MSG SPHERE
LONDON
ADVERTISEMENT
DESIGN STATEMENT

February 2019
This document describes the elements of MSG Sphere which require advertisement consent, which are the subject of an application for Consent to Display Advertisements, submitted in parallel with the Planning Application.

The advertising proposals are an integral part of the MSG Sphere, and relate to the digital surface of the MSG Sphere itself, and additional LED displays located on the exterior façade walls, lift cores, and bridge links.

These serve multiple functions, providing commercial revenue through commercial advertising and naming rights, as well as information about current and future performances, and public information.

This type of content is an integral part of any major music venue, as the precedent images in this document demonstrate, and are fully in keeping with the current and future character of the area, and the Site’s designation for major town centre uses.

The digital surface of MSG Sphere is an integral part of the design and architecture of the building, and its external appearance. For 50% of the time that MSG Sphere is illuminated, with the exception of any naming rights/event advertisement, it will be used for non-commercial content, digital art etc, and will become an iconic landmark for London and Stratford.

The strategy has been developed taking into consideration the commercial requirements for the operation of MSG Sphere, the local context, the relevant Local Plan Policies and the two criteria which determine the acceptability of advertisement proposals; safety and amenity.

This document explains the design approach and the location, size, appearance and specification of the proposed advertising panels, and includes precedent images and images of the proposed development in ‘active’ advertising mode. The digital content itself is not subject to planning controls, but is subject to a separate regulatory regime, the Advertising Standards Agency (ASA).

**MSG ADVERTISEMENT PROPOSALS**

**Introduction**

This Document is submitted in support of the Planning Statement, in addition to the following documentation:

- Application Form (combined with the application form for the Planning Application);
- Site Plan;
- Proposed Elevations;
- Advertisement Design Statement; The Environmental Statement submitted in support of the Planning Application cross refers and assesses the Advertisement Application, where relevant, including
  - Volume 1 Chapter 1: Introduction and EIA Methodology;
  - Volume 1 Chapter 3: The Proposed Development;
  - Volume 1 Chapter 5: Socio-Economics and Health;
  - Volume 1 Chapter 11: Light Intrusion and Upward Sky Glow
  - Volume 1 Chapter 17: Mitigation and Monitoring Schedule
As noted in the Design and Access Statement, the site is located within a Metropolitan Centre location, already characterised by large scale visitor attractions, including Westfield Stratford City Shopping Centre, The London Stadium and other Olympic legacy venues, and multiple large format illuminated advertisements and public art installations.

Over the London Plan period, Stratford is expected to significantly increase its current offer, becoming a globally renowned International Centre. Enhancing its cultural offer, and night-time economy, are both key components of strategic and local planning policies, and align with national policies which seek to enhance the vitality and viability of town centres.

The site is not situated within a conservation area or within the vicinity of any listed buildings or designated heritage assets. As noted in the Townscape, Built Heritage and Visual Impact Assessment (ES Volume 2) there are no protected views to or from the Site.

The Townscape, Built Heritage and Visual Impact assessment includes an assessment (ES Volume 2) of the proposed digital panels, illustrating advertising content in key views. This concludes the proposed advertisements will not have a material impact on townscape and visual amenity. On the contrary, the overall conclusion of this analysis is that, overall, the MSG Sphere will provide an attractive and iconic addition to Stratford’s townscape.

The site is located between existing railway lines and next to the Engie energy centre. Until recently, the Site has had no immediate residential neighbours, and all the adjoining sites have been developed in the context of the site’s allocation for major ‘town centre’ uses, within the heart of a Metropolitan Centre.

As such, the site is not in an established residential area, or an area designated for such uses. The commercial nature of the surrounding area is characterised by the advertisements already in place within Stratford centre, and in the immediate vicinity of the Site.

While the Site itself has no relevant history of advertising consents, the Stratford Metropolitan Centre is characterised by a number of highly visible advertisements which have been approved by the LLDC and its predecessors, or on appeal.

The proposals, and any judgements about their impact on safety and amenity, have to be understood in this context.
MSG ADVERTISEMENT PROPOSALS

Planning Policy

National Policy
The NPPF sets out the Government’s economic, environmental and social planning policies.

Advertisements are subject to control only in the interests of amenity and public safety, taking into account cumulative impacts. Control over outdoor advertisements should be efficient, effective and simple in concept and operation. Only those which have an appreciable impact on a building or their surroundings should be subject to the local planning authority’s detailed assessment.

Planning Practice Guidance (PPG) complements the NPPF and provides practical advice for practitioners. Paragraph 79 of the PPG provides guidance on the definition of amenity and serves as a reminder to Local Authorities that large format advertising is acceptable in principle in the right locations, stating:

“...In assessing amenity, the local planning authority would always consider the local characteristics of the neighbourhood: for example, if the locality where the advertisement is to be displayed has important scenic, historic, architectural or cultural features, the local planning authority would consider whether it is in scale and in keeping with these features. This might mean that a large poster-hoarding would be refused where it would dominate a group of listed buildings, but would be permitted in an industrial or commercial area of a major city (where there are large buildings and main highways) where the advertisement would not adversely affect the visual amenity of the neighbourhood of the site.”

In this case, none of these considerations apply. The proposed advertisements have been carefully located as part of a clear strategy which respects and builds upon the existing character of Stratford, and planned role of this Site as a major new ‘town centre use’ within the heart of the Metropolitan Centre.

There are no important scenic, historical, architectural or cultural features in the locality. As such, the Proposed Development would be in keeping with the commercial nature of the area, within which the display of advertisements of the nature proposed would not be out of place and would certainly not adversely affect the visual amenity which is already dominated by the commercial hub of Westfield.

The MSG Sphere will attract more visitors to Stratford, by enhancing its attractiveness, and vitality and viability. The proposed digital media content is an integral part of that attraction.

The London Plan
Policy 7.4 of the London Plan advocates a proactive approach to planning with proposals improving an area’s visual or physical connection with its surroundings. In localities of poor or ill-defined character, development should build on the positive elements that can contribute to establishing an enhanced character for the future function of the area. The proposals will enhance the character and function of this area.

LLDC Local Plan
Local Plan Policy BN15 provides specific guidance in relation to advertisements. The most applicable criteria for the proposed development are as follows:

“That the advertisement will not have an adverse impact on amenity;
That the advertisement will not result in visual clutter through the proliferation of advertisements in the area;
The advertisement will not obstruct architectural features; and
The advertisement will respect the appearance, character, scale and street scene of the building/site upon which they are proposed.”

In respect of Policy BN15, the proposed advertisements comprise a co-ordinated approach to advertising in a location clearly appropriate for the placement of naming advertisements, wayfinding and public information, and commercial advertisements within the heart of the Metropolitan Centre. Understood in the proper context, the advertisement proposals will materially enhance the general amenity of this part of the Metropolitan Centre.

The proposed advertisements will not result in visual clutter, or obstruct architectural features; on the contrary, they are an integral part of the architecture of MSG Sphere. Given the character of the site at present, they will materially enhance the appearance, character and street scene of the building/site.
Public Amenity
The meaning of amenity can be wide ranging but the PPG states that “amenity” includes aural and visual amenity.

The PPG provides an explanation of “amenity” by reference to the definition contained within the Town and Country Planning (Control of Advertisements) (England) Regulations 2007, which explains that factors relevant to amenity consideration include the “general characteristics of the locality, including the presence of any feature of historic, architectural, cultural or similar interest.”

The site is not situated within a conservation area or within the vicinity of any listed buildings or other designated heritage assets. There are no protected views to or from the Site. The site is overlooked by a number of recently developed residential premises, all of which have come forward in the context of the Site’s designation for a ‘town centre use’.

Reflecting the commercial character of the wider area and the demand for advertisement space, there have been a number of recent advertisement consents granted by the LLDC for signage.

Most notably, the digital LED wrap forming part of the Olympic Stadium redevelopment (LPA Ref: 15/00397/ADV), whereby permission was granted for the installation of vertical steel mullions 15 metres in height and extending 270 degrees around the exterior of the stadium façade (620 metres).

