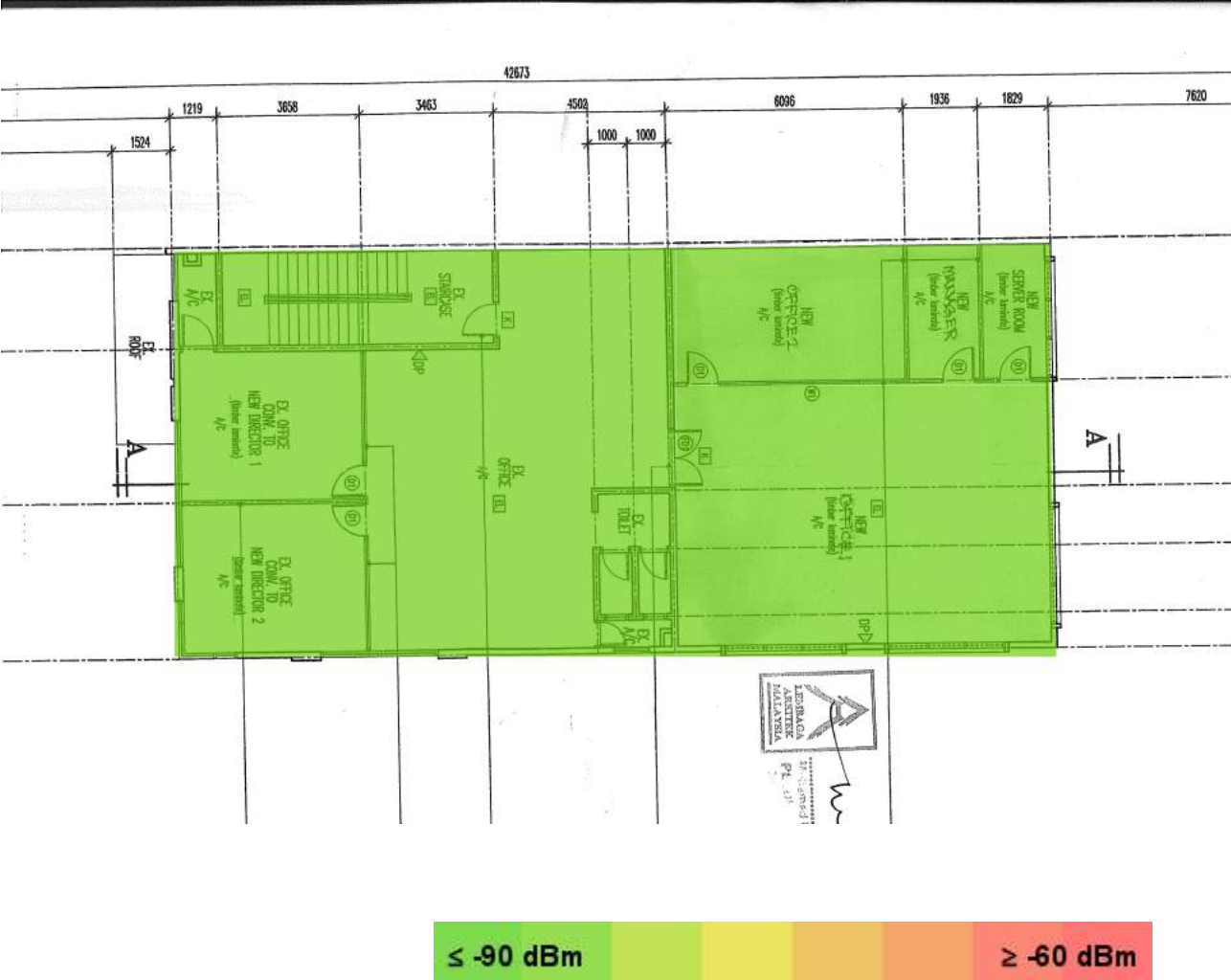
Number of Access Points indicates the number of access points audible at each location.





Noise for TH IT Prestij 16 level 1 on 2.4 GHz band

Displays the calculated co-channel interference level.

