NON ELECTRICAL LOW LEVEL GUIDANCE SYSTEMS – EMERGENCY LIGHTING

Photoluminescent Low Level Wayguidance Systems - Overview

Euro Compliance Limited – May 2013

AGENDA

- What is a Photoluminescent Low Level Wayguidance System (PLLWGS)?
- Why do you not see photoluminescent wayguidance systems the UK?
- What the Law says
- Why fit a photoluminescent wayguidance system?
- Recent developments in low level guidance
- Frequently asked questions
- Typical costs
- Examples
- Summary and questions

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What is a Photoluminescent Low Level Way Guidance System (PLLWGS)?

• Today PLLWGS are made mainly from a naturally mined, non radioactive, mineral, strontium aluminate.

• PL minerals contain pigments that have the capacity to store energy from 'normal' light and will emit this energy as a yellow-green glow in darkness.

• Over time, PL material will diminish in brightness but will remain visible to the dark-adapted eye for up to 6 days. (0.32mcd)

• PLLWGS aid evacuation by orientating, guiding and directing people to safe locations in the event of an emergency (such as a fire).

• The system provides guidance information during evacuation of a building or other enclosed space, especially during a blackout, power failure or in smoke or fire.

• Uses include markings such as exit signs, directional signage, door markings, stair tread and hand rail markings, path markings (wall or floor), door and floor number markings, obstruction identification and other components that compose safety markings.

• The system can be in the form of paint, plastic UPVC (tape or rigid) or aluminium.

Why do you not see photoluminescent systems in the UK?

- Little or no knowledge of the material used or the system itself
- Easier to stick with a system that “you know”
- Fear of the system – the unknown
- Work involved convincing the decision makers
- misconception that it costs more and is more likely to be vandalised

However, the system can be seen (in the UK) on aeroplanes, passenger ships, Royal Navy ships and Army vehicles, where in most cases ‘photoluminescent low level guidance systems are a legal requirement.

It is also installed in a number of other UK locations, including a hospital and a large secondary school as well as a number of housing association buildings.

What the Law says

The Regulatory Reform Fire Safety Order 2005 No.1541, Article 14.(2)(h)

The legislation relating to emergency lighting is clearly stated ;

"...emergency routes and exits requiring illumination must be provided with ***emergency lighting of adequate intensity*** *in the case of failure of their normal lighting"*

The RRFSO 2005 does **NOT** state that the lighting must be electrical but **more importantly** it states that it must be of **"adequate intensity"**. In fact electrical emergency lighting could be deemed to be inadequate in a fire as it is most likely to be obscured by smoke.

Why fit a photoluminescent wayguidance system?

- It works and aids orientation and egress times during an emergency
- Provides for the visually impaired
- It requires little or no maintenance or operational admin and saves money
- Costs significantly less to install than electrical emergency lighting
- Difficult and less likely to be vandalised
- Recent Coroner inquests (Shirley Towers and Lakanal House, both cite 'building guidance' as an issue that should be seriously considered, including easy to understand escape plans and even low level guidance)

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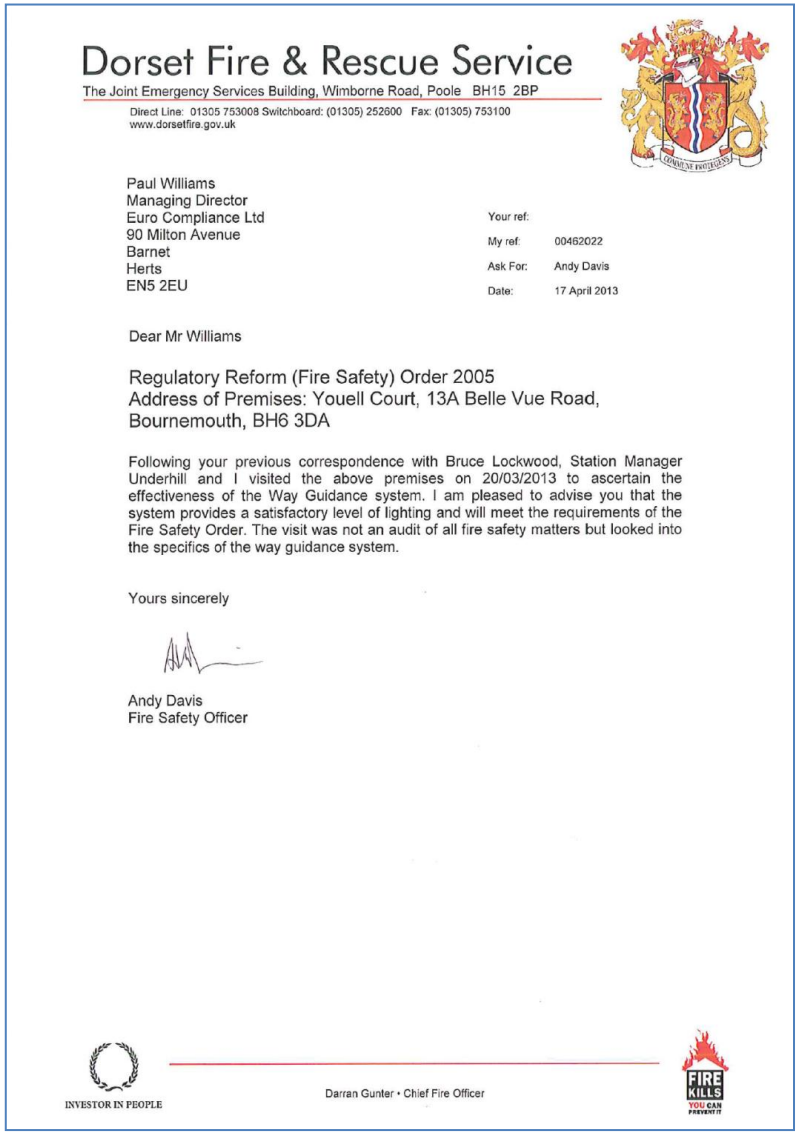
The system has been accepted by the Fire Authority as an acceptable alternative to electrical emergency lighting.

