## Development Control Committee B - 4 February 2015

ITEM NO. 2

WARD: Bishopston CONTACT OFFICER: Katy Dryden

SITE ADDRESS: Gloucestershire County Cricket Club Nevil Road Bristol BS7 9EJ

**APPLICATION NO:** 14/05030/F Full Planning

**EXPIRY DATE:** 10 December 2014

Proposed installation of 6 no. 45m tall permanent floodlights.

**RECOMMENDATION:** Grant subject to Condition(s)

**AGENT:** Alder King Planning Consultants

Pembroke House 15 Pembroke Road

Clifton

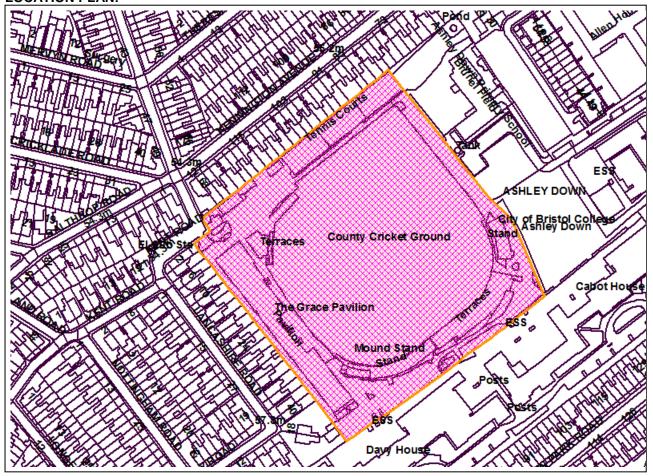
Bristol BS8 3BA

**APPLICANT:** Gloucestershire County Cricket

Club C/O Agent

The following plan is for illustrative purposes only, and cannot be guaranteed to be up to date.

### **LOCATION PLAN:**



26/01/15 10:13 Committee report

### SUMMARY/ APPLICATION DETAILS

The application relates to the Gloucestershire County Cricket Club (GCCC), Ashley Down, where planning permission is sought to erect 6 no 45m tall permanent floodlights.

The site has been re-developed in accordance with planning applications 12/05589/X, 12/01237/F and 99/03891/F. The existing ground had no significant development until 2012, when it was redeveloped to meet the England and Wales Cricket Board (ECB) requirements, which set out criteria for hosting international matches. Prior to that there had been piecemeal development with the post Second World War construction of the Mound Stand, followed more recently by the Jessop Stand, Club Office and Sports Hall in the 1990's.

The redevelopment of the ground included an enabling development of 147 residential apartments which generated sufficient revenue to complete the required ground improvements. In order to comply with ECB requirements, the ground had to increase its permanent seating capacity to be greater than 5000, and still maintain space to allow temporary seating to create a minimum of a 15000 seat stadium. The pavilion was extended and reconfigured to create a media centre for television and radio broadcasting. It is understood that funding was not previously available for the proposed floodlights at the time of the earlier applications to redevelop the site.

The need for permanent floodlights at cricket grounds has recently become a requirement of the England and Wales Cricket Board (ECB) and the International Cricket Council (ICC). This is to ensure that cricket clubs provide high levels of light required for evening matches and those that are broadcast on television. Permanent floodlights will therefore provide GCCC the opportunity to host some of the 2019 Cricket World Cup matches, International T20s, One-Day Internationals, the ICC Champions Trophy and the One Day Women's Cricket World Cup, to be held in 2017.

The submission states that the positioning of the masts would achieve the detailed lighting levels required on different parts of the field. The mast locations are also constrained by the existing buildings within the ground as well as the need to accommodate the circa 10,000 temporary seats for international matches.

The initial application submission did not include the required light assessment and as a consequence a second round of public consultation was initiated following the receipt of the detailed lighting assessment and associated data sheets. Following discussion with local residents, the area of public consultation was also extended. 7 site notices were erected for the initial round of consultation.

Following an officer request for further information on the application, a third round of public consultation took place. The additional information included:

- Additional information on light spillage calculations, including alternative floodlighting options that were considered.
- Additional information regarding the sustainability of the proposal.
- Confirmation statement regarding aircraft warning lights on the floodlights.

A significant number of representations have been received to the planning application. At the time of writing the report, on the 13th January, there were 133 objection comments/ letters, 114 in support and 4 general comments. Please note that some individuals/ groups have submitted multiple comments/ letters. Whilst many letters of support have been submitted, it should be noted that many of these are from Club/ Cricket supporters some of whom are not from the surrounding local area. Significant letters of objection have been received, raising concerns with the impact of the lighting on residential amenity, the physical presence of the masts within the community, visual impact of the masts, lack of information and difficulties assessing the lighting information submitted in addition to concerns regarding aircraft safety.

Despite officer requests for improved Computer Generated Images, showing the proposal from different viewpoints (as per the City Design Group comments) in addition to the visual impact of the lights during use in the evening/ night time, the agent has been reluctant to provide additional information to assist the assessment due to the additional time/ cost involved in producing further information and their concerns with the accuracy of this form of visual representation. Given that visual impact information has been submitted (whilst limited) it is considered that an assessment can be made of the potential impact of the proposal and the application has been assessed on this basis.