In that case, the LLDC concluded that any effects on the townscape and cultural heritage of the adjacent conservation area designation would not be significant; residential amenity would not be unacceptably impacted, and the level of brightness was considered to be within the recommended industry guidance. The MSG Sphere is a more central, urban location than the Stadium, and does not have the same sensitivity in terms of ecological effects.

More recently, permission was granted at appeal for the temporary display of vinyl adhesive adverts on the north and southern glazed panels of the Town Centre Link Bridge (TCLB). The Inspector concluded that whilst the advertisements would be very prominent to people passing over the bridge, they would relate to the busy commercial environment at the entrance to Westfield, stating:

“The TCLB is not within a conservation area and the scheme would not affect the setting of a listed building. Given its commercial context, I am satisfied that the proposal would accord with the local characteristics of the neighbourhood, and that it would not harm the visual amenity of the area.”

These and other decisions demonstrate that Stratford is an appropriate location for advertising. The site is similarly located within what will become a busy pedestrian thoroughfare, at the heart of the Metropolitan Centre, and the same considerations clearly apply to the proposed advertisements on the new bridge links.

The impact of the LED surface of MSG Sphere on nearby residents’ amenity is addressed in the detailed assessment undertaken by Point 2 Please refer to the Environmental Statement (ES Volume 1, 2, 4 and 5). Light emissions will be controlled by way of operating hours and luminance levels, which will be set out in conditions and obligations to safeguard residential amenity. There will be no impact on aural amenity. We do have adverse effects that are both significant and not significant noise / aural amenity, specifically from crowd dispersion.

Given the nature of the proposed advertisements, the location of the site and the nature of the surrounding area, they will have no adverse impact upon amenity and will accord fully with all the relevant provisions of the LLDC Local Plan, and specifically, Policy BN15.

Public Safety
The impact of the LED lighting on road/rail users has been assessed as part of Environmental Statement. The surrounding roads are urban, low speed roads and no unacceptable impacts on road or rail safety have been identified.’

The CONOPS deals with event management and crowd safety, and concludes that the proposed development will not lead to any material concerns over crowd safety. In any event, there is no evidence to suggest that the proposed advertisements will have any material impact on this aspect of safety.

As part of the pre-application stage, ongoing discussions have been held with TFL/LUL/Network Rail. These have centred around any potential impacts of MSG Sphere on rail safety. Although this process is ongoing, no material rail safety issues have been identified as a consequence of MSG Sphere.

The impact of the LED surface on air safety has also been considered as part of the Environmental Statement. This has confirmed there are no safety issues, subject to the proposed controls on lighting emissions.
MSG ADVERTISEMENT PROPOSALS

Design Rationale

This report describes the main elements of MSG Sphere which are specifically designed to display digital content, for which advertisement consent is sought. These form an integral part of the design, tailored to both commercial and non-commercial content, as an integral part of the user experience.

As the precedent images set out in this document illustrate, this type of content is a necessary, and fundamental part of a major venue, providing a means to inform and to engage with our customers and the wider public, and creating the opportunity to glimpse into the experience through content and coordinated moments.

In addition to meeting commercial requirements, and optimising sightlines and key arrival points and linkages, the location and design of the proposed LED panels and other digital media has been determined having regard to planning considerations, notably safety and amenity.

However, above all, each intervention and product, while described and examined individually in this document, forms an integral part of the venue design, and is intended to enhance the experience and seamlessly blend into the aesthetics of the landscape, by providing a visual and materiality bridge between MSG Sphere and the surrounding landscape.

In addition to the main components outlined in this document, a number of additional smaller signs/totems will be incorporated within the structure and on the podium, which for the main part would benefit from deemed consents. However, if required, these would be subject to further applications in due course.
SPHERE SURFACE
**MSG ADVERTISEMENT PROPOSALS**

**Sphere Surface**

**Key**
- **Optimum viewing distance** - 150 meters to 75 meters
- **Viable viewing distance** - 75 meters to 25 meters
- **MSG Sphere media surface**
MSG ADVERTISEMENT PROPOSALS

Sphere Surface

The external surface of the Sphere will comprise stainless steel panels with embedded LEDs. The LED surface is an integral part of the design and architecture of the building, and can be activated for the display of advertising and non-advertising content on the entirety of the LED surface (as illustrated by the images on the following pages). As mentioned previously, for 50% of the time that the Sphere surface is illuminated, with the exception of any naming rights/event advertisement, it will be used for non-advertising content, digital art etc.

We have assessed the proposed advertising on the LED surface against the relevant LLDC planning policies and conclude as follows:

Does it have impacts on the amenity of nearby residents or others?
The impact of lighting emissions from the LED surface on nearby residents’ amenity is addressed within the Environmental Statement (specifically Chapter 11). The light emissions will be controlled by way of operating hours and luminance levels, which will be set out in conditions on the advertisement consent to safeguard residential amenity. Please refer to the Mitigation and Monitoring chapters of the Environmental Statement for further details.

The Townscape, Built Heritage and Visual Impact assessment includes an assessment (ES Volume 2) of the proposed LED surface, illustrating advertising content in key views. This concludes the proposed advertisements will not have a material impact on townscape and visual amenity.

There will be no impact on aural amenity from the LED surface.

Does it result in visual clutter and proliferation?
No, the LED surface is an integral part of the design and architecture of the building, which will become an iconic landmark for London and Stratford.

Do they obstruct architectural features?
No, the LED surface is an integral part of the design and architecture of the building, which will become an iconic landmark for London and Stratford.

Does it have any impact on pedestrian, cycle, rail, road, or air safety?
The impact of the LED surface and solar glare on road/rail users has been assessed as part of the Environmental Statement. The neighbouring roads are urban, low speed roads and no impacts on road or rail safety have been identified.

As part of the pre-application stage, ongoing discussions have been held with TFL/LUL/Network Rail. These have centred around any potential impacts of MSG Sphere on rail safety. Although this process is ongoing, no material rail safety issues have been identified as a consequence of MSG Sphere.

The impact of the LED lighting on road/rail users has been assessed as part of Environmental Statement. The surrounding roads are urban, low speed roads and no unacceptable impacts on road or rail safety have been identified.
MSG ADVERTISEMENT PROPOSALS

Sphere Surface

360° DYNAMIC POSITIONING

Imagery and content moves around the surface of the sphere repositioning to always give the best sightlines through the days responding to footfall. This maximises the content exposure when needed and reduces over use of the digital facade.

Key

- High Visibility Zone
- Medium Visibility Zone
- Low Visibility Zone
- Obscured Visibility Zone

Extent of LED surface coverage
MSG ADVERTISEMENT PROPOSALS

Sphere Surface
MSG ADVERTISEMENT PROPOSALS

Sphere Surface
MSG ADVERTISEMENT PROPOSALS

Sphere Surface
MSG ADVERTISEMENT PROPOSALS

Sphere Surface
PODIUM FACADE
Planning considerations
We have assessed this element against the relevant LLDC planning policies and conclude as follows:

Do they impact on the amenity of residents and others?
No, they are in keeping with the commercial character of this central site and existing and proposed uses. There are no sensitive conservation areas, heritage assets, or established residential areas likely to be affected by the proposals. Subject to conditions on hours of operation and light emittance levels to mitigate potential impacts on residents amenity.

Do they result in visual clutter and proliferation?
No, they are an integral, fully integrated part of the design, built into the exterior façade walls.

Do they obstruct architectural features?
No, they are an integral, and fundamental part of the architecture

Do they respect the appearance, character, scale and street scene of the building/site upon which they are proposed?
Yes, they are an integral, and necessary part of the character, scale and street scene of the buildings into which they are incorporated.

Do they have any impact on pedestrian, cycle, rail, road, or air safety?
The impact of the advertisements on public safety has been considered as part of the detailed set out in the EEs and other supporting technical documents. This identifies no concerns in respect of pedestrian, cycle, rail, road or air safety.

