

SECURE HEALTH

# ILLUMINATING SECURE HEALTH APPLICATIONS



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# LIGHT THAT CHANGES LIVES

For over [60 years](#) we have worked with customers and partners to create lighting solutions that change lives.

Our unique approach begins with what the light needs to achieve, carefully considering the environment, the needs of the end user and the safety of others.

Every solution we provide is robust, reliable, low maintenance and long-lasting, delivering value through 'business as usual' continuity.

Our mission is to guide our customers, innovating in environments and applications with demanding requirements, going beyond accepted boundaries to enhance and change lives through light.

Our luminaires are built to last in demanding environments, with [robust](#) metal bodies, impact-resistant diffusers, and corrosion-resistant finishes ensuring safety and reliability. [Removable gear trays](#) simplify maintenance and enable cost-effective LED upgrades, while additional features such as [ligature resistance](#) ensure sector-specific compliance.

We don't just provide lighting — we partner with you to create solutions that change lives through light.





# LIGHTING TO ENSURE WELLBEING

We believe that visually comfortable lighting is critical to aiding recovery, with service-user safety of paramount importance.

Our luminaires are designed to meet the requirements of "Design in Mental Health Network's (DiMHN) Testing Guidance for Products in Mental Health Facilities" with a [ligature resistant](#) design to help prevent self-harming. They incorporate rounded or bevelled corners to prevent a fitting being used for self-harming as a ligature can not be attached. By following the DiMHN's [testing](#) guidance enables our luminaires to be assigned a LIG rating when tested accordingly.

We conduct specific tests at the design stage. This includes determining the degree of slope a 20 kg weight attached to a galvanised suspension cable, of differing widths, will slide off a luminaire at different angles of incline (see pictures below).

Utilising tamper proof screws and designing the body to be suitable for the application of anti-pick mastic during installation prevents the lighting from being breached or even used as a weapon.

Lighting can be a large source of energy consumption in secure health settings. Energy efficient LED lighting with dimming and occupancy sensors ensures luminaires are at full output only when needed. Removable internal [gear trays](#) allow for quick maintenance and technology upgrades without compromising the [robust](#), tamper-proof design.

Introducing colour in sensory rooms can stimulate senses to energise or calm service users. [Tuneable white lighting](#) helps regulate their circadian rhythms by mimicking daylight during the day to boost energy and switching to a warm tone at night to aid restful sleep. To reduce stress, fixtures should have a non-institutional feel.

In this brochure, we identify secure health applications, focusing on the principles of good lighting and:

- Safety
- Robust Construction
- Easy Maintenance
- Design



# WHY CHOOSE DESIGNPLAN?



SAFETY



ROBUST  
CONSTRUCTION



EASY  
MAINTENANCE



DESIGN



# BEDROOMS & ENSUITE

The **bedroom**, though not the primary location for treatment, is a service user’s home from home and place of refuge during their recovery journey. It is their place to rest in safety and the space must support them in several ways.

A place for restful sleep is understandably the most important. Disrupted sleep affects our psychological state, impairing a service user’s short and long term recovery.

Creating a non-institutional feel to the space is very beneficial. It is preferable to design the bedrooms to look as close to a residential setting as possible. The type of luminaires selected and their lit effect can impact this greatly.

The lighting should create a pleasant, restful space and the light itself should provide good colour rendering to enable various tasks to be carried out.

Luminaires should not be placed directly above the bed as this will cause discomfort to the service user resting underneath.

Lighting with a **ligature resistant** design are essential as they help prevent self-harming as the aperture between the luminaire’s diffuser and body is minimised.

A high level of **impact** and tamper resistance also helps secure the luminaire from interference, dismantling and potential weaponising.



## WHY CHOOSE DESIGNPLAN?

### SAFETY

- Ligature resistant designs reduces self-harm risk.
- Fully sealed luminaires prevent weaponisation.
- Tamper proof fixings ensure safety and security.

### ROBUST CONSTRUCTION

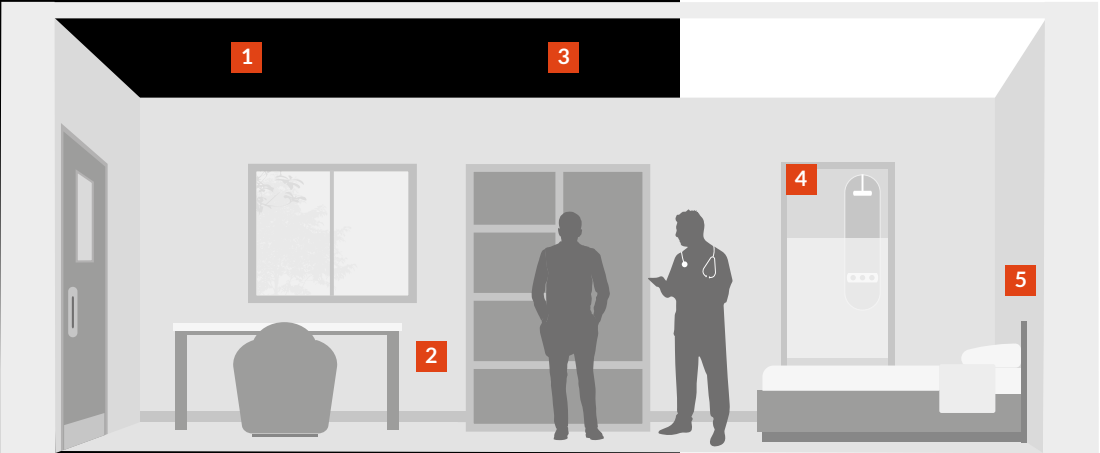
- Robust luminaires minimise damage and intervention.
- High ingress protection.
- Comprehensive warranty.
- Proven designs with application experience.