It is understood from the agent that the number and positioning of the floodlights is the most effective with regard to minimising the overspill of light from the floodlights to nearby residential properties. Temporary floodlights, which would give a greater overspill of light than the proposed permanent lights, have previously been used at the ground without cause for significant complaints from local residents.

Detailed discussions have taken place between the City Council Planning and Pollution Control officers and the applicant/ agent for this application. Should the application be approved, it is considered to be inevitable that local residential properties, particularly those to the north west of the ground, will be lit by the floodlights. However, the number of times that the lights will be used will be restricted and the lights will only be used during competitive cricket matches and switched off when cricket matches finish and no later than 23.00. Furthermore, the lights will only be used during the cricket season, generally April to September. The proposed conditions, set out in this application seek to control the use of the floodlights in order to try and minimise the effect of light from the floodlights on local residents.

The City Design Group have formally objected to this application on the basis that the proposal will cause substantial harm to the setting of the listed buildings. At present, the Orphanage Buildings dominate the sky line and it is considered that the masts will draw the skyline interest away from them, appearing above the ridge line. This can be perceived from local and long distance views.

The degree of harm caused to the setting of the designated heritage assets is assessed against the impact of the cumulative perceived mass of the proposal on the asset i.e. six masts with large lighting heads in close proximity to each other. This harm is considered to be substantial.

In accordance with Paragraph 133 of the National Planning Policy Framework (NPPF), Local Planning Authorities should refuse consent unless it can be demonstrated that the substantial harm is necessary to achieve substantial public benefits that outweigh that harm or loss. The application proposal would result in the public benefit of retaining first class and international cricket matches in Bristol at a cricket ground which has historical and cultural significance within the City. Bristol (GCCC) has now been awarded 7 International Matches between 2017 and 2019 and the agent has stated that each International match is likely to bring around £1 million additional revenue to the City, therefore having a significant boost to the Bristol economy over the next two years. On balance, it is considered that there is a cultural and economic benefit to be attached to this proposal which would outweigh the visual harm.

Following the request for additional information to explore the discounted alternatives for the site, it has been confirmed by the agent that the proposal is the optimum solution for permanent floodlighting at the site. Accordingly, the officer recommendation is for approval, subject to detailed conditions.

#### SITE DESCRIPTION

Gloucestershire County Cricket Club (GCCC) is located at the County Ground, off Ashley Down Road, which is approximately 2.25 kilometres north of the city centre. The site is 4.88 hectares and is located within the Bishopston ward. Gloucester Road is located about 400 metres to the west of the ground and Ashley Down Road is located about 250m to the east of the site.

The cricket ground is bounded to the north and west by residential properties. The City of Bristol College (CBC) is located to the south and east of the site, with its boundary immediately abutting this site. The large stone College buildings (originally part of the Muller Orphanage) are Grade II Listed. The College site and the land to the north east of the cricket ground fall within the Ashley Down Conservation Area. The residential apartment enabling development is located to the east of the site with an area of hard surfaced parking shared by the CBC and the GCCC situated to the rear. Ashley Down: Brunel Fields Primary School (application 09/02694/FB) is also located to the east of the ground.

Beyond the playing field is a housing development site (Persimmon Homes) which has been completed. The wider area is predominantly residential, comprising mainly of 2-storey Victorian terraced and semi-detached houses.

GCCC is accessed primarily from Nevil Road but also has vehicular access from Ashley Down Road along College Mews, through a shared car park.

#### RELEVANT PLANNING HISTORY

Please note, a formal pre application was not submitted for this scheme. Informal pre application discussions related to providing advice on the content of the forthcoming application submission.

An EIA Screening opinion was prepared for the scheme, with the City Council decision that an EIA is not required for the proposal, having regard to the relevant legislation and guidance.

09/03891/P - A "hybrid" outline planning application for modernisation of county cricket ground to provide access, appearance, layout, and scale of extended cricket pavilion, club accommodation and gym, new media centre, corporate boxes, banqueting and conferencing facilities, swimming pool: Access, layout and scale of 20,000 seat stadium and ancillary development including bars, new club shop, parking, landscaping; access and layout of student accommodation; and associated works - Application approved (with S106 agreement) on 4 February 2011.

11/02609/F - The modernisation of the county cricket ground to include demolition of existing Mound & Jessop stands & associated toilet blocks, provision of 7500 permanent seats incorporating bar, toilet block facilities & 351 surface car parking spaces, a 147 dwelling apartment building incorporating 111 basement car parking spaces a 269sq m club shop, 73sq m of office space, access landscaping & associated works. (Major application) - Refused at Committee 11.01.2012.

12/01237/F - The modernisation of the County Cricket ground to include demolition of existing Mound & Jessop stands & associated toilet blocks, provision of 7500 permanent seats incorporating bar, toilet block facilities & 351 surface car parking spaces, a 147 dwelling apartment building incorporating 111 basement car parking spaces, a 217sq m club shop, 150sq m of office space, access landscaping & associated works. (Major application) - Approved at Committee on 30 May 2012.

