

One Station Hill

Condition 52 - Light Pollution

13 March 2024

LincolnMGT



One Station Hill – Condition 52 Light Pollution

Condition

No part of the Plot G building within Phase 2 shall be first occupied until a Scheme of environmental controls to minimise the impact of light pollution from interior lighting on the local environment and neighbouring uses in accordance with the recommendations of the approved Environmental Statement to include (unless otherwise agreed by the Local Planning Authority) switching off office lights and closing of blinds, and shall include a timetable for implementation, has been submitted to and approved in writing by the Local Planning Authority. The development of Phase 2 shall not be carried out except in accordance with the approved Scheme and shall be maintained as such at all times thereafter.

General Policy.

The applicant has set the following objective for tenants in the building.

To preserve as much of the natural night sky appearance as possible within the local area, it is critical to ensure that light pollution is minimised. Light pollution is caused by the emission of light upwards into the sky, either directly or through reflection. It also relates to pollution of the urban night-time environment with uncontrolled, obtrusive spill light causing nuisance to neighbouring properties, people and wildlife.

The following recommendations are made with reference to minimising light pollution:

Tenants and/or their design teams must be conscious that their specified lighting design does not directly or indirectly emit an excessive amount of light upwards, out of the facade fenestration. It is understood that placing restrictions and measurable criteria on this point may be restrictive to the design process, and potentially it can be very difficult to prove compliance with any standard on light pollution without the provision of lighting calculation data. Therefore, any unit which is deemed to be 'excessive' in their emission of upwards light outside of fenestration may be subject to the intervention of the Landlord. This intervention can include the request to remove offending light source, or to refocus the light output in such a way that minimises light pollution or spill light.

Technical Guidance

The following requirements have been set out in the tenant guidelines:

- Perimeter bulkheads. Within this all lights close to the façade will be centrally controlled and out of hours be dimmed.
- The balustrade lighting on L8 and L15 this is centrally controlled by the landlord and will be off out of hours. All external terrace lighting is to be controlled via photocell or astronomical time clock and to be switched off during the night as required by the Landlord or otherwise pre-agreed for events with the Landlord.
- Lighting within the reception will be off for 8 hours every night to allow the living wall to sleep (other than required security/emergency lighting).
- PIR absence detectors to switch off the lighting when no movement has been detected for a set period (i.e. Office occupant has left and forgotten to turn the lighting off).
- Astronomical timeclock to be allowed for the automatic triggering of lighting scenes at set timings relative to the varying times of dusk and dawn, along with events based on the current time. This automatic operation should be supplemented by a minimum of one number physical lighting control plate in each area, allowing the manual override of the automatic operation, along with PIR (Passive Infra-Red) and Photocell devices to monitor occupancy and daylight levels respectively.

In addition, the landlord is recommending to all tenants that PIR occupancy detectors and photocell daylight sensors are recommended in appropriate areas to dim and turn off lighting when persons are not present or when sufficient daylight is available to provide appropriate levels of illuminance without the need for electric lighting. Suitable coverage of PIRs should be allowed so no "dead" spots occur where movement cannot be detected. PIRs to work in presence or absence detection mode as appropriate, switching lighting on when movement is sensed (presence) or off when no movement is detected (absence).

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Tenant Floors and Ceilings

General

The Landlord will not provide ceilings inside tenant areas. Tenants may choose whether or not to install ceilings over part or whole of the Tenant demise.

Concrete soffits will be exposed as part of the landlord shell and core. Tenants may therefore elect to expose all or parts of the fair faced concrete soffit to create an authentic natural look and feel.

Any ceilings installed within 3 meters from the facade shall be set 3m from the given finished floor level.