### EASY MAINTENANCE

- Low energy ensures long life & lower running costs.
- Removable gear trays for easy, sustainable upgrades.
- High IP ratings ensure bright, clean environments.

### DESIGN

- Contemporary design for a non-institutional feel.
- Service user and staff controllable for discreet night time inspection.
- Good colour rendering for accurate task performance.



1

**RDL AL G2**  
**IP65 IK14 (100J)**  
Recessed downlight with a consistent light distribution, enhancing visibility & reducing glare.

2

**DPW20**  
**IP65 IK16 (150J)**  
Wall recessed ligature resistant fitting designed to act as a wayfinding light at night.

3

**ARCULUS LINEAR RECESSED**  
**IP65 IK16 (150J)**  
Recessed ligature resistant luminaire suitable for ceiling mounting.

4

**DL86 AL**  
**IP65 IK14 (100J)**  
Ligature resistant downlight for secure healthcare providing uniform light distribution.

5

**DPR20**  
**IP65 IK14 (100J)**  
Discrete ligature resistant reading light designed to provide a soft lit appearance.

## Technical Support

In this type of space we recommend 150 lux average during the day dimmed to 50 lux at night. Luminaires should be specified with a soft diffused glow, supplemented by wall lights.

Despite a service user requiring their own space, operational staff need to be able to control lighting within individual bedrooms from outside the room. Service-users may need to be observed during the night and discreet lighting that does not disturb their sleep is essential.

The main light should be service user-controllable which staff can override from outside the room if required.

A night light should be incorporated in an over bed light which can be operated inside or outside of the bedroom. Low glare night lights will ensure service user visual comfort.

In the en-suite toilet **high ingress protection** is required due to water presence with dual operation; internally (service user) and externally (staff).



For further lighting advice call **020 8254 2022** or e-mail **[technical@designplan.co.uk](mailto:technical@designplan.co.uk)**



# CORRIDORS & CIRCULATION SPACES

**Corridors** form the backbone of a secure health facility, linking residential and treatment spaces for both people and services. These circulation spaces ensure effective movement from one location to another and act as a means of orientation.

The lighting must factor in the requirements of everyone using these functional, yet crucial, spaces. Light offers a sense of safety and security by optimising our spatial awareness. Corridors can be a confined space, requiring lighting that does not produce glare or shine into adjacent rooms.

At night time, or during periods of rest, non-clinical areas leading off a corridor benefit when light levels are set to provide low ambient illumination.

Energy efficient LED lighting can incorporate a variety of dimming and occupancy sensor options to ensure that luminaires are only at full output when actually required.

In an emergency situation, corridors can often double as the exit route to a place of safety.

Function and duration tests of emergency luminaires have to be conducted regularly and the results recorded. Automated test systems can help you meet your legal obligations - see the technical support section for more information.



## WHY CHOOSE DESIGNPLAN?



### SAFETY

- Automated or self test emergency lighting test systems designed to ensure BS5266-1 compliance.
- Tamper proof fixings prevent items from being hidden inside the fitting.



### ROBUST CONSTRUCTION

- Metal bodies and specially designed diffusers provide impact resistance.
- Works with a number of different power sources (emergency lighting).



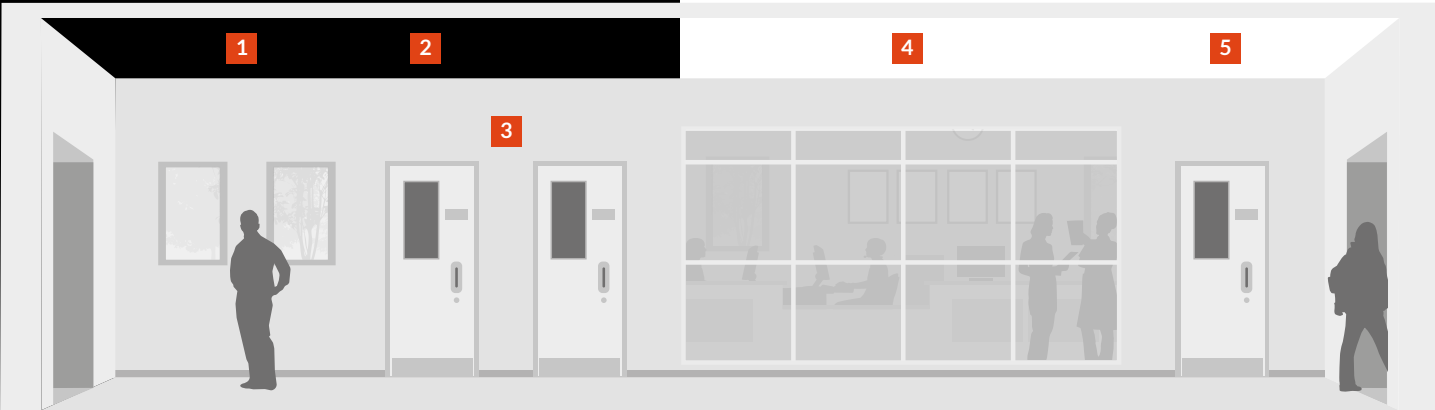
### EASY MAINTENANCE

- High IP ratings ensures easy to clean luminaires.
- Low energy ensures long life & lower running costs.
- Removable gear trays enables easy maintenance and technology upgrades.



### DESIGN

- "Low glare" prevents user discomfort in corridors.
- Integrated lighting controls enhance functionality/ lowers costs.
- Contemporary design for a non-institutional feel.