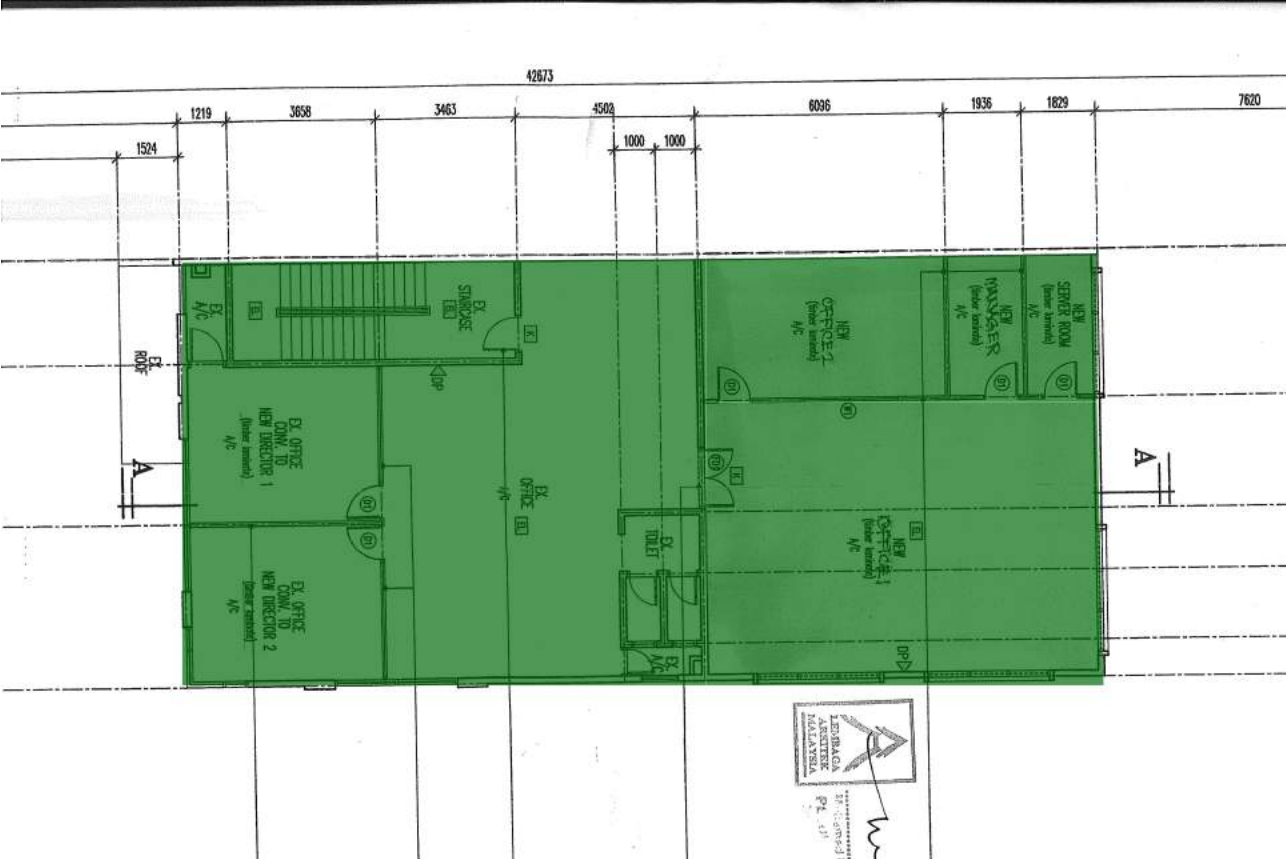






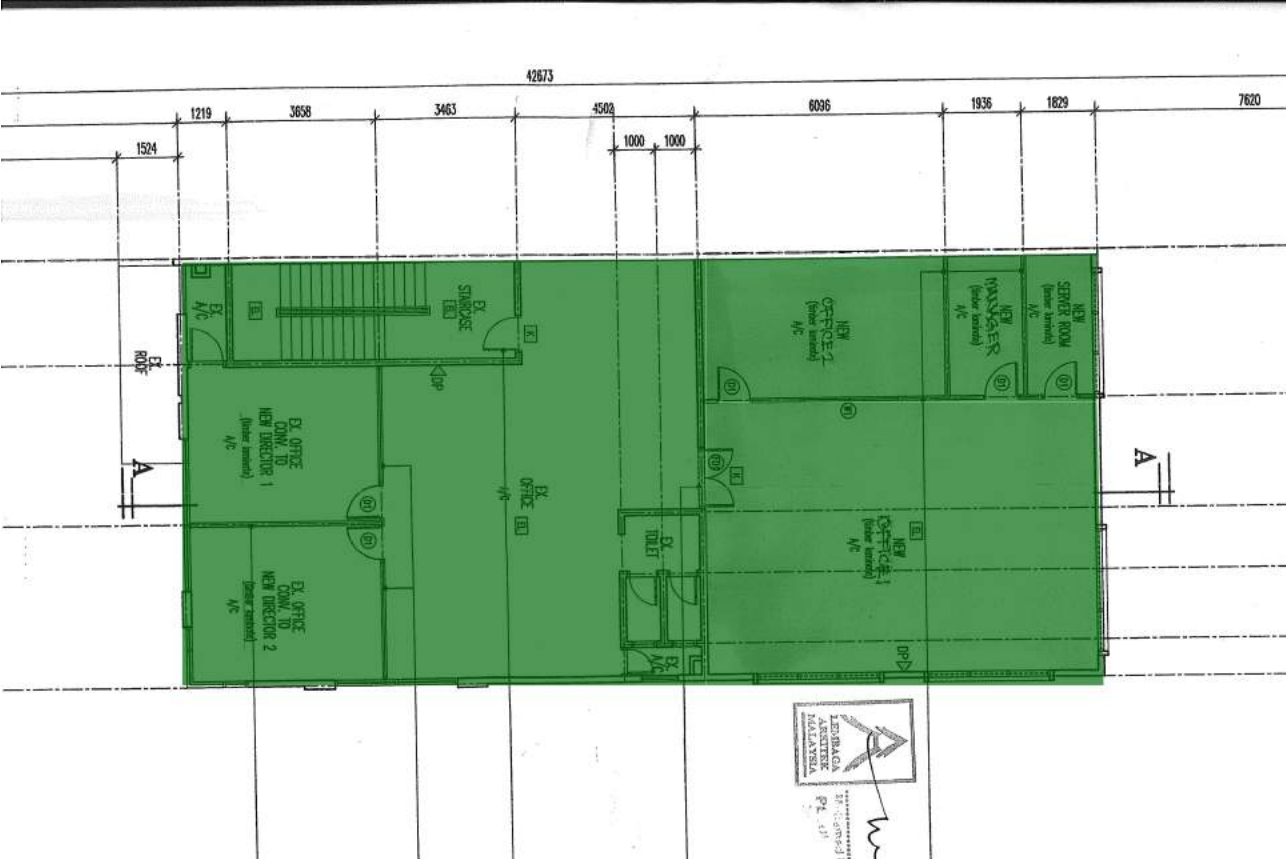
Data Rate for TH IT Prestij 16 level 1 on 2.4 GHz band

Data Rate is the highest possible speed (measured in megabits per second) at which the wireless devices will be transmitting data. Typically the true data throughput is about half of the data rate or less.



Data Rate for TH IT Prestij 16 level 1 on 5 GHz band

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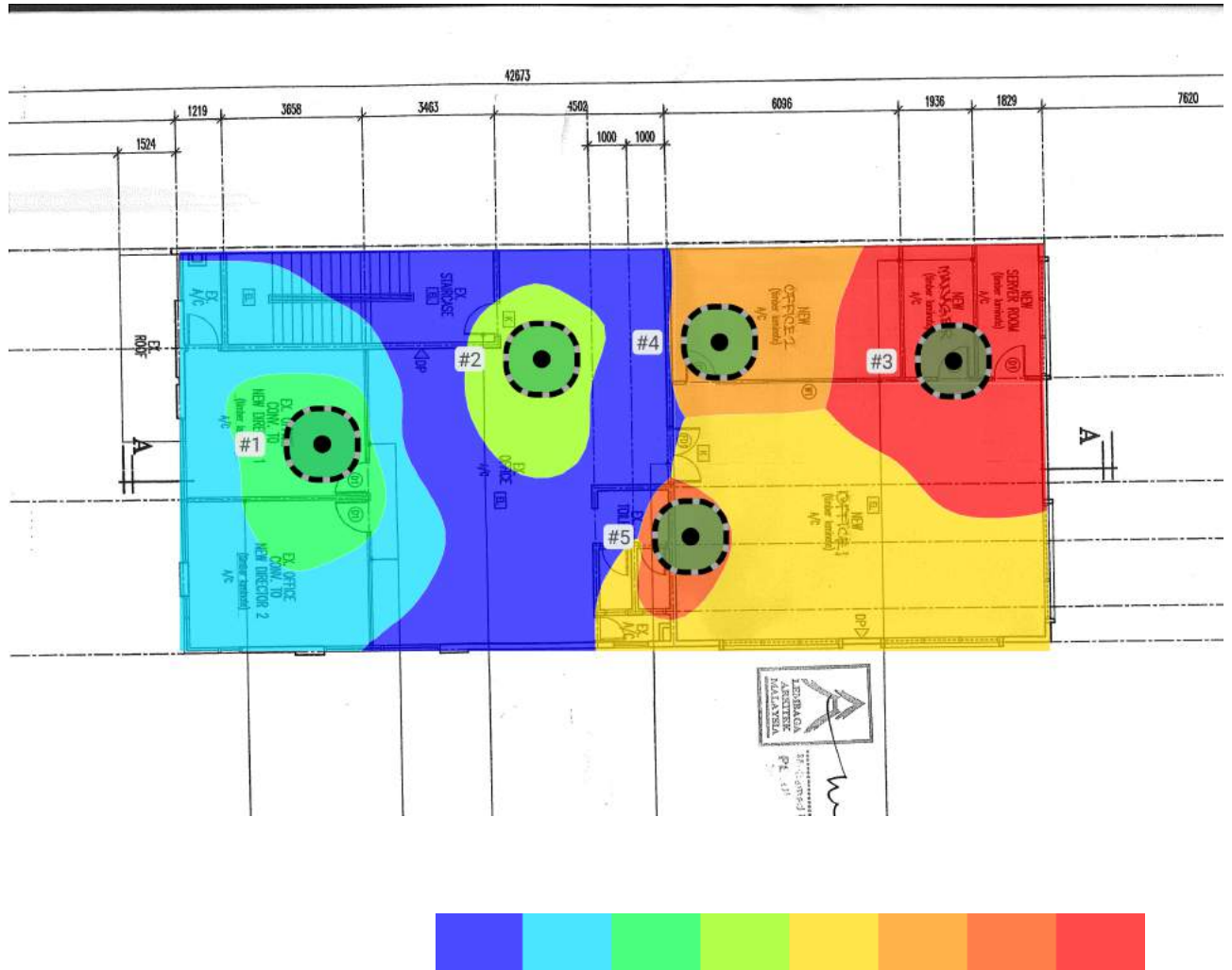




Sample Report on Wireless Network Design by Ekahau

Associated Access Point for TH IT Prestij 16 level 1

Displays the access point the client device is associated with.  
The image shows Predicted Association - Signal Strength