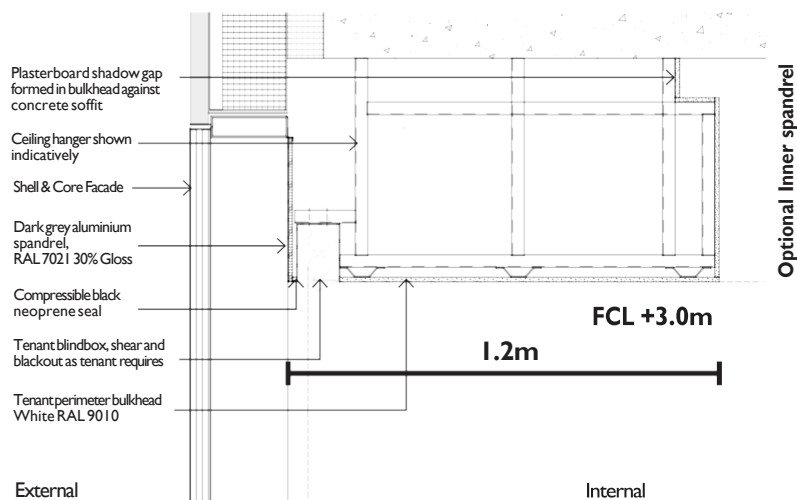
Interface with Landlord Ceilings

Where Tenant ceiling interface with Landlord ceilings, including Lift Lobby ceilings and any Landlord corridors or shared spaces, Tenant ceilings within 1.5m of Landlord Ceilings shall align to the Landlord ceiling (the FCL).

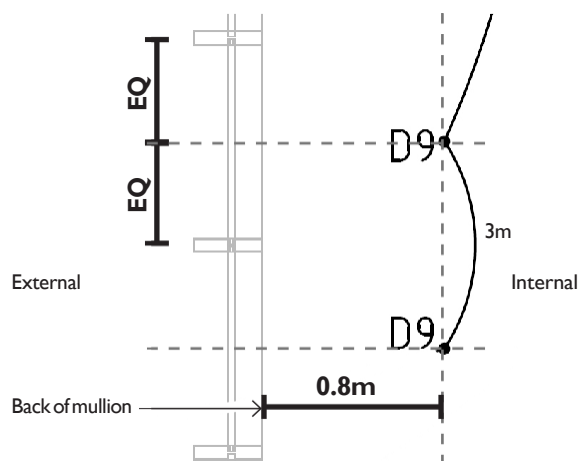
Perimeter Bulkhead

The Tenant shall provide a continuous perimeter bulkhead set at a minimum 3m height above finished floor level, and a depth of minimum 1.2m from the back of mullions, as per the illustrated design/profile and painted white RAL 9010.

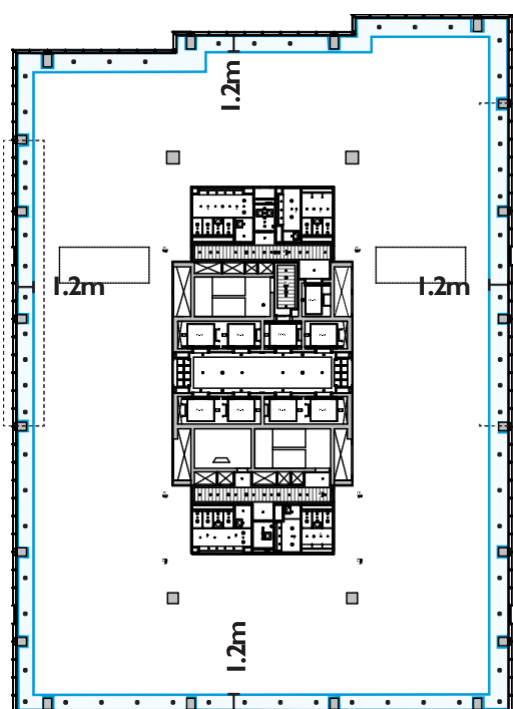
The bulkhead may include other tenant services as required, and shall be fixed back to the concrete slab.