Please note that the Fire Authority is the enforcing authority for the Fire Safety Order and it is irrelevant which location or county it is in.

It would be the same as saying that the police in Manchester have different rules to the police in London, which they don't.

The important point is that the Fire Authority has confirmed that the system is acceptable instead of electrical emergency lighting and that it fulfils the requirements of the law.



Dorset Fire & Rescue Service

The Joint Emergency Services Building, Wimborne Road, Poole BH15 2BP

Direct Line: 01305 753008 Switchboard: (01305) 252600 Fax: (01305) 753100
www.dorsetfire.gov.uk

Paul Williams
Managing Director
Euro Compliance Ltd
90 Milton Avenue
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Herts
EN5 2EU

Your ref:
My ref: 00462022
Ask For: Andy Davis
Date: 17 April 2013

Dear Mr Williams

Regulatory Reform (Fire Safety) Order 2005
Address of Premises: Youell Court, 13A Belle Vue Road, Bournemouth, BH6 3DA

Following your previous correspondence with Bruce Lockwood, Station Manager Underhill and I visited the above premises on 20/03/2013 to ascertain the effectiveness of the Way Guidance system. I am pleased to advise you that the system provides a satisfactory level of lighting and will meet the requirements of the Fire Safety Order. The visit was not an audit of all fire safety matters but looked into the specifics of the way guidance system.

Yours sincerely

Andy Davis
Fire Safety Officer

INVESTOR IN PEOPLE

Darran Gunter • Chief Fire Officer

FIRE KILLS YOU CAN PREVENT IT

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Recent developments in low level guidance

There have been 2 recent Coroner's inquests into 2 major fires in which 8 people have died. These inquests are;

- Shirley Towers
- Lakenal House

In both cases there was confusion on how to exit the building.

In the Shirley Towers inquest it was identified that low level guidance would have aided the fire-fighters and it was subsequently recommended in the Coroners recommendations - Rule 43 .

Frequently asked questions

FAQ's	EverGlow Hi150 answer
Is it easy to install?	**Yes** - It is very easy to install in any existing building and is generally fitted using 3M 468MP adhesive (the same adhesive used to fit number plates to cars)
Is it compliant?	**Yes** - The system is already installed in The Royal Surrey County Hospital, Salvation Army sheltered housing blocks, Icknield School and in all cases there is no electrical emergency lighting present.
What's the life expectancy?	20 years (minimum)
Is maintenance required?	**No** – except for a regular visual check to make sure it's there
Is it robust?	**Yes** - Aluminium product virtually vandal proof and scratch resistant. UPVC product is manufactured on anti-tamper tape.
Does it achieve the required standards?	**Yes** - in fact it over achieves the British Standard for luminance by 14x after 10 minutes and 23x after 60 minutes (BS5266-6). It is also the only system tested to a European standard DIN 67 5170

