What's the Difference Between an Occupant Warning System (OWS) and an Emergency Warning and Intercommunication System (EWIS)?

When discussing fire detection and alarm systems in strata buildings, terms such as "occupant warning system" and "EWIS" are often used interchangeably.

In reality, they are not quite the same thing. Both systems provide occupant warning, but they contain different capabilities and are governed by different Australian Standards.

Understanding the difference is important because the type of warning system installed within a building can have a significant impact on:

- Building operation
- Emergency procedures
- Maintenance requirements
- Future system replacement and modification requirements
- Project costs

For many strata committees, the distinction only becomes apparent when ageing equipment requires replacement, significant modifications are being considered, or competing proposals are received for fire system works.

What Is an Occupant Warning System (OWS)?

An Occupant Warning System (OWS) is designed to alert building occupants that an alarm condition has occurred and a basic OWS system must meet the requirements of AS 1670.1.

In its simplest form, an OWS may consist of:

- Sounders
- Horns
- Bells
- Speakers
- Warning devices

When activated, the system provides audible warning signals and, in some cases, emergency messages intended to alert occupants within the building.

Generally, an occupant warning system to AS 1670.1 must activate warnings throughout the building at the same time. The amplifiers used to provide the signal to the occupant warning system generally form part of the fire indicator panel and are directly activated by a fire alarm signal.

The primary purpose is straightforward:

Alert occupants that a fire alarm condition exists.

In many buildings, the warning signal or message may be sufficient to prompt occupants to investigate further or commence evacuation procedures in accordance with the building's emergency arrangements.

What Is an Emergency Warning and Intercommunication System (EWIS)?

An Emergency Warning and Intercommunication System (EWIS) provides a more sophisticated level of occupant warning and emergency communication and is governed by AS 1670.4.

In addition to warning occupants, an EWIS allows authorised personnel to communicate directly with building occupants during an emergency.

An EWIS may include:

- Emergency warning speakers
- Emergency microphones
- Master Emergency Control Panel (MECP)
- Wardens Intercommunication Points (WIPs)
- Emergency communication equipment
- Distributed amplifier systems
- Phased evacuation capability

Rather than simply sounding an alarm, an EWIS allows emergency messages to be broadcast throughout the building and supports communication between emergency personnel and building wardens.

The Simplest Way to Think About It

A simple way to explain the difference is:

Occupant Warning System

"There is an alarm. Please be aware."

EWIS

"There is an emergency. Here are specific instructions on what you should do."

The ability to provide live voice communication and intercommunication functions is one of the key differences between the two systems.

It is also important to remember that the fire detection system and the occupant warning system or EWIS are often separate systems performing different functions. While they may operate together during an emergency, they can involve different equipment, standards, maintenance requirements and replacement considerations.

Why Do Some Buildings Have Speakers?

One of the most common questions asked by apartment owners is:

"Why does our building have speakers in the corridors?"

Many people assume that speakers automatically mean the building has an EWIS. However, that is not always the case.

Modern Occupant Warning Systems (OWS) and Emergency Warning and Intercommunication Systems (EWIS) may both use speakers to broadcast warning signals and emergency messages throughout the building. In most cases, separate speakers are not manufactured for the different systems and the exact same speaker can be used for both.

The more important question is:

"What functions does the system perform?"

An Occupant Warning System is generally focused on providing warning signals and emergency messages to occupants.

An EWIS goes further by incorporating emergency communication, intercommunication and evacuation management functions that support building emergency management procedures.

This is why a detailed assessment of the building's warning system is often required when planning system replacement works or reviewing existing fire safety infrastructure.

What Is a WIP Phone?

Another common source of confusion is the presence of red phones located throughout a building.

These are often Wardens Intercommunication Points (WIPs).

Unlike speakers, which may be found in both Occupant Warning Systems and EWIS installations, WIPs are generally associated with the intercommunication functions of an EWIS.

WIPs allow communication between wardens, emergency personnel and the emergency control point during an emergency.

In many EWIS installations, a Manual Call Point (MCP), sometimes referred to as a break-glass alarm, is also located adjacent to the WIP. An MCP allows a person to manually initiate an alarm condition and forms part of the building's emergency warning arrangements.