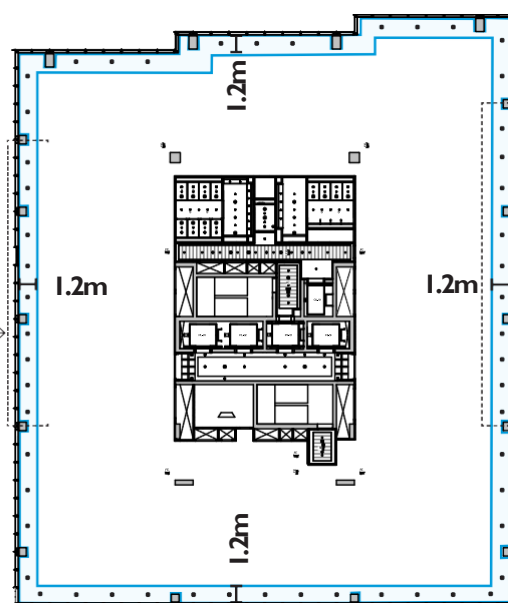
Typical Perimeter bulkhead detail



Perimeter bulkhead downlight RCP setting out



Typical Level 03 - 07 Plan of perimeter bulkhead



Extent of Tenant Perimeter Bulkhead

Typical Level 08 - 14 Plan of perimeter bulkhead

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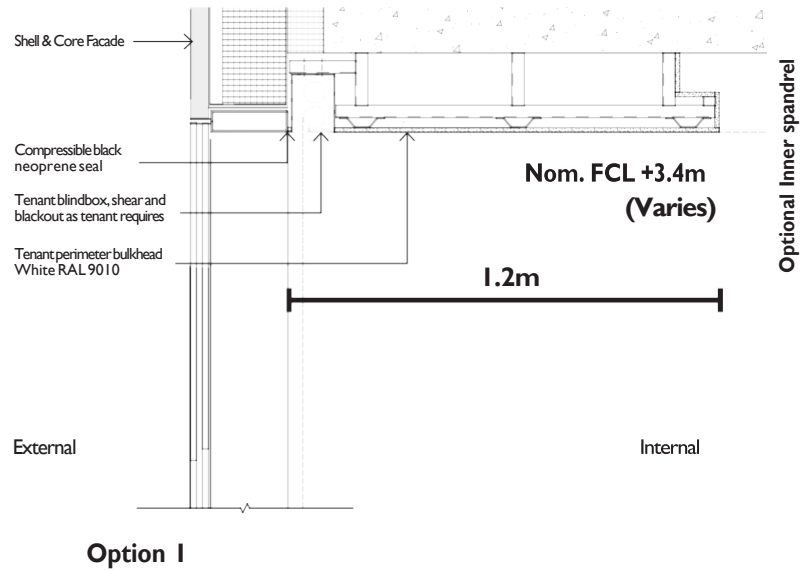
Tenant Floors and Ceilings

Typical Perimeter bulkhead detail where spandrels are set above the 3m finished ceiling level

On levels 1, 2, 7, 14 and 15 some or all facade spandrels transoms are set above the 3m AFL tenant ceiling level. In these instances the Tenant may either raise the bulkhead into alignment with the facade transom, or maintain the bulkhead at the typical 3m AFL datum.

Option 1 | Aligned with transom

The bulkhead may be raised into alignment with the facade transom. Subject to tenant's MEP zone requirement. Increased floor to ceiling height will affect the blinds length.

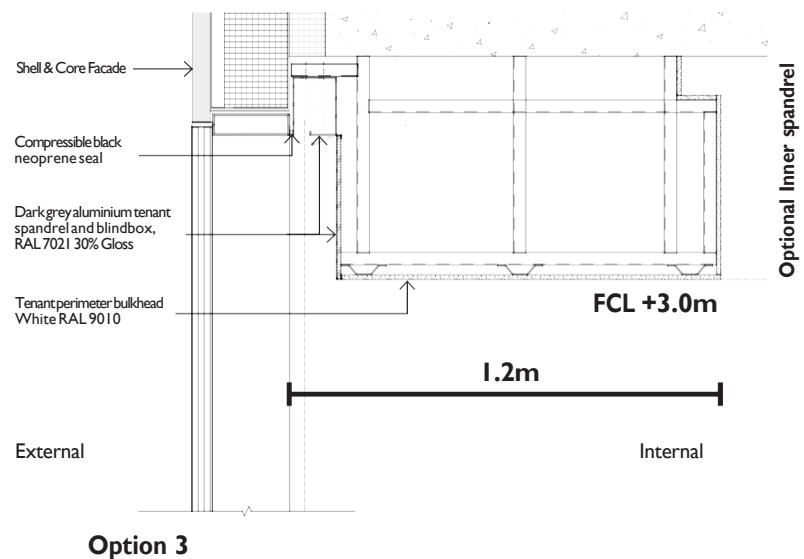
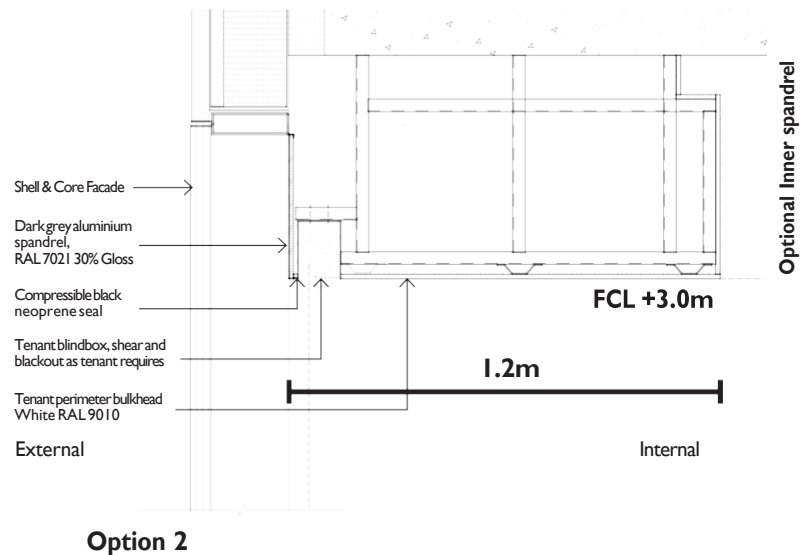