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Frequently asked questions

FAQ's	EverGlow Hi150 answer
What's its decay time?	The EverGlow Hi150 system is visible for up to 35 hours before the luminance level falls below a level visible to the naked eye (0.32mcd)
Charge time & source?	20 minutes at 320 Lux (average office/communal space lighting) Source lighting can be incandescent light or natural daylight
Does it work?	**Yes** - The system is currently used on aeroplanes, passenger ships, all US passenger trains and oil rigs. It is also a legal requirement in many countries around the world, including the USA, Japan and Germany.
Does it burn?	**Yes** – like almost everything, it does burn but when it does burn it will be at temperatures above those where life can be sustained. (Aluminium at 365 degrees C and UPVC – 160 degrees C).
Is it vandal proof?	**Yes** - The system is pretty much vandal proof for a number of reasons, aluminium, anti tamper tape, etc. However it can be vandalised but it would take days to make the system inoperative.

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TYPICAL ELECTRICAL EMERGENCY LIGHTING COSTS

(Typical 20 storey block with 80 flats)

Electrical Emergency Lighting installation & works	Quantity	Cost	Cost per typical property
Full EL system installation	1	£100,000.00	£100,000.00
EL unit replacement	c.80	£220.00	**£17,600.00**

Electrical Emergency Lighting service & tests	Quantity	Cost per test	Annual cost per property
Monthly	10	£40.00	£400.00
6 monthly	1	£75.00	£75.00
Annually	1	£250.00	£250.00
Renew battery	c.80	£35.00	£2,800.00
Renew EL bulb	c.40	£22.50	£900.00
			£4,425.00

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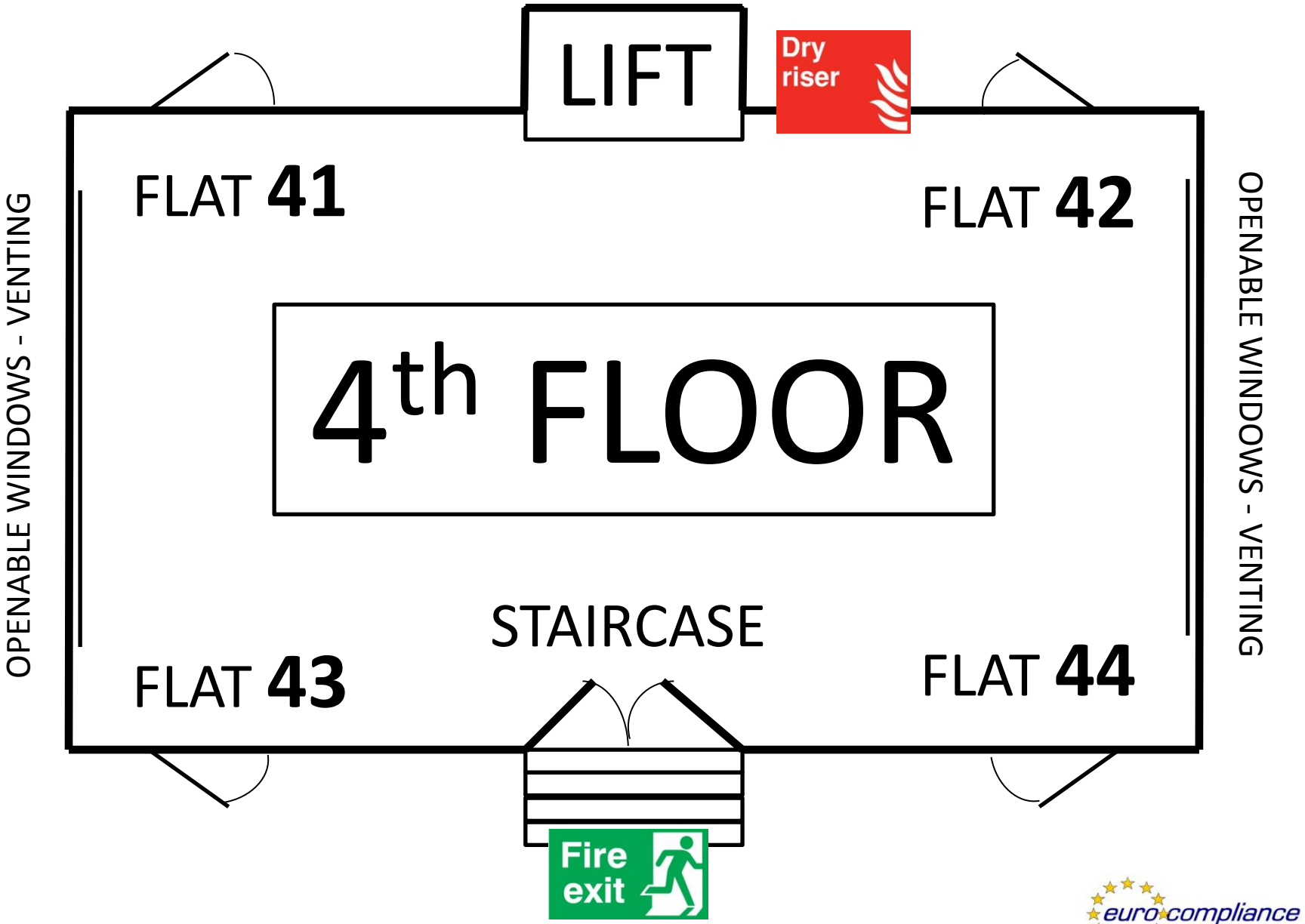
TYPICAL PHOTOLUMINESCENT LOW LEVEL GUIDANCE SYSTEM COSTS