Digital billboards
Designed to sit below MSG sphere, the digital billboards create a window of light that blends into the visual aesthetics across the whole site.

The LED digital billboards will allow the opportunity to present the content that will performed and be shown within the MSG Sphere helping to extend the experience beyond the venue interiors.

Designed to sit flush into the podium façade, when activated they will display variable messaging and content. When not activated, the black screens blend into the brick façade of the podium.

The digital billboards have been designed positioned to sit above the adjacent railway lines, so they do not cause any rail safety impacts and low enough to help mitigate light intrusion to the adjacent residential buildings.

The light emissions form the digital billboards will be controlled by way of operating hours and luminance levels, which will be set out in conditions on the advertisement consent to safeguard residential amenity.

Each location and size for the LED billboards has been coordinated in line with the architectural scheme. For consistency and balance we have developed two sizes that would work on either facade. The locations have taken into consideration multiple approaches, people movement and bridge crossing to provide a balanced coverage.
Unilumin - USURFACE III is a leading outdoor LED display system that is accessible from the front for installing and servicing. Designed with extreme conditions in mind while still delivering content.

### A. Digital billboard (East)

**Sample Product**

Unilumin - USURFACE III is a leading outdoor LED display system that is accessible from the front for installing and servicing. Designed with extreme conditions in mind while still delivering content.

- **Pixel Pitch**: 6.7mm
- **Module Size**: W400mm × H200mm × D24mm
- **Module Number**: W3×H4
- **Cabinet Size**: W1200mm × H800mm × D126mm
- **Viewing Distance**: 6m
- **Material**: Aluminium
- **Ingress Protection**: Front IP65 / Rear IP54
- **Maintenance**: Front and Rear optional
- **Horizontal Viewing Angle**: 160°
- **Vertical Viewing Angle**: 145°
Unilumin - USURFACE III is a leading outdoor LED display system that is accessible from the front for installing and servicing. Designed with extreme conditions in mind while still delivering content.

**Sample Product**

<table>
<thead>
<tr>
<th>Specification</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pixel Pitch</td>
<td>6.7mm</td>
</tr>
<tr>
<td>Module Size</td>
<td>W400mm × H200mm × D24mm</td>
</tr>
<tr>
<td>Module Number</td>
<td>W3×H4</td>
</tr>
<tr>
<td>Cabinet Size</td>
<td>W1200mm × H800mm × D126mm</td>
</tr>
<tr>
<td>Viewing Distance</td>
<td>6m</td>
</tr>
<tr>
<td>Material</td>
<td>Aluminum</td>
</tr>
<tr>
<td>Ingress Protection</td>
<td>Front IP65 / Rear IP54</td>
</tr>
<tr>
<td>Maintenance</td>
<td>Front and Rear optional</td>
</tr>
<tr>
<td>Horizontal Viewing Angle</td>
<td>160°</td>
</tr>
<tr>
<td>Vertical Viewing Angle</td>
<td>145°</td>
</tr>
</tbody>
</table>

**East Elevation**
MSG ADVERTISEMENT PROPOSALS

C. Digital billboard (East)

Unilumin - USURFACE III is a leading outdoor LED display system that is accessible from the front for installing and servicing. Designed with extreme conditions in mind while still delivering content.

**Sample Product**

- **Pixel Pitch**: 6.7mm
- **Module Size**: W400mm × H200mm × D24mm
- **Module Number**: W3×H4
- **Cabinet Size**: W1200mm × H800mm × D126mm
- **Viewing Distance**: 6m
- **Material**: Aluminium
- **Ingress Protection**: Front IP65 / Rear IP54
- **Maintenance**: Front and Rear optional
- **Horizontal Viewing Angle**: 160°
- **Vertical Viewing Angle**: 145°
**Planning considerations**

We have assessed this element against the relevant LLDC planning policies and conclude as follows:

**Do they impact on the amenity of residents and others?**
No, they are in keeping with the commercial character of this central site and existing and proposed uses. There are no sensitive conservation areas, heritage assets, or established residential areas likely to be affected by the proposals. Subject to conditions on hours of operation and light emittance levels to mitigate potential impacts on residents amenity.

**Do they result in visual clutter and proliferation?**
No, they are an integral, fully integrated part of the design, built into the exterior façade walls.

**Do they obstruct architectural features?**
No, they are an integral, and fundamental part of the architecture.

**Do they respect the appearance, character, scale and street scene of the building/site upon which they are proposed?**
Yes, they are an integral, and necessary part of the character, scale and street scene of the buildings into which they are incorporated.

**Do they have any impact on pedestrian, cycle, rail, road, or air safety?**
The impact of the advertisements on public safety has been considered as part of the detailed set out in the ES and other supporting technical documents. This identifies no concerns in respect of pedestrian, cycle, rail, road or air safety.

**Digital billboards**

Designed to sit below MSG sphere, the digital billboards create a window of light that blends into the visual aesthetics across the whole site.

The LED digital billboards will allow the opportunity to present the content that will performed and be shown within the MSG Sphere helping to extend the experience beyond the venue interiors.

Designed to sit flush into the podium façade, when activated they will display variable messaging and content. When not activated, the black screens blend into the brick façade of the podium.

The digital billboards have been designed positioned to sit above the adjacent railway lines, so they do not cause any rail safety impacts and low enough to help mitigate light intrusion to the adjacent residential buildings.

The light emissions from the digital billboards will be controlled by way of operating hours and luminance levels, which will be set out in conditions on the advertisement consent to safeguard residential amenity.

Each location and size for the LED billboards has been coordinated in line with the architectural scheme. For consistency and balance we have developed two sizes that would work on either facade. The locations have taken into consideration multiple approaches, people movement and bridge crossing to provide a balanced coverage.

**West Elevation**

- **D**
- **E**
- **F**

**Digital billboards**

- Designed to sit below MSG sphere, the digital billboards create a window of light that blends into the visual aesthetics across the whole site.
- The LED digital billboards will allow the opportunity to present the content that will performed and be shown within the MSG Sphere helping to extend the experience beyond the venue interiors.
- Designed to sit flush into the podium façade, when activated they will display variable messaging and content. When not activated, the black screens blend into the brick façade of the podium.
- The digital billboards have been designed positioned to sit above the adjacent railway lines, so they do not cause any rail safety impacts and low enough to help mitigate light intrusion to the adjacent residential buildings.
- The light emissions from the digital billboards will be controlled by way of operating hours and luminance levels, which will be set out in conditions on the advertisement consent to safeguard residential amenity.
- Each location and size for the LED billboards has been coordinated in line with the architectural scheme. For consistency and balance we have developed two sizes that would work on either facade. The locations have taken into consideration multiple approaches, people movement and bridge crossing to provide a balanced coverage.

**Planning considerations**

- We have assessed this element against the relevant LLDC planning policies and conclude as follows:
  - **Do they impact on the amenity of residents and others?**
    - No, they are in keeping with the commercial character of this central site and existing and proposed uses. There are no sensitive conservation areas, heritage assets, or established residential areas likely to be affected by the proposals. Subject to conditions on hours of operation and light emittance levels to mitigate potential impacts on residents amenity.
  - **Do they result in visual clutter and proliferation?**
    - No, they are an integral, fully integrated part of the design, built into the exterior façade walls.
  - **Do they obstruct architectural features?**
    - No, they are an integral, and fundamental part of the architecture.
  - **Do they respect the appearance, character, scale and street scene of the building/site upon which they are proposed?**
    - Yes, they are an integral, and necessary part of the character, scale and street scene of the buildings into which they are incorporated.
  - **Do they have any impact on pedestrian, cycle, rail, road, or air safety?**
    - The impact of the advertisements on public safety has been considered as part of the detailed set out in the ES and other supporting technical documents. This identifies no concerns in respect of pedestrian, cycle, rail, road or air safety.
MSG ADVERTISEMENT PROPOSALS

D. Digital billboard (West)

Unilumin - USURFACE III is a leading outdoor LED display system that is accessible from the front for installing and servicing. Designed with extreme conditions in mind while still delivering content.