12/05589/X - Minor material amendment of approved application 12/01237/F for the provision of a single storey structure (40m2) to the north west of the residential apartment block (emergency exit and ventilation from basement car park), external changes to the residential apartment block, relocation of refuse stores, changes to the layout of the basement and surface level car parks and the location and layout of basement cycle parking provision. These minor amendments required a variation of conditions 21, 23, 30, 44 and 45 of permission 12/01237/F (Major application) - Approved on 02.08.13 under Delegated Authority.

12/05423/F - Alterations to the pavilion building currently under construction in accordance with Planning Consent Reference 09/03891/P. Approved 31.01.2013.

14/00360/NMA - Application for a non-material amendment following the grant of planning permission 12/05589/X (Minor material amendment of approved application 12/01237/F), for an alteration to the approved privacy screens on the north elevation of the residential apartment building and an alteration to the fire escape for Core E. Approved under delegated authority on 28.03.2014.

#### PRE APPLICATION COMMUNUITY INVOLVEMENT

Comments from The Bristol Neighbourhood Planning Network (BNPN):

There does not appear to be a separate Community Involvement Statement posted, though the Design and Access Statement refers to there being one submitted as a separate document. Without seeing the CIS it is not possible to comment properly.

Feedback from the Howzat group is that the supportive comments for the application are coming from the club supporters not the local community who are the people who are going to be affected by these lights. The consultation form was completely skewed in its form- not an open ended consultation – and this is completely unacceptable

There is also concern that the extent of light spill is still not clear and that conditions for hours of use are not part of the application.

Please note: Following receipt of the above comment, the SCI was fully uploaded for public viewing. As this is not a major application, the submission of a SCI is not a validation requirement, however, given the significance of this scheme local community engagement and the submission of a SCI was requested by officers during pre-application discussions and prior to the application submission.

## RESPONSE TO PUBLICITY AND CONSULTATION

In respect of the formal consultation undertaken on this application, the following can be confirmed.

3 site notices were initially displayed on the 5th November 2014, with an expiry for receipt of comments of 26th November 2014. 4 additional site notices were erected on the 12th November 2014 with a closing date for receipt of comments of the 3rd December 2014.

Letters were sent to local residents and businesses that surround this site on the 30th October 2014 with an expiry date for receipt of comment of the 20th November 2014. Following liaison with local residents, it was agreed to widen the area of public consultation and additional letters were sent out to a wider area of local residents, with a closing date of the 26th November 2014.

Following concerns that the necessary lighting assessment/ detailed data was not provided in the application submission, further information was requested from the agent and uploaded to the website. Additional letters were sent out to all those previously consulted, with an expiry date of the 3rd December 2014.

Following a meeting with the agent and the request for additional information regarding alternative options that have been explored with regards to lighting provision, additional information regarding the sustainability of the proposal and confirmation regarding aircraft warning/ safety lights, a further and final round of public consultation was initiated (consulting all those previously consulted), formally expiring on the 31st December 2014. As part of this consultation, Ward Councillors and the 'Howzat' group were also individually consulted.

In summary, at the time of writing the report, on the 13th January, there were 133 objection comments/ letters, 114 in support and 4 general comments. Please note that some individuals/ groups have submitted multiple comments/ letters.

### **COUNCILLOR STATEMENTS**

### COUNCILLOR TIM MALNICK: BISHOPSTON WARD COUNCILLOR

In principle I am supportive of the efforts of the cricket club to maintain their long term viability in the present location. Personally I think that having an international sports ground in the heart of Bishopston is, on balance, a positive thing. I understand and accept that some upgrading of the floodlights appears necessary to achieve this in the long term and that the ground has a long history in this location.

Based on recent experience elsewhere in the area, I also have a genuine concern that, should the club decide to move location in the medium or longer term as a result of not being able to host international cricket, we might eventually be faced with an alternative development equally or even more disruptive to local amenity and neighbourhood feel.

I was hoping to be able to support an application, while acknowledging that of course there would be some detrimental impact to those living very close by, as well as an impact on views from further afield.

However, at this point, I am unable to support this application, reflecting some strong concerns expressed by local people. The primary concerns that I would therefore like the officer to consider in their report are:

a) The size of the floodlights will have a significant visual impact both in the immediate vicinity and further afield.

Immediate area street views and impact:

The current plans do not seem to include any genuinely local views of the daytime impact of the proposed floodlights in the immediate vicinity. While some longer range views have been provided, I do not see any drawings showing the structures in their immediate context - what local people will be seeing 365 days a year, not just on match days. I am told that Planning Officers have repeatedly asked the applicants to provide this information but it has not been forthcoming. If true, that concerns me greatly, and will be of strong concern to local residents.

Until officers have access to good quality, comprehensive images of local daytime visual impact, I request that you defer your decision. I request that the committee be given good quality images of local / immediate visual impact, in advance of the committee. If these are not provided I ask again that the committee refuse or defer.

Longer range views and impact:

Local opinion on this is mixed, with those opposed feeling it will have an unacceptably negative impact, and others suggesting that though dramatic, it will, in time become an accepted part of the local scenery, signalling the presence of an international ground.

I note the comments from the Council's city design team that 'it is apparent that there are local views and some distant views that have not been assessed...this harm (to local views) in our view is substantial. They also urge the applicant to provide these views to confirm this assessment.'

Please ensure that these are fully assessed and that the Committee is given enough appropriate visual information in advance, to properly assess this impact.