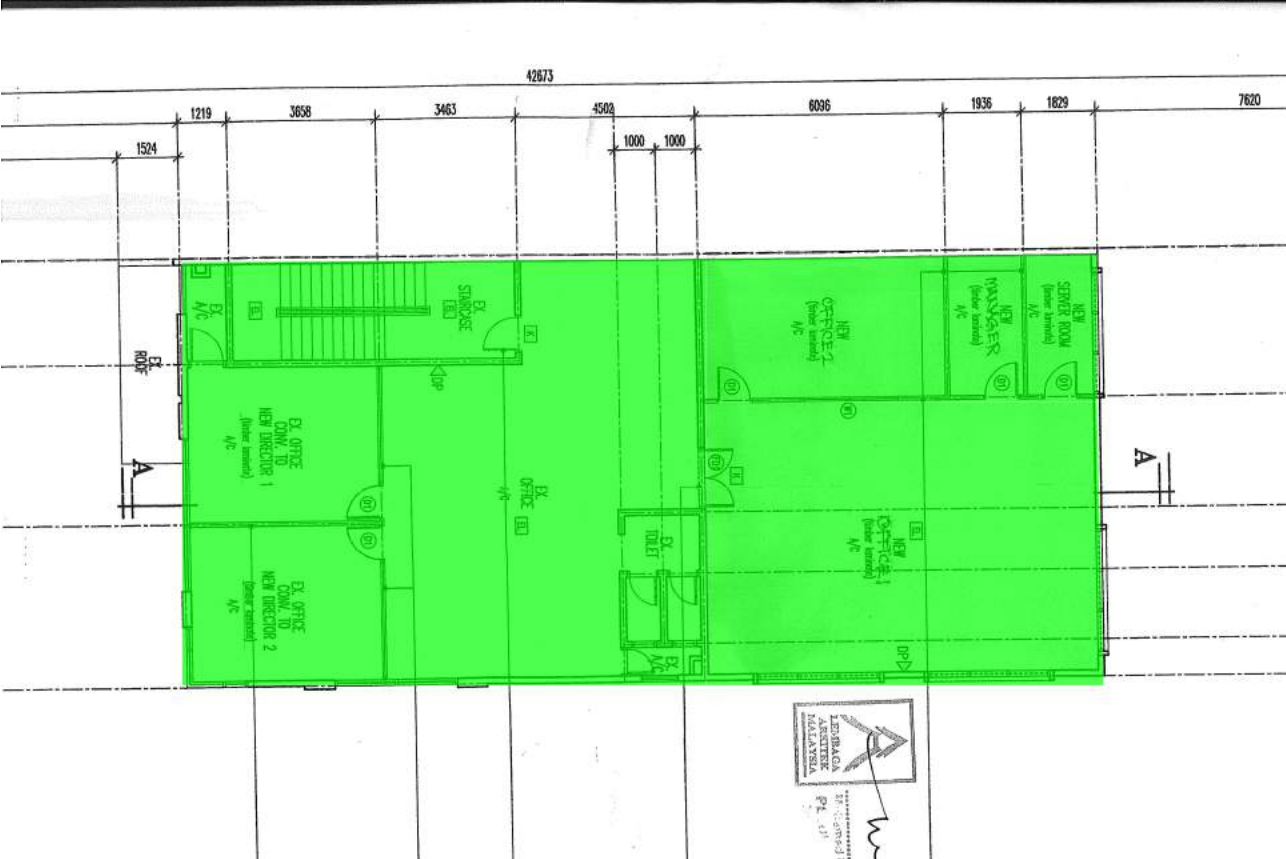
AP #	Access Point		
1	Simulated AP-1		Cisco AP2802i 2.4GHz + 5GHz
	● 802.11n	6	6 mW
	● 802.11ac	52	25 mW
	Bluetooth	-	1 mW
2	Simulated AP-2		Cisco AP2802i 2.4GHz + 5GHz

## Sample Report on Wireless Network Design by Ekahau

	● 802.11n	11	6 mW	Cisco AP2802i 2.4GHz Macro
	● 802.11ac	104	25 mW	Cisco AP2802i 5GHz Macro
	Bluetooth	-	1 mW	Cisco AP2802 BLE
3	Simulated AP-3		Cisco AP2802i 2.4GHz + 5GHz	
	Off	-	-	Cisco AP2802i 2.4GHz Macro
	● 802.11ac	132	25 mW	Cisco AP2802i 5GHz Macro
	Bluetooth	-	1 mW	Cisco AP2802 BLE
4	Simulated AP-4		Cisco AP2802i 2.4GHz + 5GHz	
	Off	-	-	Cisco AP2802i 2.4GHz Macro
	● 802.11ac	153	25 mW	Cisco AP2802i 5GHz Macro
	Bluetooth	-	1 mW	Cisco AP2802 BLE
5	Simulated AP-5		Cisco AP2802i 2.4GHz + 5GHz	
	● 802.11n	1	6 mW	Cisco AP2802i 2.4GHz Macro
	● 802.11ac	161	25 mW	Cisco AP2802i 5GHz Macro
	Bluetooth	-	1 mW	Cisco AP2802 BLE

Network Health for TH IT Prestij 16 level 1 on 2.4 GHz band

Wi-Fi is typically built for a certain purpose or several purposes, such as VoIP, web browsing, or location tracking. With Network Health, you can, with a single visualization, display whether the network meets your requirements or not.