**Sample Product**

- **Pixel Pitch**: 6.7mm
- **Module Size**: W400mm × H200mm × D24mm
- **Module Number**: W3×H4
- **Cabinet Size**: W1200mm × H800mm × D126mm
- **Viewing Distance**: 6m
- **Material**: Aluminum
- **Ingress Protection**: Front IP65 / Rear IP54
- **Maintenance**: Front and Rear optional
- **Horizontal Viewing Angle**: 160°
- **Vertical Viewing Angle**: 145°

**West Elevation**

**View**

**Distance to base of advertisement location from platform**

**Sample Product**

- **Distance to base of advertisement location from platform**

- **Sample Product**

- **Sample Product**

- **Sample Product**

- **Sample Product**

- **Sample Product**
Unilumin’s USURFACE III is a leading outdoor LED display system that is accessible from the front for installing and servicing. Designed with extreme conditions in mind while still delivering content.

**Sample Product**

- **Pixel Pitch**: 6.7mm
- **Module Size**: W400mm × H200mm × D24mm
- **Module Number**: W3HX4
- **Cabinet Size**: W1200mm × H800mm × D126mm
- **Viewing Distance**: 6m
- **Material**: Aluminum
- **Ingress Protection**: Front IP65 / Rear IP54
- **Maintenance**: Front and Rear optional
- **Horizontal Viewing Angle**: 160°
- **Vertical Viewing Angle**: 145°
Unilumin - USURFACE III is a leading outdoor LED display system that is accessible from the front for installing and servicing. Designed with extreme conditions in mind while still delivering content.

**Sample Product**

<table>
<thead>
<tr>
<th>Specification</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pixel Pitch</td>
<td>6.7mm</td>
</tr>
<tr>
<td>Module Size</td>
<td>W400mm × H200mm × D24mm</td>
</tr>
<tr>
<td>Module Number</td>
<td>W3×H4</td>
</tr>
<tr>
<td>Cabinet Size</td>
<td>W1200mm × H800mm × D126mm</td>
</tr>
<tr>
<td>Viewing Distance</td>
<td>6m</td>
</tr>
<tr>
<td>Material</td>
<td>Aluminum</td>
</tr>
<tr>
<td>Ingress Protection</td>
<td>Front IP65 / Rear IP54</td>
</tr>
<tr>
<td>Maintenance</td>
<td>Front and Rear optional</td>
</tr>
<tr>
<td>Horizontal Viewing Angle</td>
<td>160°</td>
</tr>
<tr>
<td>Vertical Viewing Angle</td>
<td>145°</td>
</tr>
</tbody>
</table>
Unilumin - USURFACE III is a leading outdoor LED display system that is accessible from the front for installing and servicing. Designed with extreme conditions in mind while still delivering content.

**Sample Product**

<table>
<thead>
<tr>
<th>Specification</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pixel Pitch</td>
<td>6.7mm</td>
</tr>
<tr>
<td>Module Size</td>
<td>W400mm x H200mm x D24mm</td>
</tr>
<tr>
<td>Module Number</td>
<td>W3 x H4</td>
</tr>
<tr>
<td>Cabinet Size</td>
<td>W1200mm x H800mm x D126mm</td>
</tr>
<tr>
<td>Viewing Distance</td>
<td>6m</td>
</tr>
<tr>
<td>Material</td>
<td>Aluminium</td>
</tr>
<tr>
<td>Ingress Protection</td>
<td>Front IP65 / Rear IP54</td>
</tr>
<tr>
<td>Maintenance</td>
<td>Front and Rear optional</td>
</tr>
<tr>
<td>Horizontal Viewing Angle</td>
<td>160°</td>
</tr>
<tr>
<td>Vertical Viewing Angle</td>
<td>145°</td>
</tr>
</tbody>
</table>
Digital Billboard Sample Product Overview

Usurface III
Outdoor Front and Rear Service | Waterproof Type Fixed LED Display Unit

<table>
<thead>
<tr>
<th>Specification</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pixel Pitch</td>
<td>6.7mm</td>
</tr>
<tr>
<td>LED Type</td>
<td>3-in-1 SMD</td>
</tr>
<tr>
<td>LED Configuration</td>
<td>Red, Green, Blue</td>
</tr>
<tr>
<td>Brightness</td>
<td>7000cd/m²</td>
</tr>
<tr>
<td>Pixel Density</td>
<td>22,500 pixels/m²</td>
</tr>
<tr>
<td>Module Size</td>
<td>W400mm×H200mm×D24mm</td>
</tr>
<tr>
<td>Module Number</td>
<td>W3×H4</td>
</tr>
<tr>
<td>Cabinet Size</td>
<td>W1200×H800×D122</td>
</tr>
<tr>
<td>Pixels Per Panel</td>
<td>180×120</td>
</tr>
<tr>
<td>Area</td>
<td>0.96 m²</td>
</tr>
<tr>
<td>Weight</td>
<td>32 kg/panel</td>
</tr>
<tr>
<td>Viewing Distance</td>
<td>≥6 m</td>
</tr>
<tr>
<td>Material</td>
<td>Aluminum</td>
</tr>
<tr>
<td>Ingress Protection</td>
<td>Front IP65 / Rear IP54</td>
</tr>
<tr>
<td>Operating Temp/Humidity</td>
<td>-20°C~+50°C/10~90%RH</td>
</tr>
<tr>
<td>Storage Temp/Humidity</td>
<td>-30°C~+60°C/10~95%RH</td>
</tr>
<tr>
<td>Maintenance</td>
<td>Front and Rear optional</td>
</tr>
<tr>
<td>Gap</td>
<td>Seamless</td>
</tr>
<tr>
<td>Bezel Width</td>
<td>None</td>
</tr>
<tr>
<td>Horizontal Viewing Angle</td>
<td>160°</td>
</tr>
<tr>
<td>Vertical Viewing Angle</td>
<td>145°</td>
</tr>
<tr>
<td>Color Temperature2</td>
<td>2000~9300K</td>
</tr>
<tr>
<td>Colors</td>
<td>4.4 Trillion</td>
</tr>
<tr>
<td>Brightness Control</td>
<td>Manual/Automatic</td>
</tr>
<tr>
<td>Contrast Ratio</td>
<td>6000:1</td>
</tr>
<tr>
<td>Input Power &lt;Max&gt;</td>
<td>680W/m²</td>
</tr>
<tr>
<td>Input Power &lt;Typical&gt;</td>
<td>225W/m²</td>
</tr>
<tr>
<td>Driving Method</td>
<td>Constant Current Drive</td>
</tr>
<tr>
<td>Video Frame Rate</td>
<td>50/60 Hz</td>
</tr>
<tr>
<td>Rate Refresh</td>
<td>≥1920 Hz</td>
</tr>
<tr>
<td>Input Voltage</td>
<td>100~240VAC</td>
</tr>
<tr>
<td>Input Power Frequency</td>
<td>47~63 Hz</td>
</tr>
<tr>
<td>Input Signal</td>
<td>RF, S-VIDEO, RGBHV, YUYV, YC, &amp; COMPOSITION, etc.</td>
</tr>
<tr>
<td>LED Life Time</td>
<td>≥100,000 Hours</td>
</tr>
</tbody>
</table>
UPPER TERRACE
FACADE WALL
Upper terrace facade wall - Elevation (East)

Upper terrace facade wall
The design intent for the slated timber facade is to create a placemaking moment that is sympathetic to the location and is integrated within the design language of the north eastern side of the upper terrace.

This will be achieved through a visual embossing of the MSG branding / naming partner into the slated surface that is proposed as part of the architectural scheme. As the slated surface is made up off individual sections that are surface mounted the ability for future rights to naming can be accommodated and allow for future content updates.

With internally placed light sources that emit light between the slates facing outwards providing external lighting that brings the brand identification to life through the architecture.