While MCPs can be used in both Occupant Warning Systems and EWIS installations, they are commonly found alongside WIPs because both devices form part of the broader emergency management and communication functions of the EWIS.

In larger or more complex buildings, this communication capability forms an important part of the building's emergency management arrangements.

What Is the Master Emergency Control Panel?

Buildings equipped with an EWIS typically include a Master Emergency Control Panel (MECP).

The MECP allows authorised personnel to:

- Monitor emergency communication functions
- Broadcast emergency messages
- Control evacuation zones
- Communicate with wardens

It operates alongside the fire indicator panel but performs a different role.

The fire indicator panel monitors and controls the fire detection system. The EWIS manages occupant warning and emergency communications.

It should be noted that even though they have separate and distinct functions, the fire indicator panel and the MECP are sometimes combined in the same physical panel to minimise the footprint of the system.

What Is Phased Evacuation?

One of the significant advantages of an EWIS is its ability to support phased evacuation strategies.

In some larger or more complex buildings, it may not be desirable or practical to evacuate every occupant simultaneously.

Instead, emergency procedures may call for:

- Immediate evacuation of the fire floor
- Evacuation of adjacent floors
- Preparation or standby instructions for other areas of the building

An EWIS allows emergency personnel or authorised building staff to direct different messages to different areas of the building as circumstances change.

This level of control can assist with managing occupant movement and reducing congestion during an emergency.

By comparison, a standard occupant warning system is generally focused on providing warning signals and messages to occupants rather than supporting more sophisticated emergency communication and evacuation management functions.

Why This Difference Matters During System Replacement

This distinction often becomes important when ageing fire detection systems are being replaced.

A strata committee may believe they are replacing:

"The fire panel (with occupant warning)."

However, a contractor may identify that the project also involves EWIS equipment.

This can significantly affect:

- Project scope
- Installation requirements
- Testing requirements
- Commissioning requirements
- Overall project cost

Two similar buildings where one contains a simple fire detection and alarm system with occupant warning, versus a fire detection system with EWIS, will experience very different replacement costs, with EWIS generally being the more expensive of the two.

Why Do Some Quotes Differ So Much?

This is one reason why competing proposals can vary significantly.

For example:

Proposal A

May include:

- Fire indicator panel replacement only (which may contain basic occupant warning)

Proposal B

May include:

- Fire indicator panel replacement
- EWIS panel replacement

At first glance, the proposals may appear to be addressing the same issue. In reality, they may involve significantly different equipment, functionality and scope.

Understanding whether EWIS equipment forms part of the project can help explain why two quotations may differ substantially.

Does Every Building Need an EWIS?

Not necessarily.

EWIS systems are generally found in larger buildings and buildings of a certain classification.

Factors such as those listed below are all relevant to determining requirements:

- Building classification
- Building size
- Building height
- Applicable approval pathway
- Fire engineering requirements

- Historical code requirements

Different buildings may have different warning system requirements.

For this reason, the presence or absence of an EWIS should never be assumed.

Questions Strata Committees Should Ask

If your building is considering a fire panel replacement, ask:

1. Does our building have an Occupant Warning System (OWS)?
2. Does our building have an EWIS?
3. Is the warning system separate from the fire indicator panel?
4. Is any warning or EWIS equipment becoming obsolete?
5. Is the proposed scope addressing both systems?
6. Are speakers part of the existing system?
7. Are WIP phones present?
8. Is the Master Emergency Control Panel being replaced?
9. What additional testing and commissioning will be required?
10. How does the warning system affect project scope and cost?

These questions can help clarify exactly what equipment exists within the building and what is included in any proposed works.

Final Thoughts

Although they are often discussed together, an Occupant Warning System (OWS) and an Emergency Warning and Intercommunication System (EWIS) perform different functions.

An OWS is primarily intended to alert occupants to an alarm condition.

An EWIS goes further by providing emergency communication, intercommunication and evacuation management capabilities that can assist with coordinating occupant response during an emergency.

Understanding the difference can help strata committees better understand their building's fire safety infrastructure, evaluate competing proposals for fire system works and avoid surprises when planning future capital works.

Full Circle Fire specialises in fire detection and alarm systems, including the maintenance, repair and replacement of ageing and obsolete equipment, as well as fire detection system works arising from Fire Safety Orders.