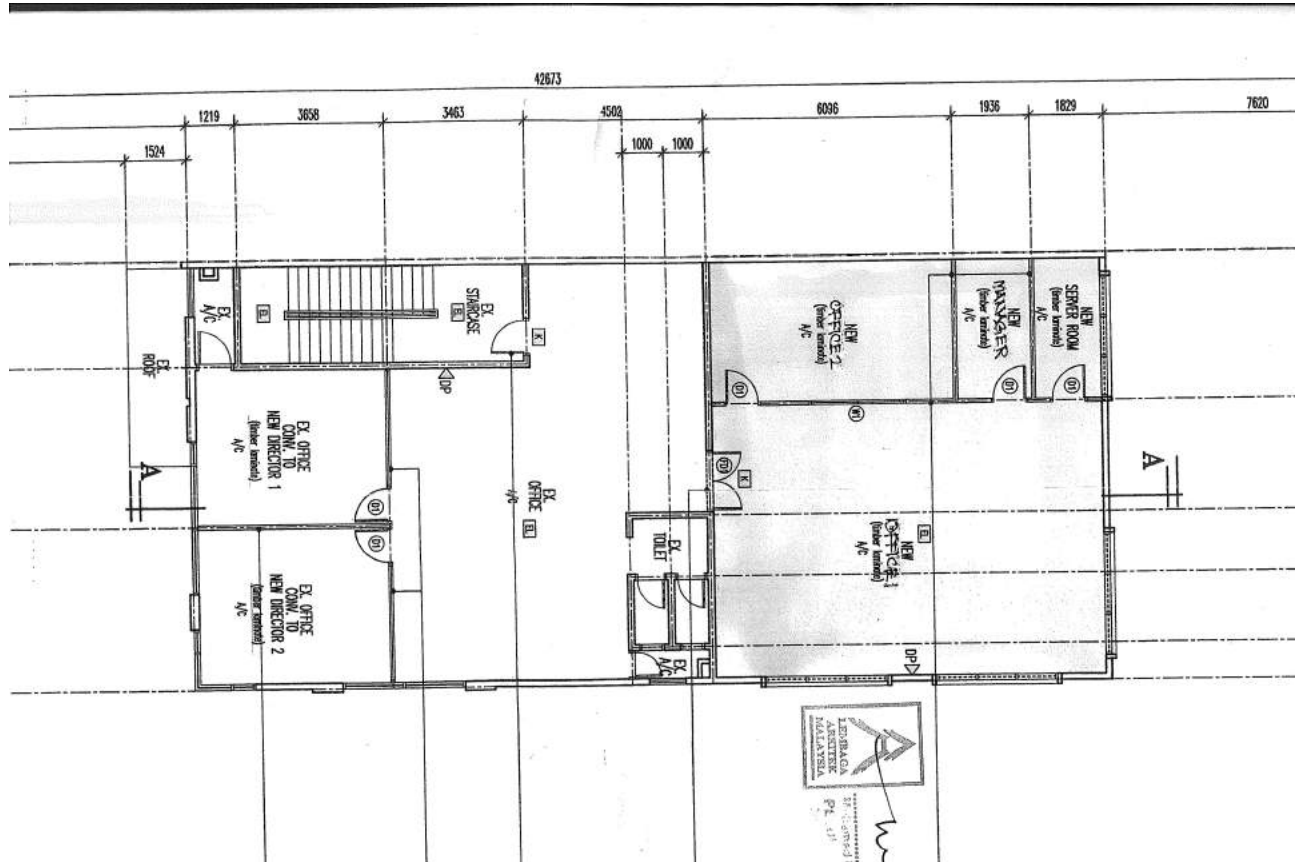
Fail	Pass
------	------





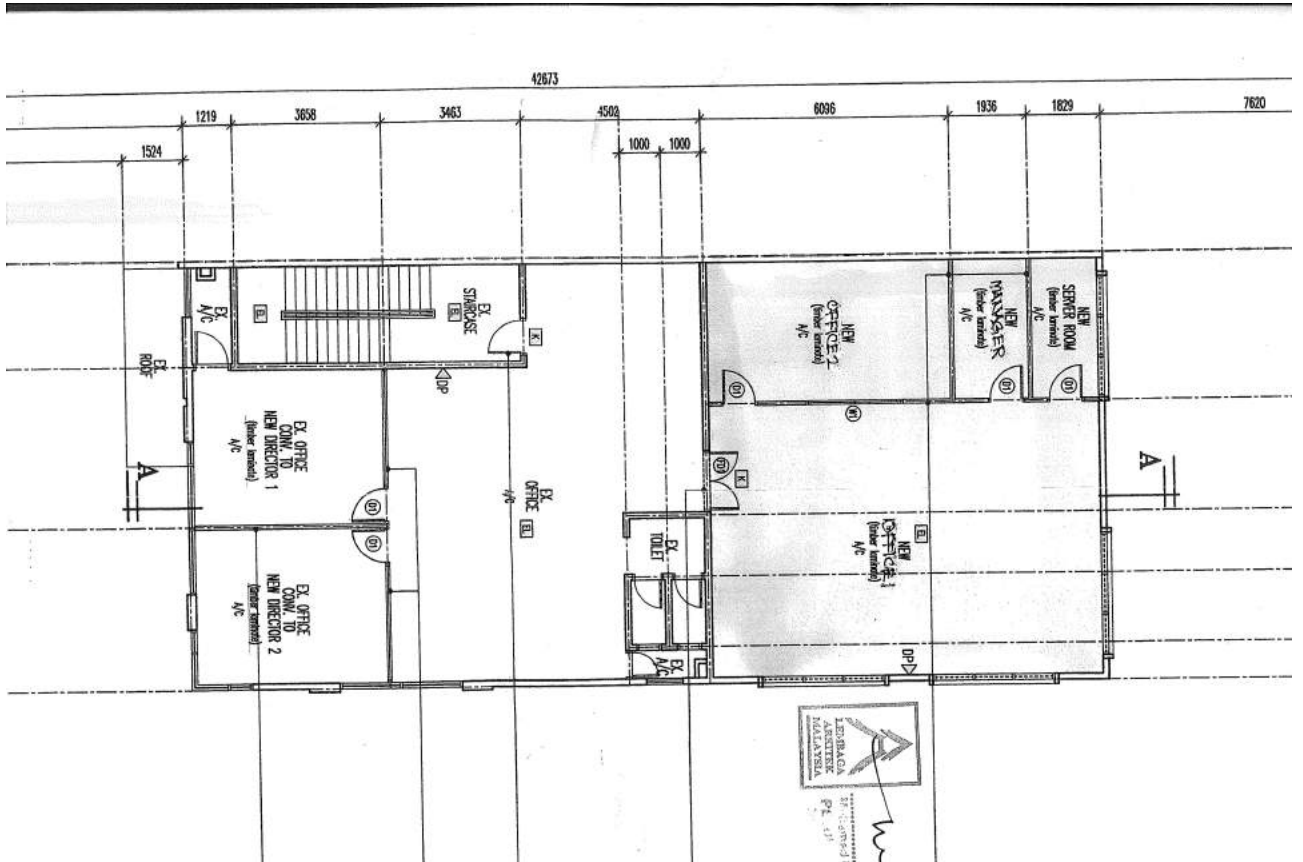
**Network Issues for TH IT Prestij 16 level 1 on 2.4 GHz band**

Network Issues complements Network Health by showing the requirement that is below the threshold level at each location. Whereas Network Health answers the question "Does it work?", Network Issues answers the question "If it doesn't work, why?".



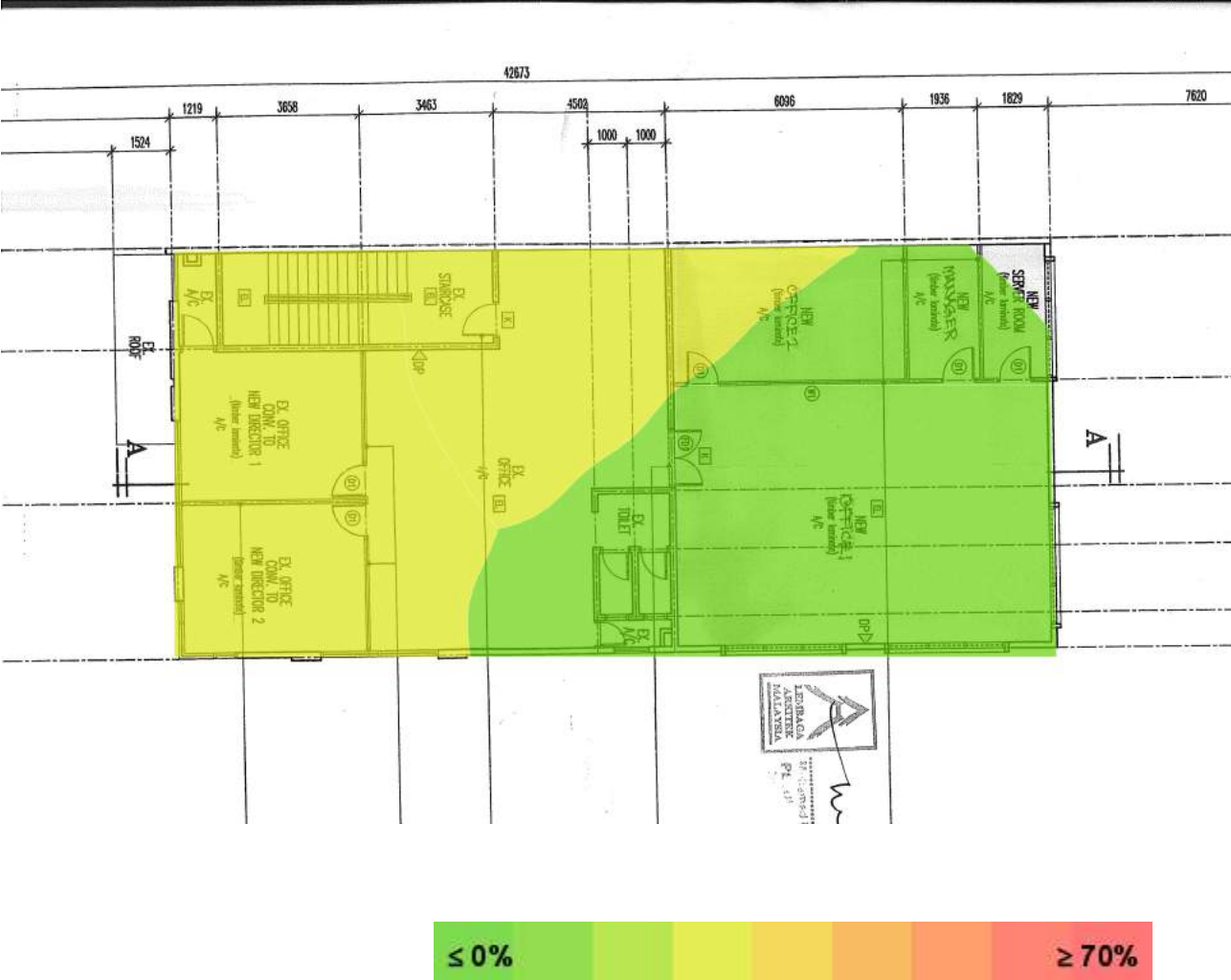
**Network Issues for TH IT Prestij 16 level 1 on 5 GHz band**

Network Issues complements Network Health by showing the requirement that is below the threshold level at each location. Whereas Network Health answers the question "Does it work?", Network Issues answers the question "If it doesn't work, why?".