Planning considerations
We have assessed this element against the relevant LLDC planning policies and conclude as follows:

Do they impact on the amenity of residents and others?
No, they are in keeping with the commercial character of this central site and existing and proposed uses. There are no sensitive conservation areas, heritage assets, or established residential areas likely to be affected by the proposals. Subject to conditions on hours of operation and light emittance levels to mitigate potential impacts on residents amenity.

Do they result in visual clutter and proliferation?
No, they are an integral, fully integrated part of the design, built into new elevations and structural elements of the MSG Sphere, the exterior façade walls, the bridge links and the lift columns, which they will enhance.

Do they obstruct architectural features?
No, they are an integral, and fundamental part of the architecture.

Do they respect the appearance, character, scale and street scene of the building/site upon which they are proposed?
Yes, they are an integral, and necessary part of the character, scale and street scene of the buildings into which they are incorporated.

The advertisements
Do they have any impact on pedestrian, cycle, rail, road, or air safety?
The impact of the advertisements on public safety has been considered as part of the detailed set out in the ES and other supporting technical documents. This identifies no concerns in respect of pedestrian, cycle, rail, road or air safety.
H. Upper terrace facade wall - Illumination

The MSG branding will be formed through embossing, raising it from the wooden slated surface. To ensure visibility at night it will be internally illuminated from within the slats.
LIFT CORES
MSG ADVERTISEMENT PROPOSALS

Bridge 1

Lift Cores
Designed to sit within the material pallet for both the venue and location on Montfichet Road, and in keeping with the aesthetics of the elevation columns, the LED mesh will be wrapped around the lift core with the purpose to run messaging and content at key times. The use is intended to give prominence to show times with the overall Nit levels balanced to be sympathetic to the wider environment.

When in operation the digital mesh is designed to benchmark the lift cores creating landmarks that bring additional prominence to the area alongside the venue sphere and Stratford City Shopping Centre facade, creating a balance between both.

Planning considerations
We have assessed this element against the relevant LLDC planning policies and conclude as follows:

Do they impact on the amenity of residents and others?
No, they are in keeping with the commercial character of this central site and existing and proposed uses. There are no sensitive conservation areas, heritage assets, or established residential areas likely to be affected by the proposals. Subject to conditions on hours of operation and light emittance levels to mitigate potential impacts on residents amenity.

Do they result in visual clutter and proliferation?
No, they are an integral, fully integrated part of the design, built into new elevations and structural elements of the MSG Sphere.

Do they obstruct architectural features?
No, they are an integral, and fundamental part of the architecture.

Do they respect the appearance, character, scale and street scene of the building/site upon which they are proposed?
Yes, they are an integral, and necessary part of the character, scale and street scene of the buildings into which they are incorporated.

Do they have any impact on pedestrian, cycle, rail, road, or air safety?
The impact of the advertisements on public safety has been considered as part of the detailed set out in the ES and other supporting technical documents. This identifies no concerns in respect of pedestrian, cycle, rail, road or air safety.
MSG ADVERTISEMENT PROPOSALS

A. Bridge 1 - Lift Core

West Elevation
North Elevation

West
North

3550 mm
3850 mm
400 mm (Depth)

Pixel Pitch
Brightness
Viewing Angle
Housing
Mesh
Overall dimensions
LED Configuration

40mm
8400cd/m²
105° × 50°
Stainless steel tubes
Stainless steel mesh
LED PRO LE - 0.6kg per meter
2Red, 2Green, 2Blue

Sample Product

IMAGIC WEAVE® is a fusion of HAVER Architectural Mesh and the latest LED technology. This unique transparent media façade system can transform walls into exciting transparent canvases for vibrant, large-scale communication.

Distance to base of advertisement location from street level

2080 mm

West North
## LED Mesh Sample Product Overview

### IMAGIC WEAVE HO

Outdoor LED facade | Waterproof transparent LED mesh

<table>
<thead>
<tr>
<th>Specification</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pixel Pitch</td>
<td>40mm</td>
</tr>
<tr>
<td>LED Type</td>
<td>High intensity THT RGB LEDs (6 leds per pixel)</td>
</tr>
<tr>
<td>LED Configuration</td>
<td>2Red,2Green,2Blue</td>
</tr>
<tr>
<td>Brightness</td>
<td>8400cd/m²</td>
</tr>
<tr>
<td>Colour Range</td>
<td>16.7 Million additive RGB colours</td>
</tr>
<tr>
<td>Colour Resolution</td>
<td>3 x 16-bit (Gamma correction)</td>
</tr>
<tr>
<td>Viewing Angle</td>
<td>105° × 50°</td>
</tr>
<tr>
<td>Luminous Flex</td>
<td>425lm</td>
</tr>
<tr>
<td>Typical LED Refresh Rate</td>
<td>&gt;9 kHz</td>
</tr>
<tr>
<td>Housing</td>
<td>Stainless steel tubes with silicone potting</td>
</tr>
<tr>
<td>Mesh</td>
<td>Stainless steel mesh</td>
</tr>
<tr>
<td>Tubing dimensions (L × W × H)</td>
<td>473 to 2983 × 14 × 22.8mm</td>
</tr>
<tr>
<td>Overall dimensions</td>
<td>To fit space</td>
</tr>
<tr>
<td>Weight</td>
<td>LED PRO LE - 0.6kg per meter</td>
</tr>
<tr>
<td>Regulatory Approval</td>
<td>CE &amp; CETLUS</td>
</tr>
<tr>
<td>Operating Temperature</td>
<td>-30°C to +60°C</td>
</tr>
<tr>
<td>Storage Temperature</td>
<td>-40°C to +70°C</td>
</tr>
<tr>
<td>Environment</td>
<td>Outdoor (IP67), UV resistant</td>
</tr>
<tr>
<td>Humidity</td>
<td>0 to 90%</td>
</tr>
<tr>
<td>Operating Voltage</td>
<td>48v DC</td>
</tr>
<tr>
<td>Power Consumption</td>
<td>Average 0.6w per pixel with RGB full on</td>
</tr>
<tr>
<td>Interface</td>
<td>TX CONNECT</td>
</tr>
<tr>
<td>Control</td>
<td>DMX512, EPIX, DVI capable</td>
</tr>
<tr>
<td>Power Supply</td>
<td>LED Engine Smart 3000w indoor</td>
</tr>
<tr>
<td>Addressing Options</td>
<td>Auto-addressing</td>
</tr>
</tbody>
</table>
LED Mesh - Lift Cores

Example of external LED mesh, this would display variable content and messaging.

One of the proposed lift core LED mesh display locations.

Example of external LED mesh, this would display variable content and messaging.

One of the proposed lift core LED display locations, as shown on above plan.
BRIDGE 03
**Bridge 03 LED Mullions**

The bridges and incorporation of the LEDs have been designed to enhance the visitor experience when accessing MSG Sphere and provide the opportunity to present dynamic content, providing a transitional moment taking visitors from the real world and the make believe. Enhancing the journey into the MSG Sphere.

As this is one of the two main bridges that lead to MSG Sphere, the intention is to create a balance between the scale of the bridge and the level of lighting providing a frame of light and vertical support to their balustrades by been sympathetic to the architectural language.

The content is focused inwards that can act as a piece of dynamic lighting that draws visitors across the bridge at ingress times with thematic messaging and content flowing along the length of the bridges.

Event and show related content can be shown at key times to audiences.

**Planning considerations**

We have assessed this element against the relevant LLDC planning policies and conclude as follows:

**Do they impact on the amenity of residents and others?**

No, they are in keeping with the commercial character of this central site and existing and proposed uses. There are no sensitive conservation areas, heritage assets, or established residential areas likely to be affected by the proposals. Subject to conditions on hours of operation and light emittance levels to mitigate potential impacts on residents amenity.

**Do they result in visual clutter and proliferation?**

No, they are an integral, fully integrated part of the design, built into new elevations and structural elements of the MSG Sphere, the exterior façade walls, the bridge links and the lift columns, which they will enhance.

**Do they obstruct architectural features?**

No, they are an integral, and fundamental part of the architecture.