## b) Light spill:

The council pollution officers report clearly indicates that the levels of light falling on local houses is way in excess of the ECB's own guidelines. The club has consistently said that this is the best possible modern design. But I struggle to understand how the best possible design of lights can exceed the ECB's own guidelines by so much.

I request that planning officers investigate and request any and every additional measure to mitigate local light pollution, and that they do this before permission is granted, rather than as a potential follow up.

c) Have all lighting options been properly explored?

I note that the retractable option is more expensive, and also that it would create a bigger visual impact at bedroom level. There is clearly a trade-off between damage to long-range views, and impact of retractable lights at first floor level for those living immediately next to the ground.

The city design team also mention the option of 'removable lighting heads on fixed masts' and suggest it should be considered. I don't see these referred to in the application as an option considered. Has it been? Should it be? I would ask the planning officer to establish whether such an option is at all viable and should be considered.

## In Summary:

I would be prepared to accept this application, once I was fully assured that every possible measure had been taken to mitigate local light pollution and assess and mitigate more distant year round visual impact. I am not yet certain that every option has been fully explored and ask the planning officer and committee to make sure that it is. This is a once in a lifetime application and it is vital that we get it right - even if that requires the club to spend more than it really wants to.

Many local residents are concerned that the club is going for the lowest cost option that best suits them - and that consultation is only going so far. For the benefit of longer-term club / community relations, please ensure that at this vital stage every possible consideration is given to how the floodlighting objective of the club can be achieved whilst minimizing the impact.

### Planning Conditions:

Should the officer / committee be minded to accept this application, either at this point, or in future, I would fully support the following conditions suggested and requested by local residents:

- That the lights be used only for cricket fixtures.
- That there is a clear maximum limit to uses per year (10 seems fine). Any additional uses to be arranged by special application / license (e.g. for world cup years etc.).
- That the time for shut down is clear. With lights dimmed by 10.15pm latest and turned off by 11.00 pm latest. And that any exception to this (for example televised games delayed by rain) has parameters clearly laid out in the conditions (i.e. number of times exceptions could be made, for how long and under what circumstances).
- That a range of conditions associated with local people's amenity on match days are included such as:
  - Late night licensing restrictions.
  - Closing local roads to traffic (apart from local residents) on match days

- Improved and well-monitored stewarding arrangements for games.
- Local highways improvements (for example requests for double yellow lines on corners of local roads etc.).
- Finally I would like the club to have to provide one single point of contact for community relations, so that all local people and we as councillors have one named person to contact and feedback any concerns, requests or suggestions to the club as they arise'.

#### COUNCILLOR DANIELLA RADICE: BISHOPSTON WARD COUNCILLOR

'I object to this application on the grounds of protection for the amenity of residents.

I do not object to this application in principle, as I accept that floodlights are needed for the future of cricket in Bristol at the County Ground. My position is consistent with my past campaigning activities. I have campaigned over the last few years to get the Gloucestershire County cricket ground to reduce the size of the flat development, but have never wanted the club to leave our area, and recognise the economic and sporting benefits that the club brings to Bishopston. I realise that the lights will be intrusive, but in terms of the already significant and detrimental impact of the flats to the Ashley Down Conservation area I do not think the floodlights will make it much worse.

My objection on the basis of residents' amenity relates to the predicted light levels during use of the floodlights in Kennington Avenue and Lancashire Road.

This demonstrates that even though the English Cricket Board has set out recommendations on the maximum light levels these are being exceeded many fold. If there was no detriment to amenity then the ECB would have seen no need to propose maximum levels.

Information from BCC environmental health report:

### ECB recommendations

(	(within 50 m of ground)	Kennington Avenue	Kennington Avenue	Leeds Headingley
		(worst affected properties)	(north side)	Planning consent
Vertical lux	40	50-320	32-140	10 Lux

In advance of the planning meeting I would like to see a document that clearly sets out how impact on residents will be minimised to include the following:

- A clear explanation of why Headingly can achieve 10 lux but GCCC cannot
- Light level management so the lights are not used fully unless absolutely necessary
- Switching off lights immediately following a match and using alternative lighting to enable spectators to safely leave the ground.
- Restrictions on the number of late-night Friday matches
- A maximum of 10 uses of the floodlights per year
- Any other measures, including repositioning of lights, to minimise the impact on residents.
- Any practical mitigation that the club could put in place.

This will allow a proper assessment of whether the light impacts on amenity can be reduced to an acceptable level.

This document should be agreed in advance and enforced through planning conditions if the committee is minded to grant the application'.

#### **BISHOPSTON SOCIETY**

We are in principle opposed to 45m high fixed floodlights and their regular use throughout the year impinging on the amenity of residents living adjacent to the cricket ground. Furthermore, the floodlighting itself will have the effect of increasing the number of evening events at the ground which will in turn increase the disruption and inconvenience for local residents. The light towers are themselves an intrusion on the skyline and inappropriate in such close proximity to the Ashley Down Conservation Area.

We would insist that the applicant be obliged to clarify in writing the following matters;

- The number of occasions each year that the lights will be in use
- The exact hours of use of the lights
- The maximum light spillage on neighbouring properties

These clarifications would then become enforced planning conditions.