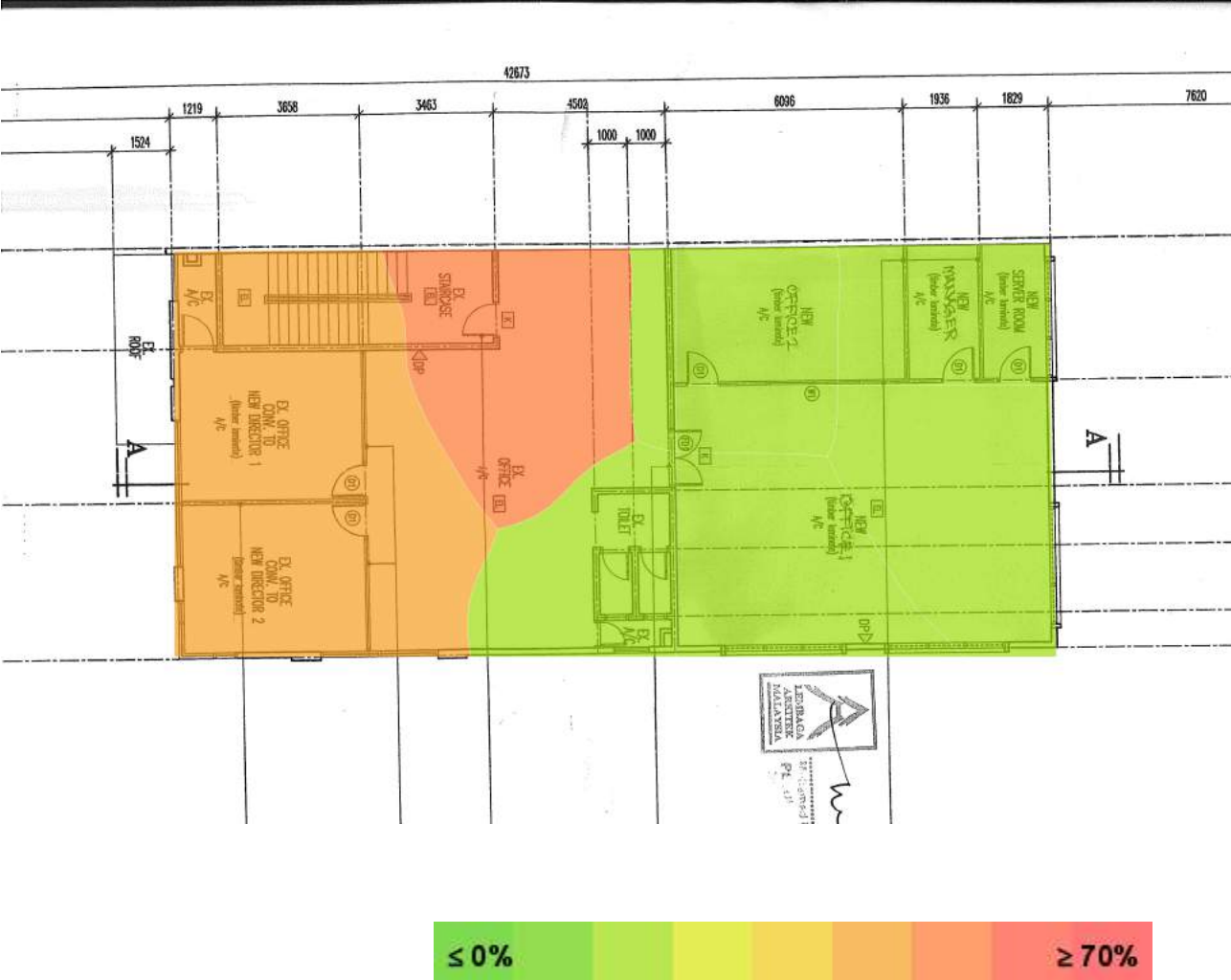
Airtime Utilization for TH IT Prestij 16 level 1 on 2.4 GHz band

Shows the utilization of the total available air time



**Airtime Utilization for TH IT Prestij 16 level 1 on 5 GHz band**

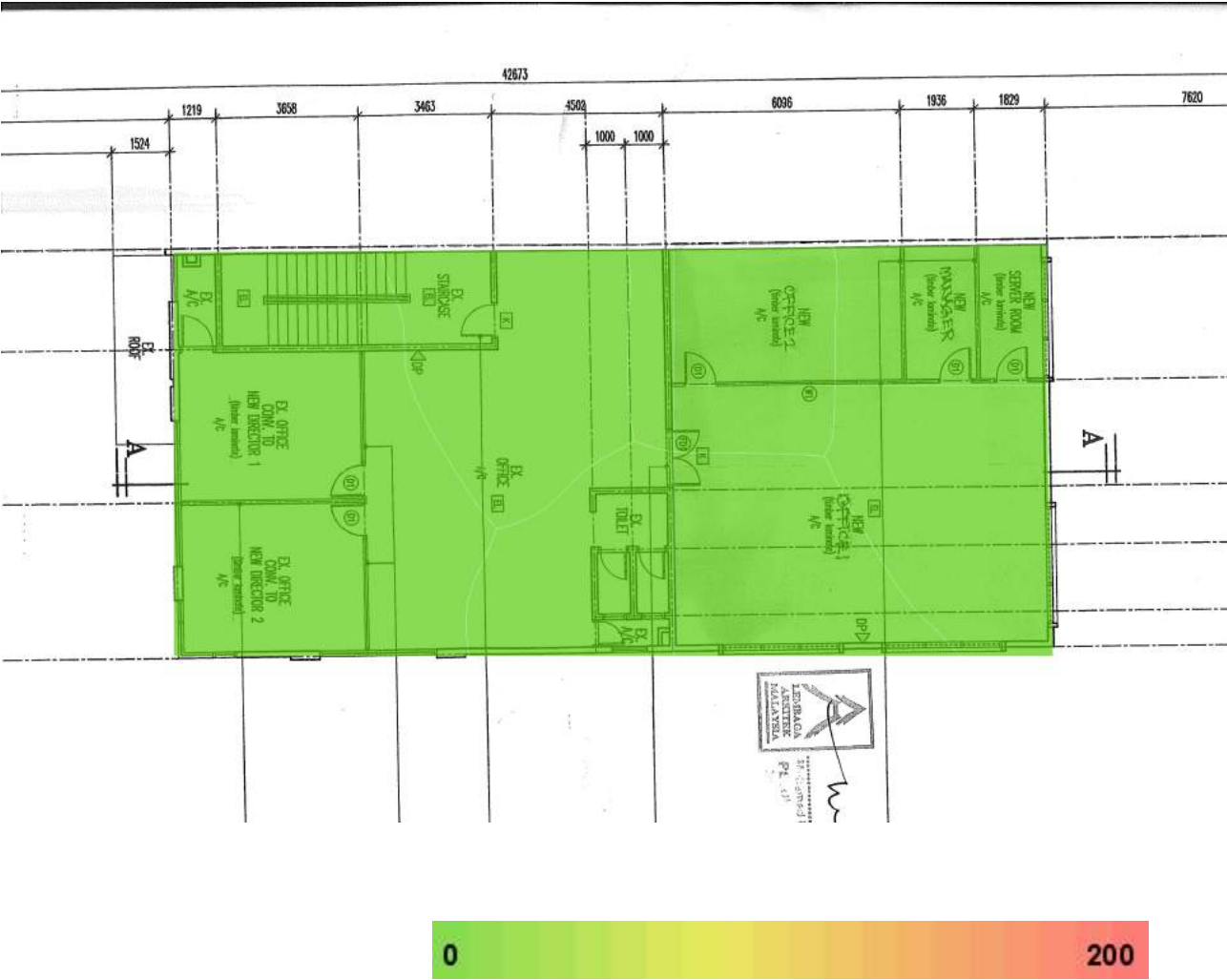
Shows the utilization of the total available air time