**Do they respect the appearance, character, scale and street scene of the building/site upon which they are proposed?**

Yes, they are an integral, and necessary part of the character, scale and street scene of the buildings into which they are incorporated.

**Do they have any impact on pedestrian, cycle, rail, road, or air safety?**

The impact of the advertisements on public safety has been considered as part of the detailed set out in the ES and other supporting technical documents. This identifies no concerns in respect of pedestrian, cycle, rail, road or air safety.
SACO Smartvision HYBRID is an innovative LED video screen system using state-of-the-art electronics in a sturdy, durable design. This tileable media system can be used in a multitude of applications.

**Sample Product**

Please note that every aperture is a different size.

**East Elevation**

Distance to base of advertisement location from City Link Bridge surface:

- Pixel Pitch: 3.95mm
- Module Size: W499mm x H499mm x D75mm
- Viewing Distance: 4m
- Material: Aluminum
- Maintenance: Rear
- Horizontal Viewing Angle: 140°
- Vertical Viewing Angle: 120°
**MSG ADVERTISEMENT PROPOSALS**

**Level 02: Bridge 3 - LED Mullions (West & East)**

---

**East Elevation**

Please note that every aperture is a different size.

---

SACO Smartvision HYBRID is an innovative LED video screen system using state-of-the-art electronics in a sturdy, durable design. This tileable media system can be used in a multitude of applications.

---

**Sample Product**

- **Pixel Pitch**: 1.95mm
- **Module Size**: W499mm × H499mm × D75mm
- **Viewing Distance**: 4m
- **Material**: Aluminum
- **Maintenance**: Rear
- **Horizontal Viewing Angle**: 140°
- **Vertical Viewing Angle**: 120°

---

**Distance to base of advertisement location from City Link Bridge surface**: 193 mm
**MSG ADVERTISEMENT PROPOSALS**

**Level 02: Bridge 3 - LED Mullions (West & East)**

- **East Elevation**
  Please note that every aperture is a different size.

- **Sample Product**
  SACO SmartVision HYBRID is an innovative LED video screen system using state-of-the-art electronics in a sturdy, durable design. This tileable media system can be used in a multitude of applications.

<table>
<thead>
<tr>
<th>Feature</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pixel Pitch</td>
<td>3.95mm</td>
</tr>
<tr>
<td>Module Size</td>
<td>W499mm × H499mm × D75mm</td>
</tr>
<tr>
<td>Viewing Distance</td>
<td>4m</td>
</tr>
<tr>
<td>Material</td>
<td>Aluminum</td>
</tr>
<tr>
<td>Maintenance</td>
<td>Rear</td>
</tr>
<tr>
<td>Horizontal Viewing Angle</td>
<td>140°</td>
</tr>
<tr>
<td>Vertical Viewing Angle</td>
<td>120°</td>
</tr>
</tbody>
</table>

**Dimensions**

- **Vertical**: 3665 mm
- **Horizontal**: 500 mm, 500 mm, 100 mm (Depth)

**Viewing Distance from City Link Bridge surface**: 4m

**Distance to base of advertisement location from City Link Bridge surface**: 193 mm
MSG ADVERTISEMENT PROPOSALS

Level 02: Bridge 3 - LED Mullions (West/East)

East Elevation
Please note that every aperture is a different size

Sample Product
SACO Smartvision HYBRID is an innovative LED video screen system using state-of-the-art electronics in a sturdy, durable design. This tileable media system can be used in a multitude of applications.

<table>
<thead>
<tr>
<th>Pixel Pitch</th>
<th>3.95mm</th>
</tr>
</thead>
<tbody>
<tr>
<td>Module Size</td>
<td>W499mm × H499mm × D75mm</td>
</tr>
<tr>
<td>Viewing Distance</td>
<td>4m</td>
</tr>
<tr>
<td>Material</td>
<td>Aluminum</td>
</tr>
<tr>
<td>Maintenance</td>
<td>Rear</td>
</tr>
<tr>
<td>Horizontal Viewing Angle</td>
<td>140°</td>
</tr>
<tr>
<td>Vertical Viewing Angle</td>
<td>120°</td>
</tr>
</tbody>
</table>

Distance to base of advertisement location from City Link Bridge surface
MSG ADVERTISEMENT PROPOSALS

Level 02: Bridge 3 - LED Mullions (West/East)

East Elevation
Please note that every aperture is a different size

SACO Smartvision HYBRID is an innovative LED video screen system using state-of-the-art electronics in a sturdy, durable design. This tileable media system can be used in a multitude of applications.

Sample Product
Pixel Pitch: 1.95mm
Module Size: W499mm × H499mm × D75mm
Viewing Distance: 4m
Material: Aluminum
Maintenance: Rear
Horizontal Viewing Angle: 140°
Vertical Viewing Angle: 120°

Distance to base of advertisement location from City Link Bridge surface: 193 mm

View

500 mm
500 mm
100 mm (Depth)
### SACO H4

<table>
<thead>
<tr>
<th>DIMENSIONS</th>
<th>Module section: 19.7&quot; wide x 19.7&quot; high (499mm x 499mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>SURFACE FINISH</td>
<td>Frame in standard grey powder coat finish</td>
</tr>
<tr>
<td>WEIGHT</td>
<td>6.55lbs/ft2 average (32.0kg/m2)</td>
</tr>
<tr>
<td>HEAT CONTROL</td>
<td>Use of entire housing's surface area for passive heat dissipation</td>
</tr>
<tr>
<td>OPERATING TEMP</td>
<td>-13°F to 149°F (-25°C to 65°C)</td>
</tr>
<tr>
<td>INPUT VOLTAGE</td>
<td>100-240VAC, 50/60Hz</td>
</tr>
<tr>
<td>POWER</td>
<td>150W Maximum @ full white (per tile)</td>
</tr>
<tr>
<td>HARDWARE</td>
<td>LED status indicators</td>
</tr>
<tr>
<td></td>
<td>Remote turn-off of status LEDs for showtime</td>
</tr>
<tr>
<td>PIXEL TYPE</td>
<td>High brightness 3-in-1 LEDs by Nichia</td>
</tr>
<tr>
<td>PIXEL PITCH</td>
<td>0.16&quot; (3.95mm)</td>
</tr>
<tr>
<td>PIXEL COUNT</td>
<td>128px wide x 128px high = 16,384px (per tile)</td>
</tr>
<tr>
<td>COLOR DEPTH</td>
<td>16-bit High Color per channel (65,536 shades per channel)</td>
</tr>
<tr>
<td></td>
<td>48-bit Deep Color per pixel (281 trillion shades per pixel)</td>
</tr>
<tr>
<td>VIEWING ANGLE</td>
<td>Beam angle: 140° / 120° (horizontal / vertical)</td>
</tr>
<tr>
<td>TRANSPARENCY</td>
<td>0%</td>
</tr>
<tr>
<td>WHITE BALANCE</td>
<td>3500-9500K (Adjustable)</td>
</tr>
<tr>
<td>WHITE LUMINOSITY</td>
<td>5,000 cd/m² @ 6500K (5,000 nits)</td>
</tr>
</tbody>
</table>
TICKERTAPE
MSG ADVERTISEMENT PROPOSALS

Tickertape LED Display - Elevations

LED Tickertape
Designed to fit within the architecture of the upper terraces bridging the spaces between podium and MSG Sphere. When viewed from a distance the visual effect of the tickertape will be that of a thin halo of light that balances the arrival spaces on the Podium with the Terrace levels and the wider landscaping.

When operating at show times it will display dynamic content including commercial and variable wayfinding displayed as static content balanced with harmonious content that reflects the show and artist.

In non event mode the LED tickertape would use dynamic timing for commercial content while adding to the landscapes immersive experience through a continues flow around the whole landscaping site.

Planning considerations
We have assessed this element against the relevant LLDC planning policies and conclude as follows:

Do they impact on the amenity of residents and others?  
No, they are in keeping with the commercial character of this central site and existing and proposed uses. There are no sensitive conservation areas, heritage assets, or established residential areas likely to be affected by the proposals. Subject to conditions on hours of operation and light emittance levels to mitigate potential impacts on residents amenity.