1



### ARCULUS LINEAR RECESSED

IP65

IK16 (150J)

Recessed ligature resistant luminaire suitable for ceiling mounting.

2



### RDL AL G2

IP65

IK14 (100J)

Recessed downlight with a consistent light distribution, enhancing visibility & reducing glare.

3



### BASILICA

IP66

IK20 (250J)

Contemporary and robust ligature resistant bulkhead with uniform light distribution & impressive light output.

4



### ARCULUS SURFACE

IP65

IK16 (150J)

Simple to install ligature resistant luminaire, built to be disassembled & reinstated after anti-pick mastic application.

5



### STROMMA

IP65

IK14 (100J)

Robust vandal and weather-resistant IP65 rated modular lighting system offering continuous linear illumination.

## Technical Support

Levels of illumination in a corridor can vary depending on the time of day. BS EN12464-1 recommends 200 lux for multi-purpose corridors during the day and CIBSE LG2 suggests 5 lux on the floor at night for corridors leading on to bedrooms.

There are many guides, directives and standards relating to emergency lighting including BS EN60598-2-22 for emergency luminaires, The Health and Safety (Safety Signs and Signals) Regulations, and BS5266 Part 1:2016, Code of Practice for the Emergency Lighting of Premises.

BS EN 62034 and BS EN 50172 relate directly to your legal requirement to ensure your emergency lighting systems are routinely inspected, tested and the test results recorded. We can provide professional guidance on how you can meet your emergency lighting obligations.

For example, we offer a DALI emergency lighting test system called DesignPath that automatically carries out routine testing, records results and reports faults.



For further lighting advice call **020 8254 2022** or e-mail **[technical@designplan.co.uk](mailto:technical@designplan.co.uk)**

# THERAPY ROOMS

Light can set the tone for a **therapy** session. Flexible, variable-colour lighting can boost activity or create a relaxing environment.

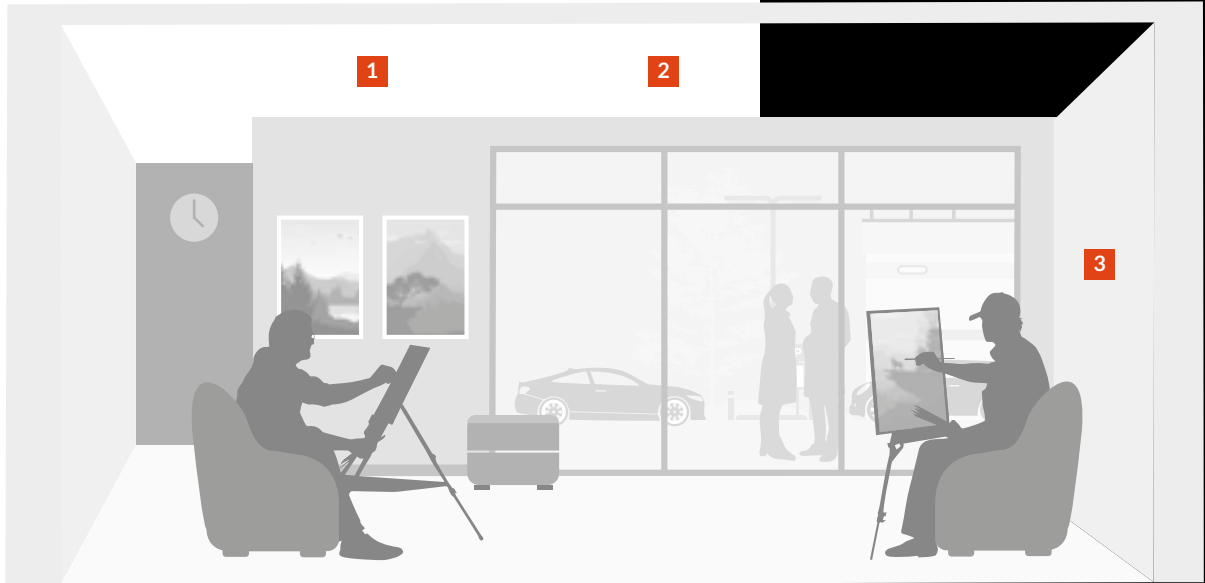
The lighting design must be flexible as most therapy activities do not require a specific room layout or equipment and these spaces are often multi-functional.

Natural light has a positive effect on stress and feelings of anxiety and can be helpful in a counselling setting. We have developed lighting, to support daylight and help regulate our circadian rhythm.

**Tuneable white lighting** can be raised to a cool colour temperature to replicate daylight providing an energy boost or lowered to a warm colour temperature to create a restful environment.

## Technical Support

Vertical illuminance must be considered to ensure good personal interaction. Lighting vertically onto surfaces can also help spaces feel less oppressive and more welcoming.



**ARCULUS RECESSED TUNEABLE WHITE**  
IP65 IK16 (150J)  
Tuneable white ligature resistant bulkhead designed to mimic our circadian rhythm.



**DL86 AL RGBW**  
IP65 IK14 (100J)  
Ligature resistant RGBW colour control downlight for secure healthcare providing uniform light distribution.



**BASILICA TUNEABLE WHITE**  
IP66 IK20 (250J)  
Contemporary tuneable white ligature resistant bulkhead, to mimic our circadian rhythm.

# COMMUNAL AREAS

Well-designed lighting should be warm, welcoming and encourage social interaction.