Capacity: Clients per AP for TH IT Prestij 16 level 1 on 5 GHz band

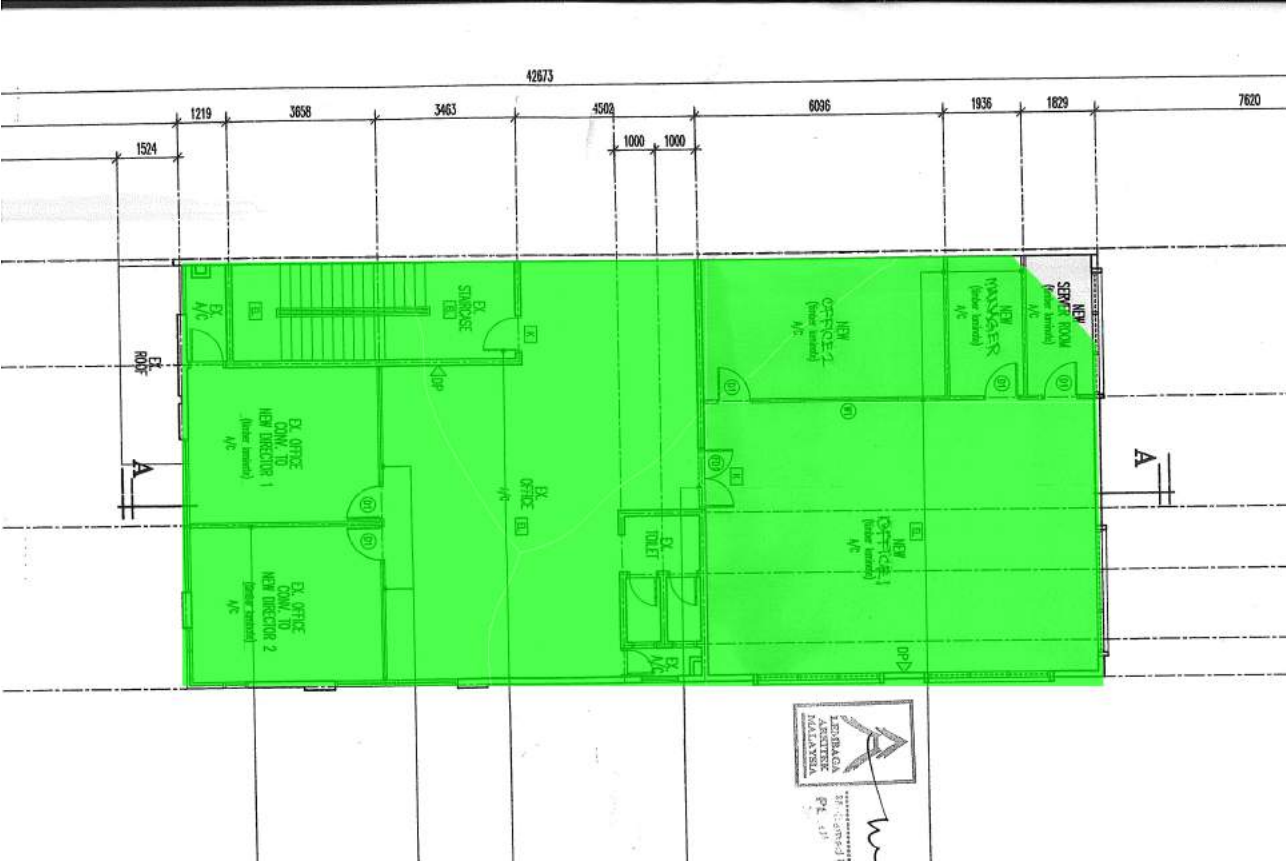
Shows how the Wi-Fi clients configured in your Capacity Requirement are distributed between the access points. The image shows Requested Associations





Capacity Health for TH IT Prestij 16 level 1 on 2.4 GHz band

Capacity Health displays if the network can handle the load of the configured Wi-Fi clients