We note that many of the 'Neighbour comments' are from people living as far away as London and Liverpool. We would like confirmation that by definition only 'Neighbour comments' from actual neighbours are relevant. All other comments from people living outside the immediate area should be removed from the planning website as they are irrelevant and misleading'.

## BISHOPSTON SOCIETY - FURTHER COMMENTS FOLLOWING THIRD ROUND OF PUBLIC CONSULTATION:

"Light Spill"

The Environmental Health report confirms that the floodlights will create light levels at some properties (particularly Kennington Avenue and Lancashire Road) which are far in excess of ECB standards - by a factor of as much as 8-16 times. We consider that this is not acceptable and that mitigation measures should be put in place BEFORE any planning permission is granted.

We support the proposal in this report that, should permission be granted, that the following conditions should be imposed;

- -That the lights should only be used for competitive cricket
- That the lights should only be used a maximum of 15 times per year
- That the lights should not be used between 23.00 pm and 10.00 am

## "Visual Impact"

We are extremely concerned about the visual impact of these 45m high lighting standards with their 8m x 8m light heads on the immediate area and the Ashley Down Conservation Area in particular. We are also concerned that this visual impact was not covered in the planning application for reasons obvious

We consider that the consultation period was too short and that the agreed cut-off date immediately after the two week Christmas period has meant that many local residents have not been able to register their concerns'.

### **PUBLIC CONSULTATION COMMENTS:**

OBJECTIONS TO LIGHTSPILL/ DETRIMENTAL IMPACT TO RESIDENTIAL AMENITY (ADDRESSED BY KEY ISSUE B LATER IN THIS REPORT):

- The light spill will constitute a nuisance to the residents of many local properties
- This report indicates that light spill at nearby houses will greatly exceed ECB and ILE guidelines, and that very many more houses will suffer from light spill above recommended levels. GCCC must be forced to withdraw its planning application and only resubmit it when it can present a compliant design. Although the Pollution Control team recommends a review within one month of constructing the floodlights, this makes sense only if they have been built to a design that conforms to ECB and ILE guidelines.
- This is a densely populated area with many young children whose sleep would be disturbed on a frequent basis over summer.
- Local residential area also home to older residents who will be affected by the light pollution.
- At the very least, the club should comply with the ILE/ECB guidelines.
- Light spillage would be a nuisance to houses in the local area, and not only those close to the cricket pitch.
- The light spill onto neighbouring properties is too high and the frequency of potential use is also too high.
- Whilst living several streets away, the area is widely lit up when the evening events are staged. For those closest it must be intolerable.
- It has been observed that when temporary lights have been erected there haven't been many objections about light spill. This is because they are not used that often. Also if floodlights are to be erected why can't they be retractable?
- The light spillage levels do not comply with ECB requirements in fact they are 8-16 times higher than they should be. If this is the case then why should BCC give permission, we could just have temporary floodlights and not be subject to 45m high lights 365 days per year. Leeds Council (for Headingly) insisted on conformity to light spillage standards and so should BCC if it is minded to grant permission for these floodlights.
- Why is there no independent report backing up GCCC's claims that 6 floodlights in the proposed positions are the most effective way to minimise light spill? According to the Environmental Report light spill is clearly NOT being minimised
- Very concerned about the excessive light spillage reported in the Environmental Health Report which is estimated to exceed ECB standards by a factor of 8-16 times.
- The Detailed Lighting Assessment Sheets contain no analysis or explanation, making them virtually incomprehensible for lay people.
- Concern that once these lights are up and permanent it won't be long before the club apply for further planning to have other events beyond cricket.
- I consider the use of temporary lights is more suitable when required (which the GCCC assured residents was their plan when they put in the original plans for redevelopment).

- The temporary lights were bright for residents and universally disliked.
- The Club says they have sited the lights to minimise light spillage I believe this, and the number being mooted this needs independent verification.
- Permanent floodlights would be used much more frequently to justify their cost.
- Once installed, it will be extremely difficult for the Council to resist future applications to increase the range of uses for the floodlights, and so there will be a gradual increase in the frequency of their use.
- I strongly object to the amount of light spillage. This is because I don't understand the calculations documents provided. They are not presented in an accessible manner for the nonspecialist.
- Would the planning committee approve a similar application it was a private radio broadcaster wishing to erect six 45 metre permanent radio masks (which do not emit light) in the middle of a residential area?
- Please note most UK cricket clubs with international games have retractable flood lights.
- I am concerned if the application is granted there would be no mechanisms by which the lighting impact could be monitored and assessed. Whilst comparisons have been included between temporary and permanent lights. The figures present do not articulate or forecast an accurate account of the impact from light pollution incurred on a regular basis from permanent flood light usage. In addition the analysis does not take into account: 1) The increased late night demands on road and parking infrastructure and GCCC ground crowd noise (The Memorial Ground football games can be heard across BS7)
- We would urge the Council to enable valid consultation to take place by requiring GCCC to provide further information about the lighting impact.
- The light spillage from the temporary lights goes far beyond the area covered by these drawings, including areas west of Gloucester Road.
- Very few of the grounds which are referred to in the Design and Access Statement as having erected floodlights recently are located in a similarly residential area.
- Sleep disturbance caused by light pollution is a health risk at worst, and a huge annoyance at best.
- Families with young children will really feel the impact of the light pollution and light spill with evening matches. Kennington Avenue is full of young families.
- On the occasions when temporary floodlighting has been used at the ground, traffic problems have been caused by delivery and removal, and the amount of testing and adjustments of the lights have probably caused much more 'light' disturbance than would be expected from permanent installations.
- Floodlight P2 is proposed to be a mere 16 metres from our garden wall and will significantly impact on the amenity of our (and others) properties. GCCC's own shadow analysis shows that throughout the year shadows from various floodlights (and Floodlight P2 in particular) will cross our property. This will negatively impact the use and enjoyment of our property.