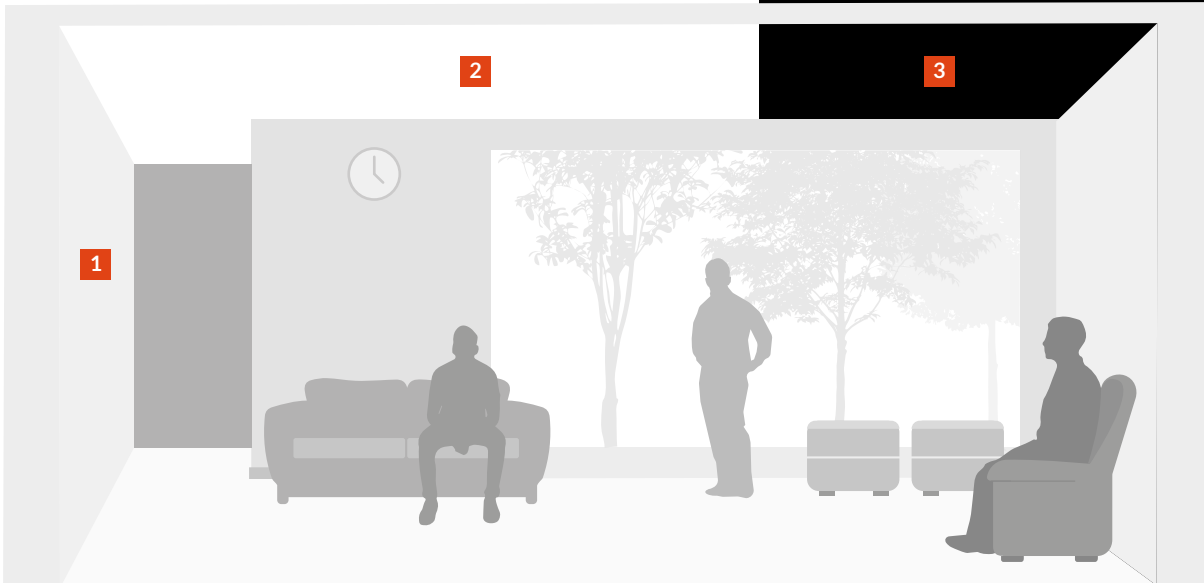
Good lighting helps create an environment where service users can engage in social activities. These areas are often open plan, enhancing the therapeutic environment by creating a light and airy space at the heart of the unit.

The **sitting room** often has access to the garden courtyard area enabling lighting designers to mix natural and artificial light to create a comfortable, relaxing space.

Sudden changes in illumination character can be disconcerting and disorientating. Light levels should be appropriate for the application with due attention paid to the consistency of lighting in the transition between areas.

## Technical Support

Codes of practice will generally specify values of horizontal illuminance. However, careful and controlled vertical lighting can dramatically increase the perception that the space is brightly lit and welcoming, far beyond what horizontal illuminance alone can deliver.



**BASILICA TUNEABLE WHITE**  
IP66 IK20 (250J)  
Contemporary tuneable white ligature resistant bulkhead, to mimic our circadian rhythm.



**ARCULUS LINEAR RECESSED**  
IP65 IK16 (150J)  
Recessed ligature resistant luminaire suitable for ceiling mounting.



**ARCULUS RECESSED**  
IP65 IK16 (150J)  
Simple to install ligature-resistant luminaire. Maintainable after anti-pick mastic has been applied.



# NURSE STATIONS

The [nurse station](#) is the central hub of a secure health facility, operating 24/7.

Tasks vary from screen work to face to face discussions with colleagues and visitors. High quality lighting is vital for comfort and glare control. Illuminating vertical surfaces, including the faces of operational staff and service users, is especially important.

If there is access to daylight, this should be maximised where possible, and [lighting controls](#) should be used to ensure that the lighting is energised only as required. Light must be flexible to support night staff while avoiding disturbance to service-users. Low maintenance lighting tailored to the task is recommended.

## Technical Support

It is important to balance light levels, and light quality, whilst ensuring nurses' stations are not over illuminated and waste energy. The provision of dimming control, for specific tasks, and the uniformity of light should be maximised. Energy savings can be made by employing [lighting controls](#).



**ARCULUS LINEAR RECESSED TUNEABLE WHITE**

IP65 IK16 (150J)

Luminaire designed to mimic our circadian rhythm.



**RDL AL G2 TUNEABLE WHITE**

IP65 IK14 (100J)

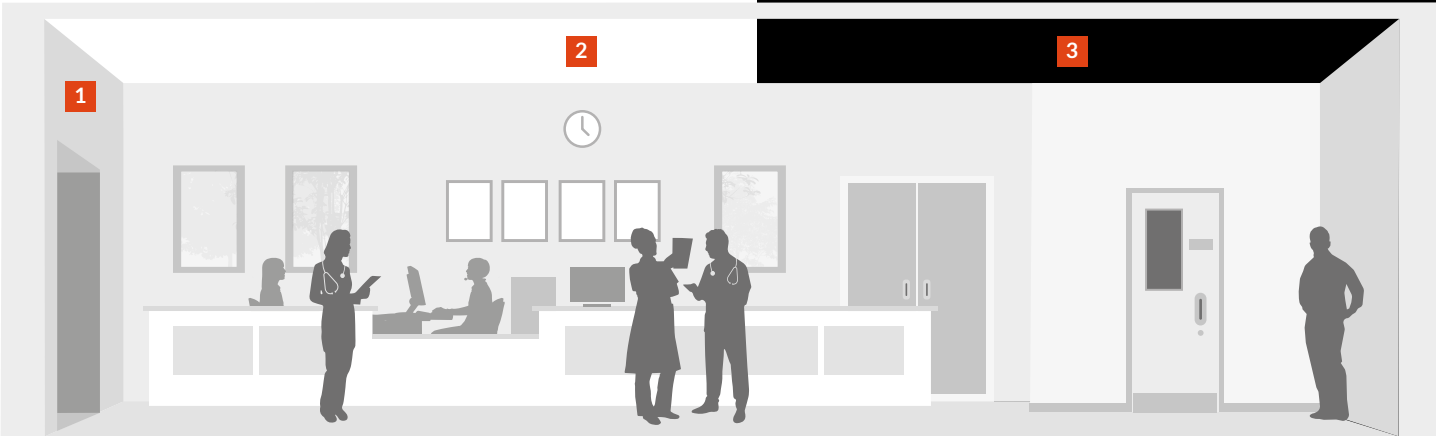
Recessed ligature resistant downlight designed to mimic our circadian rhythm.