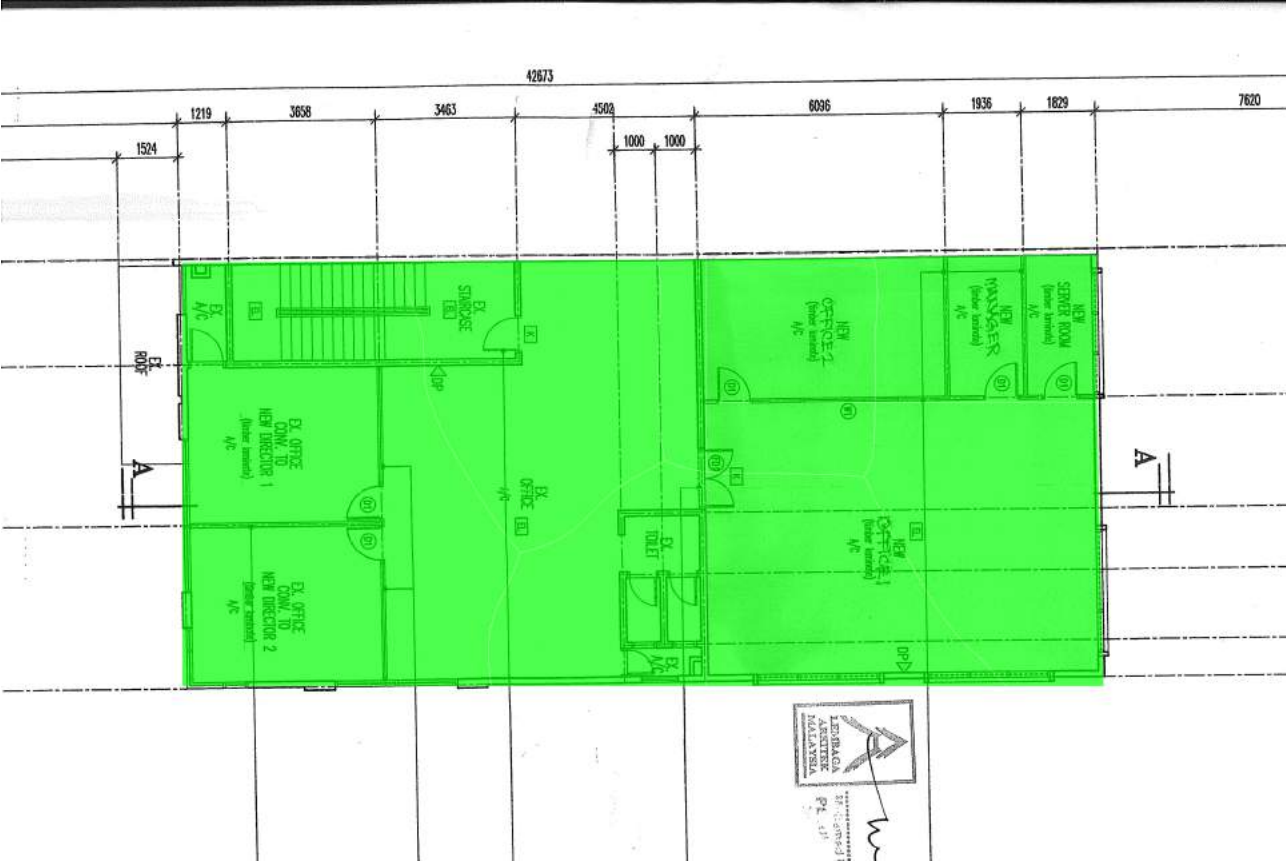


Pass	Airtime	Clients
------	---------	---------



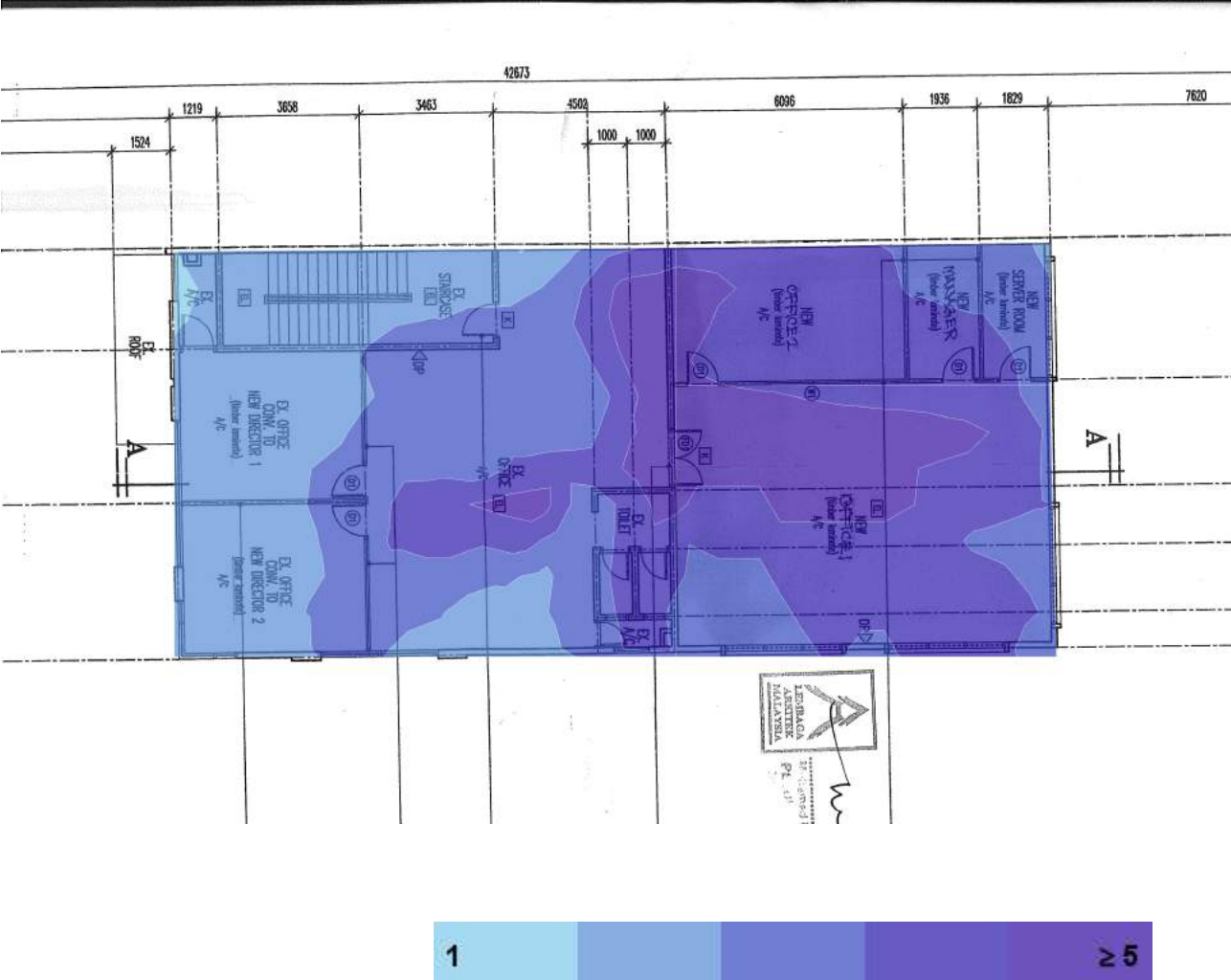
Capacity Health for TH IT Prestij 16 level 1 on 5 GHz band

Capacity Health displays if the network can handle the load of the configured Wi-Fi clients



Bluetooth Coverage for TH IT Prestij 16 level 1

Bluetooth coverage shows how many Bluetooth radios are audible at each location.





## My Access Points on TH IT Prestij 16 level 1

### Simulated Access Points on TH IT Prestij 16 level 1

AP #	Access Point			
1	Simulated AP-1		Cisco AP2802i 2.4GHz + 5GHz	
	802.11n	6	6 mW	Cisco AP2802i 2.4GHz Macro
	802.11ac	52	25 mW	Cisco AP2802i 5GHz Macro
	Bluetooth	-	1 mW	Cisco AP2802 BLE
2	Simulated AP-2		Cisco AP2802i 2.4GHz + 5GHz	
	802.11n	11	6 mW	Cisco AP2802i 2.4GHz Macro
	802.11ac	104	25 mW	Cisco AP2802i 5GHz Macro
	Bluetooth	-	1 mW	Cisco AP2802 BLE
3	Simulated AP-3		Cisco AP2802i 2.4GHz + 5GHz	
	Off	-	-	Cisco AP2802i 2.4GHz Macro
	802.11ac	132	25 mW	Cisco AP2802i 5GHz Macro
	Bluetooth	-	1 mW	Cisco AP2802 BLE
4	Simulated AP-4		Cisco AP2802i 2.4GHz + 5GHz	
	Off	-	-	Cisco AP2802i 2.4GHz Macro
	802.11ac	153	25 mW	Cisco AP2802i 5GHz Macro
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	802.11n	1	6 mW	Cisco AP2802i 2.4GHz Macro
	802.11ac	161	25 mW	Cisco AP2802i 5GHz Macro
	Bluetooth	-	1 mW	Cisco AP2802 BLE

### Measured Access Points on TH IT Prestij 16 level 1

None.

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## **Other Access Points on TH IT Prestij 16 level 1**

### **Simulated Access Points on TH IT Prestij 16 level 1**

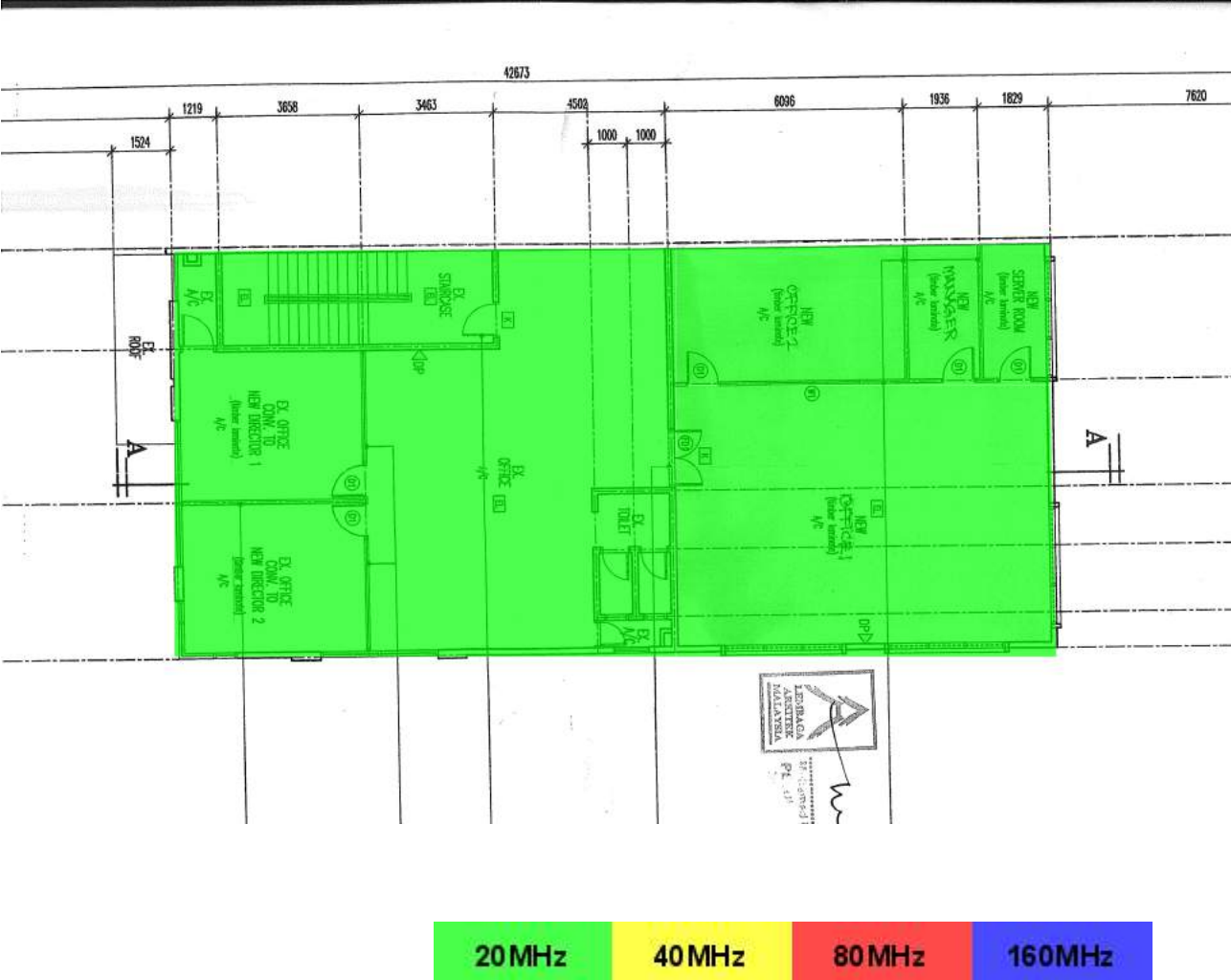
None.

### **Measured Access Points on TH IT Prestij 16 level 1**

None.