- Floodlight P2 should be moved closer to the boundary of the ground. It is the floodlight nearest to several Kennington Avenue properties and yet the furthest of the 6 proposed lights from the field boundary.
- Floodlight P2 will be erected only 16m from our garden wall. The floodlight proposal does significant harm to local residential amenity from late night cricket and other activities that this proposal would facilitate.
- Main concern relates to the position of the pylons, specifically Floodlight Pylon P3 which is forward of the line of the Graveney Apartments. This will cast shadows, adversely affecting views and light (during daylight hours) and enjoyment of those living in Graveney Apartments. After dark these floodlights will create significant light and privacy intrusion and will negatively impact upon our property values. Positioning of Floodlight Pylon P3 in line with the back of the Graveney Building as initially proposed by GCCC (at the time of purchasing my apartment), would be a reluctantly more acceptable proposal-
- Suggest that P3 would be moved to be in line with the front elevation building line of the
  Graveney block. If this is not possible then I would suggest that it be moved to be on a
  diagonal drawn from the corner of the apartment block so reducing its impact on views both to
  the South and West.
- Given the site is located at one of the highest points in Bristol, it will also contribute to wider light pollution.

### COMMENTS ON TIMING/ LIGHTING CONTROLS (KEY ISSUE B):

- It is very concerning that the limit for number of games the lights are used keeps changing. From 6 to 15. A similar issue is the time of dimming.
- (In response to Pollution Control Comments) Not acceptable that we should put up with this level, as the lights will 'only' be used 15 times a year. On those 15 occasions, we will be prevented from using 50% of our property and our back garden. As they will be during the cricket season only, they will be concentrated into a small space of time and could end up being used on a weekly basis when we shall need to leave our house.
- Floodlights should be restricted to switch off before 10pm (or earlier) and that their use be restricted to a set number of matches per year, ideally twelve or fewer.
- Lights to be used a maximum of 8 days a year GCCC themselves state they would have used lights 8 times last season had they been in situ. The lights at Lords are permitted only 10 times a year. That evening matches end by 21.30 when the lights should be dimmed to 50%, and turned off by 22.30. d. That the intensity of light and light spill to adjacent roads and properties is closely monitored and limited to levels set by accepted guidelines (eg the Institute of Lighting Professionals).
- 2300 is too late for turning off the lights. If at 2200 lights are dimmed, local residents will be subjected to noise, light and antisocial behaviour at least until 2300 as spectators slowly leave the ground. If BCC grant permission there should be a condition that lights should be fully off by 2200.
- It should also be considered that these 15 times are not spread through a 12 month period but over a concentrated period of 4/5 months being the cricket season.
- If the lighting impact cannot be limited further (and we would request an independent assessment of this) stringent conditions should be imposed in line with our previous comment

- i.e. used no more than 8 times a year, be dimmed at 10pm and off completely by 10.30.
- Floodlights should be switched off at 10pm latest AND they should be dimmed by 9.30pm. Other lighting in the ground it perfectly adequate to allow spectators to leave the ground safely. In addition GCCC want to leave one light on for televised matches. This is unnecessary and other grounds don't appear to require this so why should GCCC? floodlights should only be used for cricket matches; cricket matches should end no later than 9:30pm.
- Lights to be used a maximum of 8 days a year (this is what the club told local residents they would have used last season if they had been in situ, and even Lords has a limit of only 10 days). Lights only to be used for cricket matches and not for any other events held at the ground. Lights to be totally switched off by 10.30pm and dimmed to a maximum of 50% by 9.45pm. Matches to end no later than 10pm.
- That the use of the lights are restricted for use for a limited number of evening matches (as a bench mark, Lords is limited to 10 evenings by Westminster Council) That evening matches must end by 21.30 when the operating capacity of the lights is reduced to 50% and reduced to 10% by 22.00 before being fully extinguished by 22.30.
- The application granted at Lords in 2008 states that lights should be reduced by 50% at 21:50 and be further reduced to 10% from 22:30 and be turned off by 23:00. In the context of this development a condition that lights be reduced by 50% at 21:50 and all lights be turned off completed at 22:30 would reduce the lighting impact on local residents.
- The number of uses for day/night or evening matches should be limited to perhaps eight or ten per year. Matches should finish no later than 10 pm and the lighting reduced (i.e. dimmed) immediately the floodlights should all be completely switched off by 11pm.
- Matches should be scheduled to finish by 2130, and lights should be dimmed from then until
  the ground is empty at 2230 providing a full hour for the ground to empty.
- There needs to be a limit on usage, no later than 10pm, and no more than 12 times a year.
- It should be limited to cricket matches only and a maximum of 6 times per season at the most.
- Having engaged in discussions with GCCC's lighting contractors (Musco) we are aware that the lights can be switched off immediately and do not needed to be dimmed beforehand. Given that there are not currently permanent lights at the ground we do not see why existing lighting cannot be used to enable spectators to leave the ground safely. We have seen reference in the planning application to the ground wishing to leave one light on for televised matches. We do not see why this is necessary given, in particular that the Lords planning consent does not include a similar requirement.
- The Planning Statement states that GCCC do not want to limit usage as they want to be able to "top up" daylight and do not see that this will impact on local residents. We strongly disagree with this statement. We have received a letter from the ground dated 29 August 2014 which indicates that they would have used the lights 8 times last season (including an international). It therefore cannot impact them to have this as a limit of the number of times they may be used. Limiting usage to 8 times per year past 7pm would reduce the light pollution and amenity impact on local residents.
- If the floodlight application does gain consent I would urge that the following conditions are imposed to protect residents: cricket use only, play finishing by 22.00 with lights dimmed immediately and lights off by 23.00 with a maximum of 8-10 matches per year. This would not restrict international cricket. However, it would help to protect children who need sleep and