**ARCULUS SURFACE TUNEABLE WHITE**

IP65 IK16 (150J)

Ligature resistant luminaire designed to mimic our circadian rhythm.



# DE-ESCALATION ROOMS

The aim of this [calming room](#) is to let service users step into a quiet space where they can de-escalate from an emotional state.

This reduces the risk of harm and helps create a calm, low-stimulus environment. [RGBW luminaires](#) can offer muted tones or a wide palette of colours and intensities.

To reduce stress further, luminaires should feel non-institutional and deliver soft, diffused light. [Ligature-resistant](#) designs help prevent self-harm, with no protruding parts and rounded corners to minimise risk.

High impact resistance is essential as service users recover from distress.

## Technical Support

At Designplan our [RGBW luminaires](#) can utilise DALI, or wireless control methods such as Casambi which can be adapted to the needs of your secure health project.



**BASILICA RGBW**

IP66 IK20 (250J)

Contemporary and robust RGBW colour control ligature resistant bulkhead.



**RDL AL G2 RGBW**

IP65 IK14 (100J)

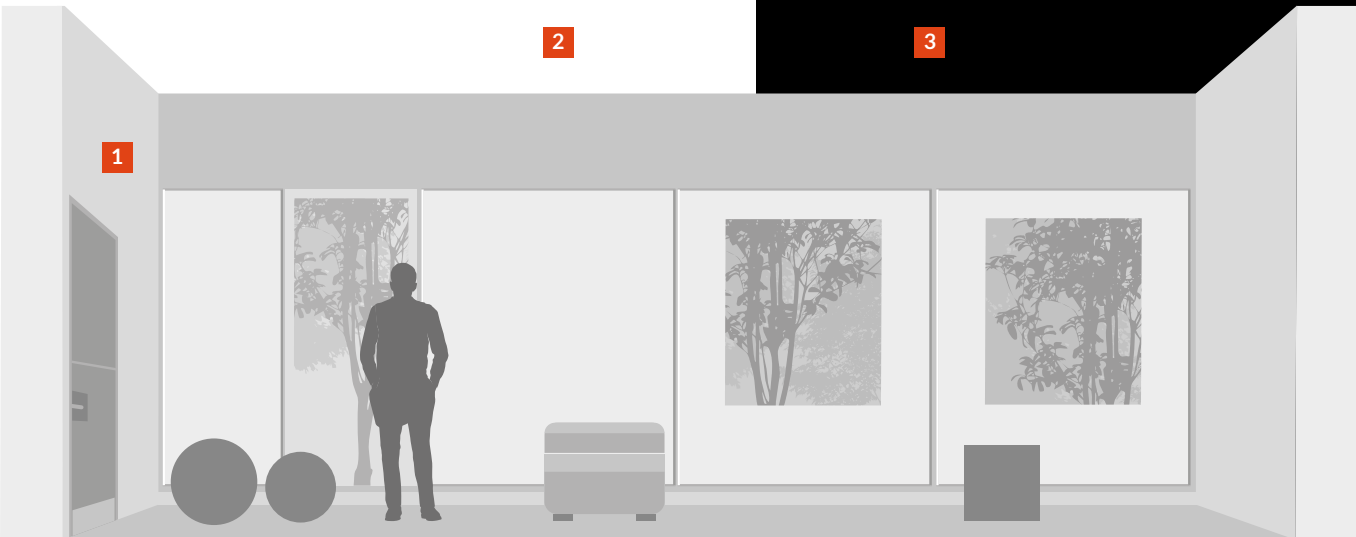
Recessed RGBW colour control ligature resistant downlight suitable for secure accommodation.



**DL86 AL RGBW**

IP65 IK14 (100J)

Ligature resistant RGBW colour control downlight providing uniform light distribution.



# EXERCISE & ACTIVITY AREAS

Individuals with severe mental illness often engage in significantly less amounts of **physical activity** than the general population. External courtyards and internal activity spaces can break down the barriers to exercise, opening up the physical and mental benefits to service users.

External courtyards offer a space outdoors to socialise, exercise and for quiet relaxation, all of which are beneficial to mental wellbeing. External lighting can be fully exposed to the elements, making **high IP rated** luminaires essential.

Lighting should be **robustly constructed** requiring little in the way of maintenance and should be appropriate for the intended use of the space, whether that be sport, exercise or relaxation.

Consideration should also be given to minimising upward light and ensuring that light does not spill into interior spaces.

Low level lighting such as bollards can be used to aid movement around footpaths and circulation areas and this can be complemented by wall mounted luminaires around the perimeter.

Internal multi-purpose exercise areas require lighting which can withstand a high level of impact such as being hit by a stray football.