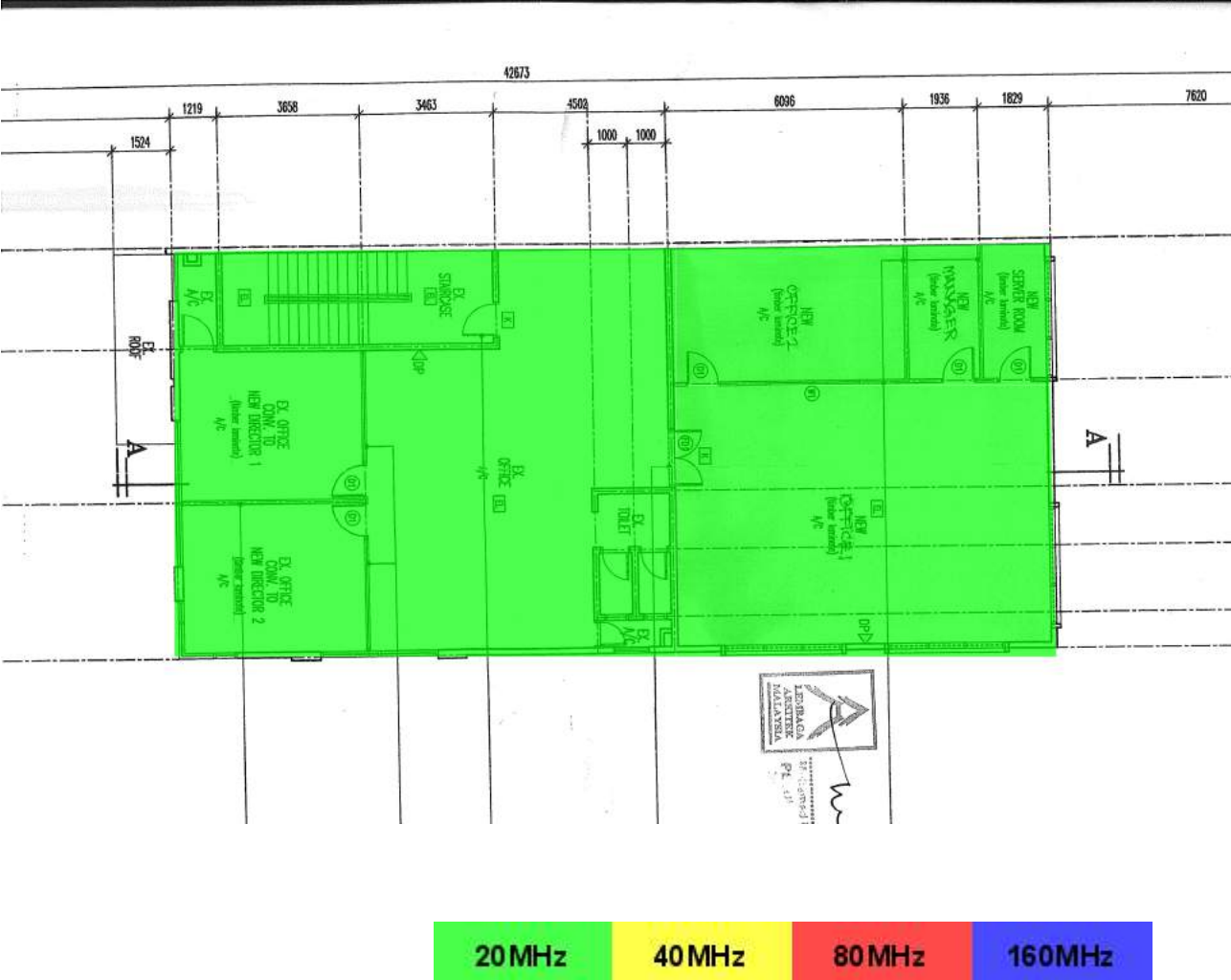
Channel Width for TH IT Prestij 16 level 1 on 2.4 GHz band

Shows the maximum channel width available in each area.

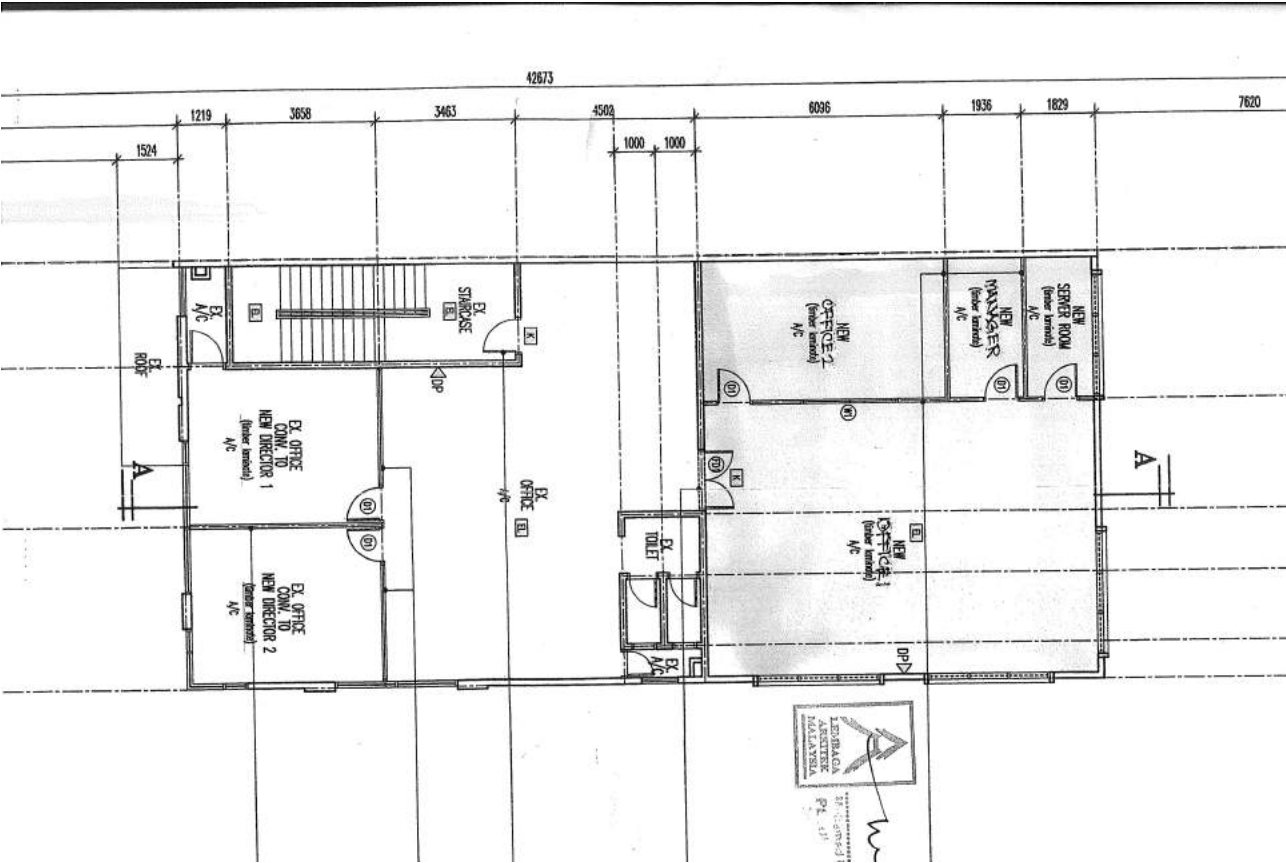


Channel Width for TH IT Prestij 16 level 1 on 5 GHz band

Shows the maximum channel width available in each area.



# Bluetooth Devices on TH IT Prestij 16 level 1





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## **My Bluetooth Devices on TH IT Prestij 16 level 1**

**Simulated Bluetooth Devices on TH IT Prestij 16 level 1**

None.

Sample Report on Wireless Network Design by Ekahau

## **Other Bluetooth Devices on TH IT Prestij 16 level 1**

**Simulated Bluetooth Devices on TH IT Prestij 16 level 1**

None.

Sample Report on Wireless Network Design by Ekahau

## **Measured Access Points not placed on any map**

### **My Access Points not placed on any map**

None.

### **Other Access Points not placed on any map**

None.

### Network capacity configuration

	2.4 GHz	5 GHz
Minimum Data Rate	<b>12 Mbits/s</b>	<b>12 Mbits/s</b>
Band steering	<b>N/A</b>	<b>N/A</b>
Number of SSIDs	<b>2</b>	<b>2</b>
Max. Associated Clients	<b>200</b>	<b>200</b>
RTS / CTS	<b>No</b>	<b>No</b>