Option 2 | At 3m AFL, with blinds set at low level

The bulkhead may be maintained at 3m AFL. Outward internal spandrels must be finished in a dark grey aluminium (RAL 7021), 30% gloss, and must maintain a minimum distance of 200mm away from the internal face of the glass.

Option 3 | At 3m AFL, with blinds set at high level

The bulkhead may be maintained at 3m AFL. Outward internal spandrels and blind boxes must be finished in a dark grey aluminium (RAL 7021), 30% gloss. Blind box can not be installed between the facade mullions and must be placed behind the transom to maintain a minimum distance of 200mm away from the internal face of the glass.



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Tenant Floors and Ceilings

Typical Perimeter bulkhead detail where spandrels are set above the 3m finished ceiling level

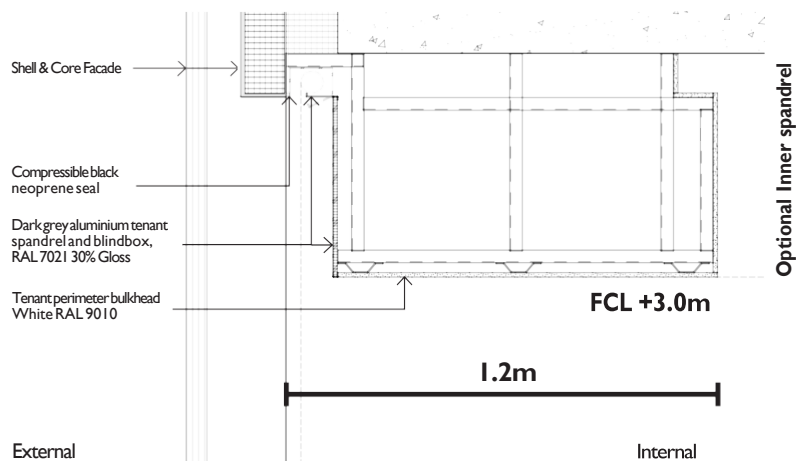
On levels 1 and 2 all facade spandrels are set above the 3m AFL tenant ceiling level. In these instances the Tenant bulkhead shall be set at the typical 3m AFL datum, and fixed back to the concrete slab.

Option 1 | At 3m AFL, with blinds set at high level

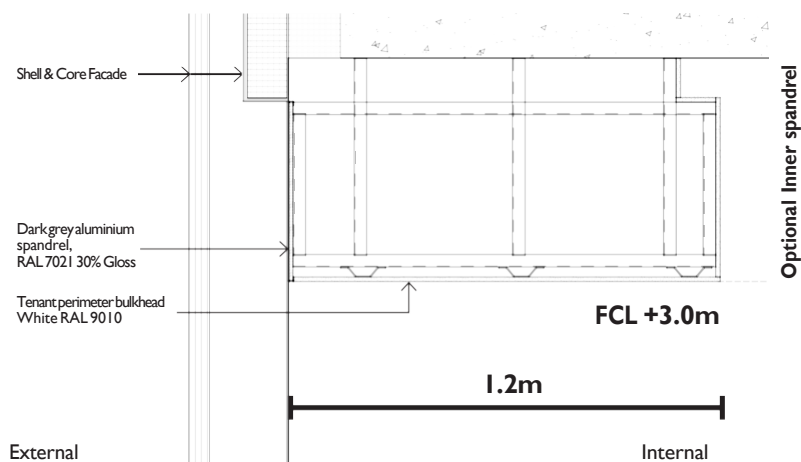
The bulkhead needs to be maintained at 3m AFL. Outward internal spandrels and blind boxes must be finished in a dark grey aluminium (RAL 7021), 30% gloss. Blind box can not be installed between the facade mullions and must be placed behind the mullions to maintain a minimum distance of 200mm away from the internal face of the glass.