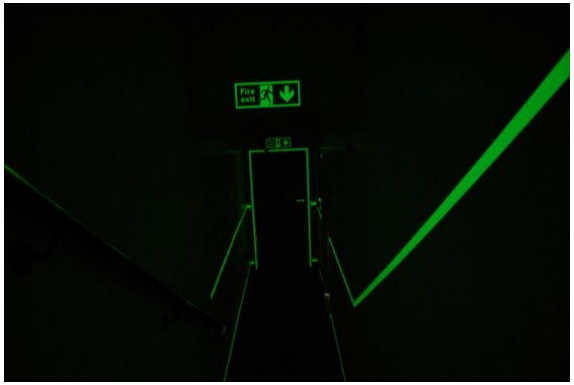
(Typical 20 storey block with 80 flats)

Photoluminescent	Quantity	Cost	Cost per typical 20 storey 4 flats per floor (80)
Install Hi150 1 metre aluminium anti slip stair nosing (with 25mm photoluminescent insert)	247	£45.00	£11,115.00
Supply and fit Hi150 wall markings per metre (estimated metres required)	800m	£9.00	£7,200.00
Supply and fit Hi150 25mm handrail markings	19	£27.00	£513.00
Supply and fit Hi150 25mm door edge markings	10	£22.50	£225.00
Supply and fit PL 75mm flat numbers	80	£12.00	£960.00
Supply and fit PL 100mm floor numbers (2 per floor 1 by lift and 1 by stairs to lobby)	38	£20.00	£760.00
Photoluminescent floor layout	20	£45.00	£900.00
			£21,673.00

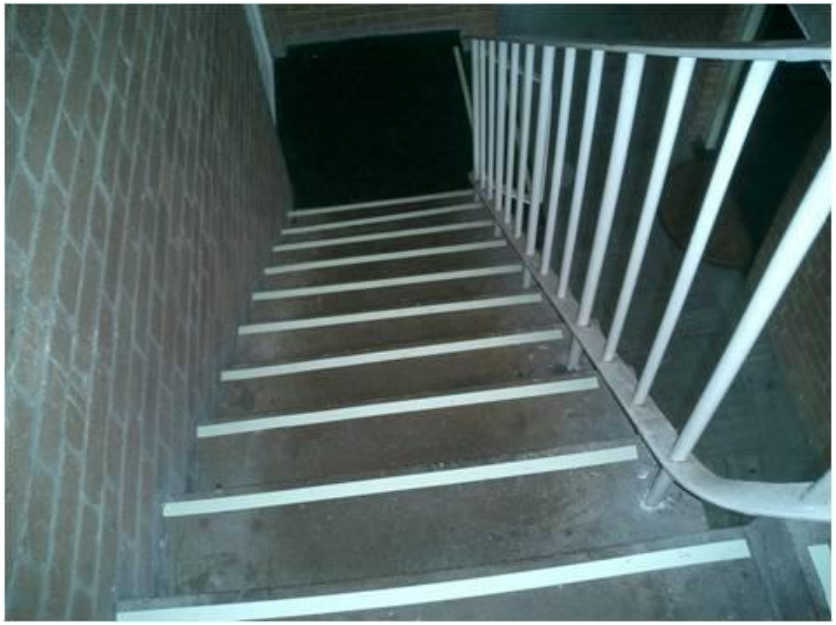

LIFT
Dry riser
FLAT 41
FLAT 42
4th FLOOR
OPENABLE WINDOWS - VENTING
OPENABLE WINDOWS - VENTING
STAIRCASE
FLAT 43
FLAT 44
Fire exit