Equipment, such as a running machine, can have a sloping control panel so bright reflections from a luminaire should be minimised.



## WHY CHOOSE DESIGNPLAN?

### SAFETY

- Lighting that promotes safety and wellbeing.
- Uniform lighting to reduce shadows.
- Clear signage lighting for safe wayfinding.

### ROBUST CONSTRUCTION

- Specialist diffusers and metal bodies provide high vandal resistance.
- High ingress protection.
- External finishes of luminaires are highly resistant to degradation.

### EASY MAINTENANCE

- Removable gear trays for easy, sustainable upgrades.
- Running hours and output reduced by using controls.
- Highest quality, UV stabilised optics minimises luminaire maintenance.

### DESIGN

- Highly efficient, low energy luminaires.
- Multiple mounting options only put light where it is needed.
- Light trespass and pollution is strictly controlled.



### ZELOS BOLLARD

**IP66 IK16 (150J)**

Impact resistant, weatherproof bollard with optics providing up to 8 metre spacings (15 lux average and 0.25 uniformity).

### ZELOS WALL SKI SLOPE

**IP66 IK16 (150J)**

Design prevents use as an external hiding place, accessible from an internal window. Minimal upward light.

### MONITOR

**IP65 IK16 (150J)**

Very strong vandal and weather resistant linear fitting providing excellent light distribution.

### BASILICA

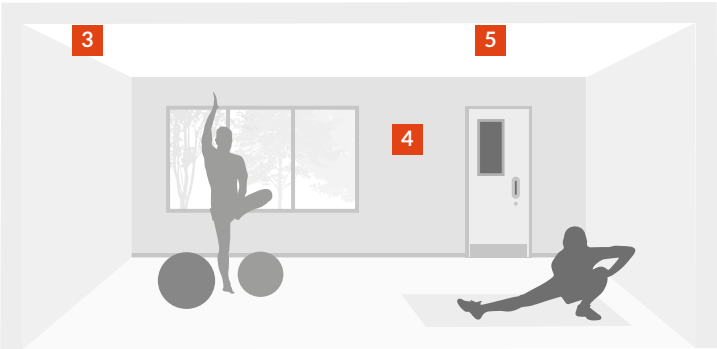
**IP66 IK20 (250J)**

Contemporary ligature resistant bulkhead with uniform light distribution and impressive light output.

### ARCULUS RECESSED

**IP65 IK16 (150J)**

Simple to install ligature-resistant luminaire. Can be maintained after anti-pick mastic has been applied.



## Technical Support

In internal exercise spaces, these areas should appear light and airy as dark colours can look oppressive. A light ceiling reduces the contrast between the luminaire and its immediate surroundings, reducing glare.

BS EN12464-1: Lighting – Indoor Workplaces should be consulted. Generally, in these spaces, we would recommend an illumination level of 300 lux.

For outdoor amenities, consideration should be given to the following standards and guidance:

- BS EN12464-2: Lighting – Outdoor Workplaces.
- BS 5489-1: Lighting of roads and public amenity areas
- ILP GN01:2011: Guidance Notes for the reduction of obtrusive light.



For further lighting advice call **020 8254 2022** or e-mail **[technical@designplan.co.uk](mailto:technical@designplan.co.uk)**



# ANCILLARY AREAS

Ancillary areas are integral to the efficient operation of a secure health facility.

Lighting should prioritise functionality as activities vary. In laundry rooms, for example, inadequate lighting can conceal trip hazards or slippery floors. A bright interior with light-coloured surfaces is advised.

Higher vertical illuminances, and some light onto the ceiling, is recommended. Glare control will also safeguard staff against discomfort or reduced visibility. Luminaires that are easy to clean, with long service lives, will help minimise any down time for maintenance.

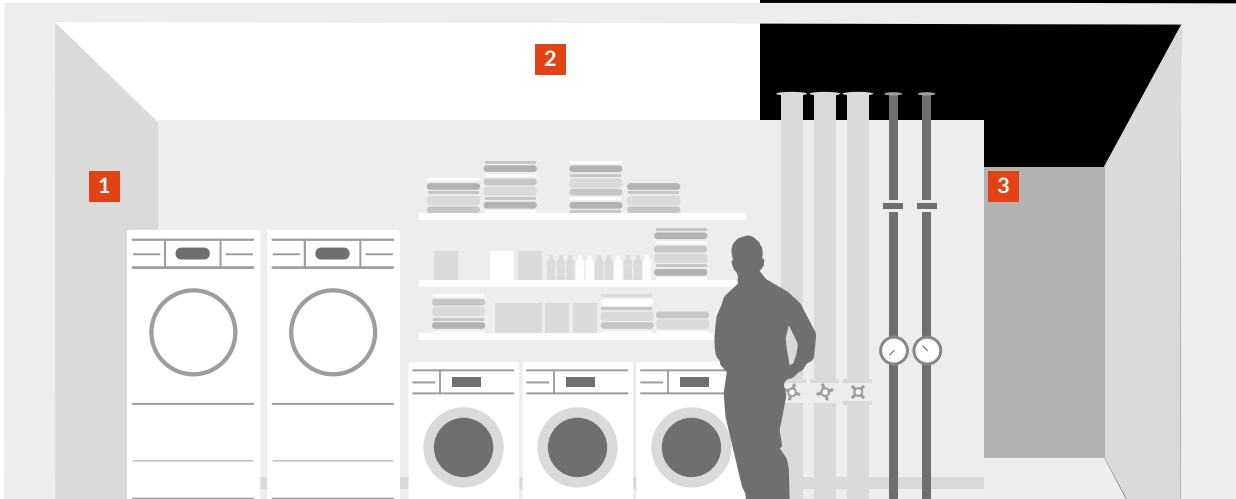
Automated occupancy controls are especially valuable as ancillary areas are not continuously occupied.