Do they result in visual clutter and proliferation?  
No, they are an integral, fully integrated part of the design, built into new elevations and structural elements of the MSG Sphere, the exterior façade walls, the bridge links and the lift columns, which they will enhance.

Do they obstruct architectural features?  
No, they are an integral, and fundamental part of the architecture.

Do they respect the appearance, character, scale and street scene of the building/site upon which they are proposed?  
Yes, they are an integral, and necessary part of the character, scale and street scene of the buildings into which they are incorporated.

Do they have any impact on pedestrian, cycle, rail, road, or air safety?  
The impact of the advertisements on public safety has been considered as part of the detailed set out in the ES and other supporting technical documents. This identifies no concerns in respect of pedestrian, cycle, rail, road or air safety.
A. Tickertape LED Display (South-West)

Daktronics outdoor LED ribbon board displays are specifically designed to meet the unique requirements of stadiums and other outdoor venues.

**Sample Product**

- Pixel Pitch: 13.06 mm
- Brightness: 7000nits
- Viewing Angle: 160° x 65°
- Pixel configuration: 1 red, 1 green, 1 blue
- Lifetime: 100,000 hours
- Color Capacity: 16 bit, 281 trillion colors
- Maintenance: Front or top

Left: Example of tickertape used at the Bank of America Stadium
**B. Tickertape LED Display (East)**

**Unwrapped Elevation**

- **29750 mm**

**Sample Product**

Daktronics outdoor LED ribbon board displays are specifically designed to meet the unique requirements of stadiums and other outdoor venues.

<table>
<thead>
<tr>
<th>Specification</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pixel Pitch</td>
<td>13.06 mm</td>
</tr>
<tr>
<td>Brightness</td>
<td>7000 nits</td>
</tr>
<tr>
<td>Viewing Angle</td>
<td>160° x 65°</td>
</tr>
<tr>
<td>Pixel configuration</td>
<td>1 red, 1 green, 1 blue</td>
</tr>
<tr>
<td>Lifetime</td>
<td>100,000 hours</td>
</tr>
<tr>
<td>Color Capacity</td>
<td>16 bit, 281 trillion colors</td>
</tr>
<tr>
<td>Maintenance</td>
<td>Front or top</td>
</tr>
</tbody>
</table>

Left: Example of tickertape used at the Bank of America Stadium
C. Tickertape LED Display (North-East)

Sample Product
Daktronics outdoor LED ribbon board displays are specifically designed to meet the unique requirements of stadiums and other outdoor venues.

<table>
<thead>
<tr>
<th>Specification</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pixel Pitch</td>
<td>13.06 mm</td>
</tr>
<tr>
<td>Brightness</td>
<td>7000 nits</td>
</tr>
<tr>
<td>Viewing Angle</td>
<td>160° x 65°</td>
</tr>
<tr>
<td>Pixel configuration</td>
<td>1 red, 1 green, 1 blue</td>
</tr>
<tr>
<td>Lifetime</td>
<td>100,000 hours</td>
</tr>
<tr>
<td>Color Capacity</td>
<td>16 bit, 281 trillion colors</td>
</tr>
<tr>
<td>Maintenance</td>
<td>Front or top</td>
</tr>
</tbody>
</table>

Left: Example of tickertape used at the Bank of America Stadium
D. Tickertape LED Display (North)

Sample Product

Daktronics outdoor LED ribbon board displays are specifically designed to meet the unique requirements of stadiums and other outdoor venues.

- **Pixel Pitch**: 15.06 mm
- **Brightness**: 7000 nits
- **Viewing Angle**: 160° x 65°
- **Pixel Configuration**: 1 red, 1 green, 1 blue
- **Lifetime**: 100,000 hours
- **Color Capacity**: 16 bit, 281 trillion colors
- **Maintenance**: Front or top

Left: Example of tickertape used at the Bank of America Stadium
### Sample Tickertape LED Display Product Overview

**DAKTRONICS TICKERTAPE**  
Outdoor LED Ribbon Board Displays

<table>
<thead>
<tr>
<th>Feature</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pixel Pitch</td>
<td>13.06 mm</td>
</tr>
<tr>
<td>Maximum Brightness</td>
<td>7000 nits</td>
</tr>
<tr>
<td>Viewing Angle</td>
<td>160° x 65°</td>
</tr>
<tr>
<td>Pixel configuration</td>
<td>1 red, 1 green, 1 blue</td>
</tr>
<tr>
<td>Size</td>
<td>Custom to requirements</td>
</tr>
<tr>
<td>Lifetime</td>
<td>100,000 hours</td>
</tr>
<tr>
<td>Color Capacity</td>
<td>16 bit, 281 trillion colors</td>
</tr>
<tr>
<td>Maintenance</td>
<td>Front or top</td>
</tr>
<tr>
<td>LED Type</td>
<td>Nichia®</td>
</tr>
<tr>
<td>Ingress protection</td>
<td>66</td>
</tr>
</tbody>
</table>

Above: Example of tickertape used at the NRG Stadium  
Left: Example of tickertape used at the Bank of America Stadium
MSG ADVERTISEMENT PROPOSALS

Tickertape LED Display - Precedent examples

LED Tickertape - Level 03

Example of LED tickertape usage on an entrance to a building.
Tickertape at MSG Sphere could display variable messaging and content.

Example of LED tickertape usage in shopping mall environment.
Tickertape at MSG Sphere could display variable messaging and content.

One of the proposed locations of tickertape.

One of the proposed locations of tickertape, as shown on above plan.
DIGITAL BILLBOARDS
**Digital Billboards**

Designed to fit within the architecture and landscape, the purpose of the LED billboards is to allow commercial content to be shown at key times and provide platforms that can output subtle lighting and dynamic effects in line with the shows and artists. The content will be designed to run in conjunction with messaging appearing on the surrounding tickertape.

When in operation the billboards are designed to help benchmark the access points to the podium from Angel lane.

**Planning considerations**

We have assessed this element against the relevant LLDC planning policies and conclude as follows:

**Do they impact on the amenity of residents and others?**

No, they are in keeping with the commercial character of this central site and existing and proposed uses. There are no sensitive conservation areas, heritage assets, or established residential areas likely to be affected by the proposals. Subject to conditions on hours of operation and light emittance levels to mitigate potential impacts on residents amenity.

**Do they result in visual clutter and proliferation?**

No, they are an integral, fully integrated part of the design, built into new elevations and structural elements of the MSG Sphere, the exterior façade walls, the bridge links and the lift columns, which they will enhance.

**Do they obstruct architectural features?**

No, they are an integral, and fundamental part of the architecture

**Do they respect the appearance, character, scale and street scene of the building/site upon which they are proposed?**

Yes, they are an integral, and necessary part of the character, scale and street scene of the buildings into which they are incorporated.

**Do they have any impact on pedestrian, cycle, rail, road, or air safety?**

The impact of the advertisements on public safety has been considered as part of the detailed set out in the ES and other supporting technical documents. This identifies no concerns in respect of pedestrian, cycle, rail, road or air safety.
MSG ADVERTISEMENT PROPOSALS

A. Angel Lane Digital Billboard (South)

**Sample Product**

SACO Smartvision HYBRID is an innovative LED video screen system using state-of-the-art electronics in a sturdy, durable design. This tileable media system can be used in a multitude of applications.

<table>
<thead>
<tr>
<th>Specification</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pixel Pitch</td>
<td>3.95mm</td>
</tr>
<tr>
<td>Module Size</td>
<td>W499mm x H499mm x D75mm</td>
</tr>
<tr>
<td>Viewing Distance</td>
<td>4m</td>
</tr>
<tr>
<td>Material</td>
<td>Aluminium</td>
</tr>
<tr>
<td>Maintenance</td>
<td>Rear</td>
</tr>
<tr>
<td>Horizontal Viewing Angle</td>
<td>140°</td>
</tr>
<tr>
<td>Vertical Viewing Angle</td>
<td>120°</td>
</tr>
</tbody>
</table>

**South Elevation**

Distance to base of advertisement location from staircase landing
B. Angel Lane Digital Billboard (North)

Sample Product
SACO Smartvision HYBRID is an innovative LED video screen system using state-of-the-art electronics in a sturdy, durable design. This tileable media system can be used in a multitude of applications.