Royal Surrey County Hospital NHS

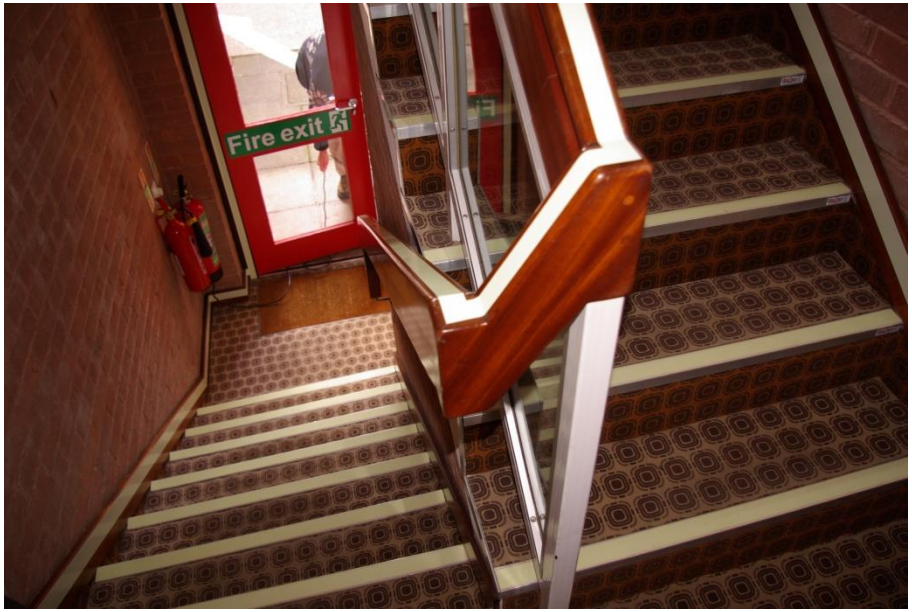
NHS Foundation Trust

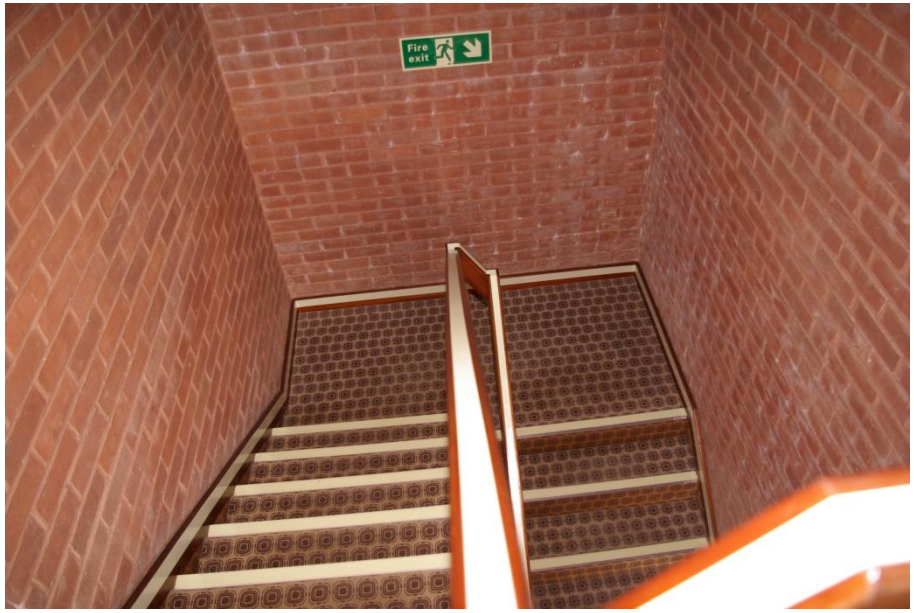


London Borough of Barnet – Barnet Homes



Salvation Army Housing Association, Bournemouth





Icknield
A Visual Arts College

Icknield High School, Luton

More locations where the system is fitted

In addition to the above locations, Photoluminescent low level wayguidance systems are fitted in all of the following. (in some cases where there is no electrical emergency lighting):

- Kennedy Space Centre, USA
- Time Warner, USA
- Chinese National Theatre
- Chengdu Metro, China
- Beijing Olympic Stadium
- Beijing Olympic Hotel
- Nanboku and Odakyu Metro lines, Japan
- Shibuya and Meguro Stations, Tokyo
- Melbourne Cricket Ground, Australia
- United Nations building, USA
- The Pentagon, USA
- Jazz at The Lincoln Centre, New York
- Madison Square Gardens, USA
- Curran Theatre, San Francisco
- Gwinnet Centre, Georgia, USA
- The Convention and Exhibition Centre, Hong Kong
- The Eaton Centre, Toronto

Thank you

For more information why not contact us
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