Option 2| At 3m AFL, with no blinds (North facade)

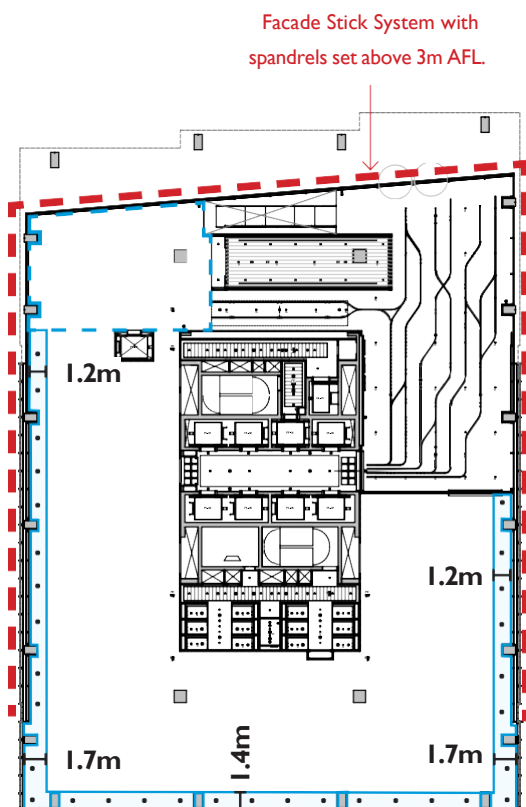
The bulkhead needs to be maintained at 3m AFL. Outward internal spandrels must be finished in a dark grey aluminium (RAL 7021), 30% gloss, and must maintain a minimum distance of 200mm away from the internal face of the glass.



Option 1

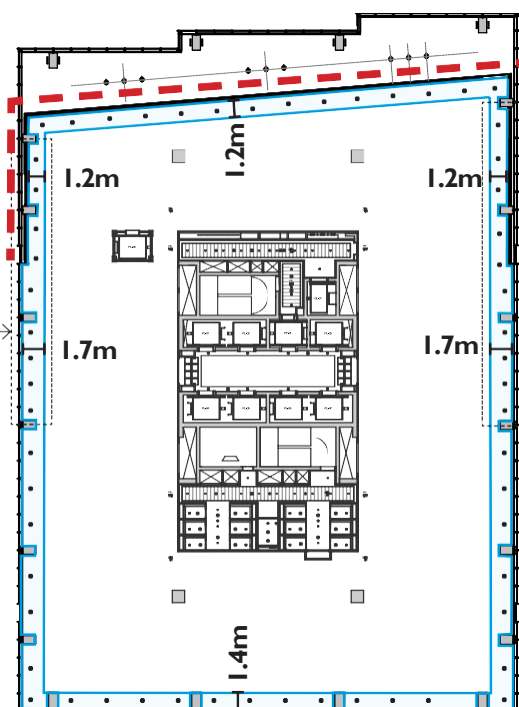


Option 2



Level 01 Plan of perimeter bulkhead

Light fittings @2.7 intervals



Level 02 Plan of perimeter bulkhead

Extent of Tenant Perimeter Bulkhead

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Perimeter Lighting

The Tenant shall provide landlord specified luminaires mounted to the above specified bulkhead, at 3m intervals centred to the glazed facade panels.

Tenant to install the following recessed downlight:

Designed Architectural Lighting(DAL) - MINITRM 62 FIXED Round recessed downlighter with no separate ceiling trim and a black deep cone reflector finish and beam distribution.

Ceiling Datums

Key ceiling datums for the shell and core have been defined in the landlord areas; lift lobbies(3m) and BOH corridors(2.7m). All tenant ceilings adjacent to these areas should be flush and align with these heights.

Interface with Landlord Doors

Where tenant ceilings run up against landlord doors, they shall clear the same by at least 100mm over the door frame.

Window Blinds

Tenants shall place full width and length roller blinds at windows (vision panels).

Blinds shall not be installed on any level on the North facade. The blinds shall be the following fabric and colour only (or landlord approved):

Mecho Manual Shade System

EcoVeil Screens I350 Series - Black I354,

or alternatively:

ElectroShade Motorized Shade System

EcoVeil Screens I350 Series - Black I354.

Other blinds, curtains, shutters, manifestation, masks, and other light control devices shall not be used.