## Technical Support

Levels of illumination vary depending on each ancillary area. CIBSE LG2 recommends:

Laundry Rooms: 300 lux at bench height.

Plant Rooms and Supply Stores: 200 lux at the floor.



**QUADRING**  
**IP65 IK12 (65.2J)**  
Round robust bulkhead fitting. Die cast aluminium body incorporating opal polycarbonate diffuser.



**LINILUX**  
**IP54 IK12 (65.2J)**  
General purpose robust linear luminaire manufactured with a heavy gauge steel body, suitable for ceiling mounting.



**QUADRANT**  
**IP65 IK14 (100J)**  
Vandal resistant bulkhead fitting for wall or ceiling mounting. Can resist up to 100 joules of energy.

# EXTERIOR & PERIMETER

High **IP-rated** luminaires are essential for robust, low-maintenance **external lighting**.

Weatherproof luminaires with good visibility are needed for staff and visitor car parks, ideally positioned to eliminate hiding places.

External signage must be clear and visible. Lighting should balance security with minimal light pollution.

LEDs with specifically designed optics reduce energy usage compared to inefficient discharge lamps in floodlights.

For longevity and cost minimisation, luminaires should have highly resistant paint finishes.

## Technical Support

When it comes to lighting external and perimeter applications glare must be kept to a minimum. We recommend that the peak intensity of the main beam is below 70° from the vertical.

Higher mounting heights also need lower main beam angles, which can not only reduce glare but limit light pollution into neighbouring areas. Lighting levels should conform to CIBSE LG9 and BS EN 12464-2:2014.



**STREET** By iGuzzini  
**IP65 IK09 (10J)**  
Stylish and innovatively designed multifunctional post top range.



**ZELOS BOLLARD**  
**IP66 IK16 (150J)**  
Impact resistant, weatherproof bollard with optics providing up to 8 metre spacings (15 lux average and 0.25 uniformity).



**ZELOS WALL MAX**  
**IP66 IK16 (150J)**  
Elegant and versatile bulkhead for high wall mounted perimeter applications. Minimal upward light.





FOSS PARK



BROADMOOR

# SECTOR KNOWLEDGE & SOLUTIONS

We have extensive experience in secure healthcare applications, where safety and patient comfort are paramount.

Our luminaires combine specialist features with high-quality, energy-efficient lighting to meet these objectives.

For example, our Basilica luminaire is [ligature resistant](#) and rated [IK20/IP66](#). With a variety of sizes, switching and lumen options, our secure healthcare range is suitable for multiple applications (see pages 6–17).

## Case Study: Broadmoor

The [Broadmoor Hospital](#) Redevelopment in Berkshire provides high-security psychiatric services for men with serious mental health or personality disorders.

To modernise living conditions, 1,500 [Basilica](#) luminaires were specified for corridors, ward day spaces and reception areas. Their non-institutional appearance supports treatment in a contemporary, forward-thinking environment.

## Case Study: Foss Park

At [Foss Park Hospital](#) in York, we supplied Basilica, Bedhead and RDL AL G2 luminaires. Their rounded corners help prevent self-harm, while the minimal aperture between diffuser and body allows anti-pick mastic to be applied during installation.



BROADMOOR



FOSS PARK



# PRODUCT TESTING TO ENSURE SAFETY

Our products are designed to withstand attack and reduce the possibility of attaching ligatures.

We design these features in from the outset by carefully developing the form of the product, selecting the most appropriate materials and minimising the gaps between components.

Our luminaires are designed to meet the requirements of BRE and the Design in Mental Health Network's (DiMHN) Testing Guidance for Products in Mental Health Facilities with a [ligature resistant](#) design to help prevent self-harming. Amongst its primary objectives the BRE and DiMHN guidance also covers the ability of products to withstand sustained attack and abuse.

The BRE & DiMHN guidance defines test procedures and requirements that should result in demonstrating a range of performance characteristics that will enable an informed choice to be made by those procuring the product.

The Guide provides testing methodologies that aim to replicate attempts to damage a product or attach a ligature with varying degrees of planning and itemises the implements that should be used in carrying out the tests. This includes trying to insert various items such as a key, piece of cutlery or a credit card.

[Impact tests](#) featured in the Guide include a "soft" body, "hard" body or pendulum hammer. We go above these testing methodologies having designed a drop hammer test. This test applies an impact of 250 joules of energy - 5 times higher than EN 60068-2-75 (50 joules).



LIGATURE RESISTANT PROBE TEST



LIGATURE RESISTANT PULL TEST



DROP TEST



# EMERGENCY LIGHTING

UK Building Regulations require [emergency lighting](#) in case of mains failure. It ensures safe wayfinding and illumination of escape routes. We comply with key regulations and standards, including BS EN 60598-2-22, the Health & Safety (Safety Signs and Signals) Regulations and BS 5266-1:2016.

Emergency operation can be via self-contained gear or central battery systems. Our emergency luminaires undergo the same rigorous design, testing and certification as all our products. Auto and Self-Test systems, such as DesignPath, provide real-time fault reporting to support compliance and cut maintenance costs.