young people who are taking Summer exams from disturbance from light spill, late night noise and possible antisocial behaviour. 15 matches per year is not far off one a week in the cricket season.

- Strict planning conditions are required to ensure that the lights are not used more than the agreed number of times per year FOR CRICKET ONLY, in the interests of avoiding nuisance to the residents of the neighbourhood. I would not support the lights being used for other events such as concerts etc.
- Surely if the GCCC is seeking to install floodlights to satisfy ECB requirements and mitigation measures are available, these should be used to protect local residents and bring down light spill to ECB guidance standards as a condition of approving the application. I note that in the Headingley cricket ground floodlight application approved in 2014 the council conditioned light spill at any residential window to the stricter ILE guidance level of less than 10 lux vertical illuminance.

### OBJECTIONS TO THE VISUAL IMPACT OF THE PROPOSAL (KEY ISSUE C):

- These floodlights would be an eyesore, visible from miles around, every day of the year. The floodlights would detrimentally dominate the skyline and this would be wholly inappropriate within the context of a long established residential area sited next to a Conservation Area.
- If the floodlights are ever switched on they will spoil the night skyline too.
- At 45m high, the pylons would dominate the skyline, towering over not just the nearby streets but also the Muller Orphanages and the Cricket Ground itself.
- The floodlights would be very tall and completely out of scale with surrounding buildings. This would spoil the view over a wide area EVERY DAY OF THE YEAR.
- It is interesting to note that the application to build flats on the site was initially rejected because of the effect their height would have on the surrounding area but their height is only a fraction of the forty five metres proposed for the floodlights.
- The design of the lighting head frames is utilitarian and unimaginative, unlike those at some other grounds such as Trent Bridge and Lords
- I've seen no artist's impression, since the club have submitted drawings only from a bird's eye view, but I'm concerned they'll be ugly and add to the area's increasingly built-up feel.
- Why have GCCC not provided local residents with illustrations of just what these lights will look like for residents and the local community? Their illustrations show more 'aerial' views which give no context to the actual height impact to local houses.
- Computer generated graphics could be provided to show the impact by day as well as by night. These must be possible - there is such a graphic amongst Musco's illustrations. I am disappointed that no further information seems to be forthcoming and even if the application is to be recommended for approval I would hope that the Planning Committee defer decision and ask for that information.
- Although the documents submitted by the applicant show distant views of the proposed 45m floodlights, they do not show scale representations of them from nearby, in the streets surrounding the ground. In the absence of such important illustrations. A local resident with urban design and planning experience has produced such views and I am extremely disturbed to see how the lights will dominate the area and have a severe detrimental impact on the

character and appearance of the neighbourhood, 365 days a year.

- I cannot support the erection of such industrial-sized, utilitarian constructions in the middle of an attractive Victorian area.
- Monstrosities that will tower over our homes and dominate the skyline.
- If the City Council is persuaded that permanent lights have to be installed, please can there be an exploration of solutions other than the one so far advanced which will spoil this area forever.
- The club is not listening to the residents who would prefer lower or retractable lights with increased light spillage used a couple of days a year rather than a ruined skyline.
- I notice also in the City Design document in December that they include a question about the possible use of removable heads on permanent poles. This is something I see no discussion about with the Club only providing a comparison with the option of retractable heads which I can see could see even greater intrusion on local properties. Why has the possibility of removable heads not been scoped? Can it be please?
- Why can't they afford to pay extra for retractable lights? Are grants available from the England cricket authorities if club is strapped for cash?
- Prison like structures, not what one expects to see in a quiet family friendly neighbourhood.
- These 6 (45m tall) Permanent floodlights will be an eyesore to the area. I know that most of the people who support this do not live in the area.
- The CDG comment plays on the impact of the masts on the heritage assets in the vicinity, and on impacts on longer views - regrettably, this pass was sold when consent was given to the residential development on the site. There is still no objective analysis of the local impact of the masts - particularly during the day. The only information that can be seen and interpreted by anybody is the shadow-path analysis. The modelling that was done for this could be used to generate Accurate Visual Representations of the views towards the ground from the immediate locality, such as from the Nevil Road approach, from Cricklade Road, Kent Road and Kennington Road. The shadows cast by the masts and lighting arrays are one thing - and will particularly affect the houses along Kennington at all times during the year, but the presence of these objects in the hitherto uncluttered sky will be a constant, unmoving intrusion. Although light spill is an important issue, particularly to residents immediately around the ground, it is a transitory one that - under the current proposals at least - will only occur on a limited number of evenings per year. The daylight impact will be continuous and permanent and is unacceptable. Please ensure that the applicant is required to produce images showing the local impact so that the Planning Committee is able to give this the appropriate consideration against the GCCC's blandishments.
- The area can clearly be seen for many miles away for a European Green Capital for visitors to be coming down the M32 what an impression will be made by seeing these giant flood lights! And yes even the new development is visible from down there!
- The height of the floodlights mean they will dominate the skyline, being by far the tallest structure in the area.
- Disagree with the application submission that claims that the significant, dominating, visual impact of the lights is a positive contribution as the lights will "contribute positively in achieving local identity".