Blinds shall be fixed from the Tenant's ceiling or underside of the structural slab.

Blinds shall be regularly raised and lowered so that they are not left down over extended periods.

Black-out Blinds

Where Tenants required black-out blinds (e.g. Projection Rooms, special needs, etc.) they shall be the following fabric and colour only (or landlord approved):

Mechoshade Blackout Shade Cloth Collections

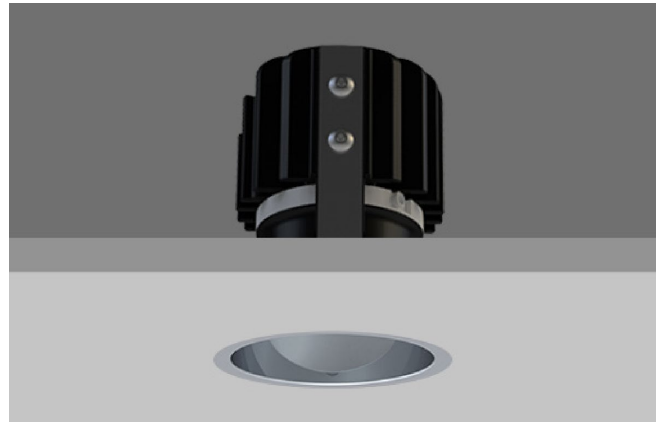
Classic Blackout 0700 Series

Colour: Black 0731

Tenant Floors

Tenant finished floors levels shall align to Landlord finished floor levels / given building Finished Floor Levels. Where Tenant floors abut / interface with Landlord floors they shall be fitted tightly and evenly against Landlord Floors.

The Tenant will be provided with Raised Access Floor that has been designed for the area.



Indicative image of perimeter bulkhead recessed downlight



Indicative image of recessed blinds at the glazed facade



Indicative image of raised flooring

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Tenant Lighting

Tenant Office Spaces

Guidelines are given for the following lighting criteria:

- Lighting Controls
- Light Sources
- Correlated Colour Temperature (CCT)
- Colour Rendering (CRI)
- Colour Consistency (SDCM)

Prior to installation all lighting schemes are to be submitted by the tenant / tenant's design team to the Landlord for review and approval, submitted information to include:

- Lighting layouts
- Illustrations as appropriate
- Lighting control schedules and/or electrical layouts
- Lighting equipment schedules / cut-sheets showing: light-source, wattage, CCT, CRI, SDCM, driver/control-gear information

Lighting Control

It is critical that offices are able to control their lighting levels throughout the working period, adjusting lighting levels to suit available daylight, occupancy and task. Lighting control systems allow flexibility and a level of future proofing, which is critical in an office environment, but also contribute towards a reduction in lighting load, and allow the lighting to be tailored to suit the requirements of the development, as well as the internal requirements of the office tenant.

The following lighting control recommendations are made:

- Lighting control system to be utilised for all lighting equipment, providing dimming functionality to all front of house light sources
- Light sources should be either individually digitally addressable (through a system such as DALI), or suitably grouped via physical control cabling, to allow each individual lighting typology to be dimmed separately
- Control system and electronic drivers should allow luminaires to be dimmed to at least 5% of light output
- All dimming must be flicker free and stable, so as not to cause any stroboscopic effects. Dimming quality should be verified by physical bench tests with the proposed equipment, prior to full installation

Astronomical time-clock to be allowed for the automatic triggering of lighting scenes at set timings relative to the varying times of dusk and dawn, along with events based on the current time. This automatic operation should be supplemented by a minimum of one number physical lighting control plate in each area, allowing the manual override of the automatic operation, along with PIR (Passive Infra-Red) and Photocell devices to monitor occupancy and daylight levels respectively

- PIR occupancy detectors and Photocell daylight sensors are recommended in appropriate areas to dim and turn off lighting when persons are not present or when sufficient daylight is available to provide appropriate levels of illuminance without the need for electric lighting. Suitable coverage of PIRs should be allowed so no “dead” spots occur where movement cannot be detected. PIRs to work in presence or absence detection mode as appropriate, switching lighting on when movement is sensed (presence) or off when no movement is detected (absence)
- A series of lighting scenes should be set up to allow different lighting levels throughout the day, evening and night appropriate to the level of ambient daylight and the surrounding environment. Different lighting scenes should be set-up to suit the functionality of the different spaces. These scenes should be commissioned by a lighting design consultant, with final approval from a Tenant representative.