<table>
<thead>
<tr>
<th>Pixel Pitch</th>
<th>3.95mm</th>
</tr>
</thead>
<tbody>
<tr>
<td>Module Size</td>
<td>W499mm x H499mm x D75mm</td>
</tr>
<tr>
<td>Viewing Distance</td>
<td>4m</td>
</tr>
<tr>
<td>Material</td>
<td>Aluminum</td>
</tr>
<tr>
<td>Maintenance</td>
<td>Rear</td>
</tr>
<tr>
<td>Horizontal Viewing Angle</td>
<td>140°</td>
</tr>
<tr>
<td>Vertical Viewing Angle</td>
<td>120°</td>
</tr>
</tbody>
</table>
B. Angel Lane Digital Billboard (North)

Sample Product

SACO Smartvision HYBRID is an innovative LED video screen system using state-of-the-art electronics in a sturdy, durable design. This tileable media system can be used in a multitude of applications.

<table>
<thead>
<tr>
<th>Specification</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pixel Pitch</td>
<td>3.95mm</td>
</tr>
<tr>
<td>Module Size</td>
<td>W499mm x H499mm x D75mm</td>
</tr>
<tr>
<td>Viewing Distance</td>
<td>4m</td>
</tr>
<tr>
<td>Material</td>
<td>Aluminum</td>
</tr>
<tr>
<td>Maintenance</td>
<td>Rear</td>
</tr>
<tr>
<td>Horizontal Viewing Angle</td>
<td>140°</td>
</tr>
<tr>
<td>Vertical Viewing Angle</td>
<td>120°</td>
</tr>
</tbody>
</table>

North Elevation
## SACO H4

### Module section: 19.7” wide x 19.7” high (499mm x 499mm)

<table>
<thead>
<tr>
<th>DIMENSIONS</th>
<th>19.7” wide x 19.7” high (499mm x 499mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>SURFACE FINISH</td>
<td>Frame in standard grey powder coat finish</td>
</tr>
<tr>
<td>WEIGHT</td>
<td>6.55lbs/ft² average (32.0kg/m²)</td>
</tr>
<tr>
<td>HEAT CONTROL</td>
<td>Use of entire housing’s surface area for passive heat dissipation</td>
</tr>
<tr>
<td>OPERATING TEMP</td>
<td>-13°F to 149°F (-25°C to 65°C)</td>
</tr>
<tr>
<td>INPUT VOLTAGE</td>
<td>100-240VAC, 50/60Hz</td>
</tr>
<tr>
<td>POWER</td>
<td>150W Maximum @ full white (per tile)</td>
</tr>
<tr>
<td>HARDWARE</td>
<td>LED status indicators</td>
</tr>
<tr>
<td></td>
<td>Remote turn-off of status LEDs for showtime</td>
</tr>
<tr>
<td>PIXEL TYPE</td>
<td>High brightness 3-in-1 LEDs by Nichia</td>
</tr>
<tr>
<td>PIXEL PITCH</td>
<td>0.16” (3.95mm)</td>
</tr>
<tr>
<td>PIXEL COUNT</td>
<td>128px wide x 128px high = 16,384px (per tile)</td>
</tr>
<tr>
<td>COLOR DEPTH</td>
<td>16-bit High Color per channel (65,536 shades per channel) 48-bit Deep Color per pixel (281 trillion shades per pixel)</td>
</tr>
<tr>
<td>VIEWING ANGLE</td>
<td>Beam angle: 140° / 120° (horizontal / vertical)</td>
</tr>
<tr>
<td>TRANSPARENCY</td>
<td>0%</td>
</tr>
<tr>
<td>WHITE BALANCE</td>
<td>3500-9500K (Adjustable)</td>
</tr>
<tr>
<td>WHITE LUMINOSITY</td>
<td>5,000 cd/m² @ 6500K (5,000 nits)</td>
</tr>
</tbody>
</table>
MSG ADVERTISEMENT PROPOSALS

Digital Billboard - Precedent examples

Digital Billboards

Example of external digital billboard. Digital billboards at MSG sphere could display variable messaging and content.

One of the proposed digital billboard locations. As shown on above plan.

One of the proposed digital billboard locations, as shown on above plan.
GATES
**Planning considerations**
We have assessed this element against the relevant LLDC planning policies and conclude as follows:

**Do they impact on the amenity of residents and others?**
No, they are in keeping with the commercial character of this central site and existing and proposed uses. There are no sensitive conservation areas, heritage assets, or established residential areas likely to be affected by the proposals. Subject to conditions on hours of operation and light emittance levels to mitigate potential impacts on residents amenity.

**Do they result in visual clutter and proliferation?**
No, they are an integral, fully integrated part of the design, built into new elevations and structural elements of the MSG Sphere, the exterior façade walls, the bridge links and the lift columns, which they will enhance.

**Do they obstruct architectural features?**
No, they are an integral, and fundamental part of the architecture

**Do they respect the appearance, character, scale and street scene of the building/site upon which they are proposed?**
Yes, they are an integral, and necessary part of the character, scale and street scene of the buildings into which they are incorporated.

**Do they have any impact on pedestrian, cycle, rail, road, or air safety?**
The impact of the advertisements on public safety has been considered as part of the detailed set out in the ES and other supporting technical documents. This identifies no concerns in respect of pedestrian, cycle, rail, road or air safety.
MSG ADVERTISEMENT PROPOSALS

A. Bridge 1 gate - Montfichet Road (North)

Using internal lighting sources that pick out detailing in the gates that cut in to the weathered steel. Creating a contrast against the corrosion-retarding. With changing colour washes that reflect the naming rights brand propositioning.

The light will respond to the ever changing environment and lighting conditions.
B. Bridge 2 gates - Montfichet Road (South)

Elevation

View

4800 mm

Distance to base of advertisement location from street level

1635 mm

1635 mm

Product

Using internal lighting sources that pick out detailing in the gates that are cut into the weathered steel. Creating a contrast against the corrosion-retarding. With changing colour washes that reflect the naming rights brand propositioning. The light will respond to the ever changing environment and lighting conditions.
C. Bridge 3 gate - Town Centre Link Bridge

**Product**

Transparent LED glass layered back to back to present a double sided screen that can switch media faces presenting dynamic content and information. With changing colour washes that reflect the naming rights brand propositioning.

The light will respond to the ever changing environment and lighting conditions.
Overall conclusions

The proposed advertisements are an integral part of MSG Sphere, and the design concept. They are a fundamental, and accepted commercial component of any major venue. However, in this case, the digital content, and the opportunity to create a truly immersive and interactive experience, creates a unique opportunity for an iconic experience.

The content of advertisements is not a matter for planning, and falls to the Advertising Standards Agency. Subject to any relevant controls on light emissions, there is no material difference, in amenity or safety terms, between commercial and non-commercial content.

However, reflecting the positive contribution which MSG Sphere will make to the local townscape, and the benefits of a programme of non-commercial content displays, the Applicant is prepared to restrict purely commercial advertising content on the external surface of the MSG Sphere to not more than 50% of the time that it is illuminated.

For the avoidance of doubt, this restriction would not govern advertisements associated with naming rights or information or images relating to current or future events.

Furthermore, the advertisement application will also be subject to proposed controls on the hours of operation, and light emittance levels, which are covered in the CONOPS, and the daylight/sunlight and lighting effects reports, and will be the subject of planning conditions and/or obligations.

As a consequence of these controls, the proposed advertisements will result in no material adverse impact on amenity or safety. On the contrary, MSG Sphere will deliver an iconic, high quality redevelopment of an unattractive vacant site, which will result in a material improvement in the amenity of those living and working in, and visiting, Stratford.