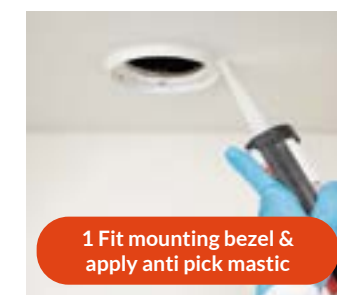
# MAINTENANCE: ANTI-PICK MASTIC

**To prevent ligature risk, anti-pick mastic must be applied at the bezel-substrate junction during installation.**

Maintenance access is critical, without it, safety can be compromised. Designplan [ligature-resistant](#) luminaires are specifically engineered to support this process, allowing safe disassembly and reinstatement without disturbing the mastic, as the pictures opposite show.

Not all secure health luminaires on the market can be maintained in this way. This can cause several issues including the inability to change emergency batteries or upgrade the product to the latest LED light engines utilising a [retrofit gear tray](#) (see page 25).

The aesthetics of the installation will also be affected as removing anti-pick mastic will damage the mounting substrate and possibly damage the light fitting.



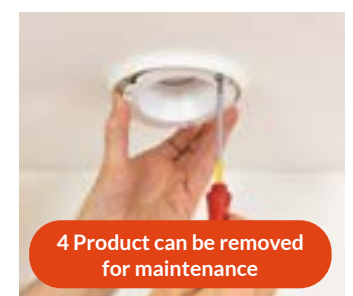
1 Fit mounting bezel & apply anti pick mastic



2 Connect luminaire



3 Luminaire now operational



4 Product can be removed for maintenance



# LIGHTING CONTROLS

## Lighting controls create energy-efficient, safe and welcoming spaces.

In secure healthcare every area, from bedrooms and corridors to therapy rooms and exercise spaces, has distinct lighting needs for service users and staff.

Our luminaires support various driver options, including standard switched and [DALI](#). When integrated into a lighting control system, lighting levels can be adjusted based on occupancy, delivering full illumination when needed and reducing output to save energy when spaces are unoccupied.

Control strategies are tailored to each area, using presence detection, timed control, daylight linking and manual options to ensure the right balance of functionality and efficiency.

## Occupancy and Daylight Control

Using PIR and microwave sensors in combination with photocells, we deliver energy-efficient solutions that respond intelligently to occupancy and daylight availability, dimmed or switched off when lighting isn't needed

[Lighting control systems](#) help reduce energy usage by adjusting light levels and switching off unused areas. They also support maintenance and monitoring by enabling automatic emergency light testing and generating compliance reports aligned with statutory requirements.

# CLEAN, HYGIENIC ENVIRONMENT

## Reducing the build-up of dust and germs supports infection control in secure health facilities.

Smooth-surfaced luminaires are easy to clean, helping maintain bright, hygienic environments. A [high ingress protection \(IP\) rating](#) ensures continued electrical safety.

## Antibacterial Paint

Antibacterial describes a substance that limits micro-organism growth. Our [antibacterial optional powder coatings](#)\* use advanced silver ion technology to reduce bacteria on painted surfaces by up to 99.99%, without losing effectiveness over time. Tests show a 90% reduction of SARS-COV-2 after 6 hours (ISO 21702:2019) and up to 99.99% against MRSA and E.coli (ISO 22196:2011).

| Species       | Contact Time |          | Reduction (Control) |            |
|---------------|--------------|----------|---------------------|------------|
|               | 0 Hours      | 24 Hours | Log 10              | Percentage |
| P. aeruginosa | 1.30E+04     | <11.11   | ≥ 4.39              | ≥ 99.99%   |
| E. aerogonese | 1.50E+04     | <11.11   | ≥ 3.87              | ≥ 99.99%   |
| E. faecalis   | 2.80E+04     | <11.11   | ≥ 3.74              | ≥ 99.99%   |
| E. coli       | 1.90E+04     | <11.11   | ≥ 4.82              | ≥ 99.99%   |

\* Available in-our standard paint colours as an option. If you require a special paint colour, please let us know.





# SUSTAINABLE MANUFACTURING

Since 1963, we've been designing and manufacturing robust luminaires in the London Borough of Sutton.

We start by listening to our customers' needs and requirements, with their feedback guiding a design process that begins with 3D CAD software and is followed by thorough [in-house testing](#).

After design and pre-production testing, our manufacturing process combines advanced robotics and automated machines with skilled operators.

Once formed, luminaire bodies pass through our paint plant for protective finishes, followed by assembly, electrical testing, and final dispatch.

We use LEAN methodology to minimise waste in time and materials, ensuring continuous product improvement.

Operating from a [BREEAM](#) 'Excellent' facility, we implement sustainability initiatives such as rainwater harvesting, solar panels and integrated [lighting controls](#) throughout the building.

We are accredited to [ISO 9001](#) Quality Management and [ISO 14001](#) Environmental Management systems, with both short and long-term plans to reduce our direct emissions, managed by a dedicated sustainability team.

We are increasing our use of [recycled and low-carbon](#) materials whilst designing out waste and minimising supply chain material miles.

We are enhancing our energy efficiency by replacing old machinery, expanding our use of daylight sensors, reusing heat from our paint plant and increasing presence sensor use.



# CIRCULAR DESIGN

Energy efficiency and circular design are at the heart of our sustainability promise. Our luminaires are engineered for long life, with [removable internal gear trays](#) that allow simple technology upgrades over time. This ensures fittings remain current, have a 30+ year lifespan and minimise waste.

The [robust](#) aluminium and steel housings are built for durability in the harshest environments while enabling reuse of the main body without replacement. Combined with low energy consumption, reduced maintenance and future-proof technology, this approach lowers running costs and minimises environmental impact.





# LIGHT THAT CHANGES LIVES

Our mission is to guide our clients, innovating in environments and applications with demanding requirements, going beyond accepted boundaries to enhance and change lives through light.



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