- Recommend the use of a telescopic system which will be less visually damaging.
- One of GCCC's major arguments against using temporary floodlights for international matches
  is that it is disruptive to the local residents. As local residents, we confirm that we are happy to
  deal with the short term disruption of erecting temporary lights in order to avoid the long term
  issues of visual harm and light pollution.
- The proposed lights will be visible from many roads and gardens in the surrounding area PERMANENTLY. They will also have a detrimental effect on the City of Bristol College site which is a Conservation Area. The temporary lights that have been used up till now are clearly visible from Muller Road and in more distant views from Kellaway Avenue at Golden Hill. Looking on Google Earth Street View at the Northants County Ground in Nothhampton which have similar lights to those proposed for the GCCC it is plain to see the awful effect these tall masts have on the local area.
- At over 5 times the height of an average house and more than twice the height of the newly constructed flats, they would loom above all local buildings and destroy views of the sky from several vantage points.
- Lights should not be retractable as this means the proposed planning application height could still be incurred (visual and residential amenity concerns expressed).
- I do sympathise that the cost of retractable, telescopic or temporary lights is so high for the club, but this surely has to be the only solution if the need for night games is so great. (visual and residential amenity concerns expressed).
- The structures have no aesthetic value and would reduce the aesthetic value of the surrounding neighbourhood which is characterised by period homes on tree lined streets.
- The development would impact significantly on townscape and landscape quality and visual amenity and will ultimately have a detrimental impact on the existing green space.
- The lighting towers would ruin the skyline of the city for several miles around, from all compass points from Stapleton and Fishponds in the North East, past Brislington and around to Bedminster in the South West.

# OBJECTIONS REGARDING INCREASE NOISE/ DISTURBANCE AND ANTI SOCIAL BEHAVIOUR (KEY ISSUE B)

- Having permanent floodlights would give GCCC more opportunities to stage more night matches and this will undoubtedly cause nuisance to local people when supporters exit.
- Spectators leaving the club after late evening matches would cause noise disturbance, again at a time when residents are trying to sleep.
- How is the ground going to police the large numbers of supporters leaving the ground late at night if the application is approved?
- Anti Social Behaviour Larger and later matches will lead to an increase in antisocial behaviour. This is a significant problem with the 20/20 games. Public urination, rowdy behaviour and vandalism is hardly appropriate in a residential area.
- Concerns with litter being left in gardens (currently experienced with daytime matches).

- Arguments, fights & threatening behaviour are not uncommon surrounding site, especially when alcohol is involved. GCCC not controlling as outside their grounds.
- A local pub has to empty its customers from its beer garden by 10pm. Why the difference?
- Main concern is the potential for a 'creep' towards the ground becoming a general entertainment/concert venue. There is no guarantee that GCCC will be awarded the matches it hopes for by installing these lights and might well turn to alternative income earning schemes by hiring out the venue for other purposes. The local infrastructure is unsuitable enough for the handling of crowds attending cricket matches but would be quite incapable of handling large and possibly unruly crowds attending entertainment events.
- Late night revellers cause disturbance when leaving the ground and waiting for lifts / taxis at the entrance.
- Concerns with damage to personal property/ cars from visitors leaving grounds.
- Amenity issue of cars using their horns late at night as drivers express their frustration.
- There is no mention at all in the Club's letter of any intention on their part to take steps to deter this antisocial behaviour, such as posting stewards, and where feasible providing temporary portable toilets, in the surrounding streets.
- Alcohol sales should be terminated at 9pm to reduce anti-social behaviour of spectators leaving the ground.
- I'm not at all happy at the opportunity that late matches finishing in the dark will give for antisocial behaviour.
- It is not appropriate to penalise surrounding residents by turning the ground into a 24/7 leisure
  activity/show time venue. Bristol badly needs an Arena, but the cricket ground is not the place
  for one.
- The noise from spectators and lighting/camera crews late into the evening is likely to spoil this further and disrupt sleep patterns - particularly during the summer months when residents have windows open during warm evenings.
- The Cricket Club has written to local residents offering increased stewarding. Unfortunately stewards have no authority outside the ground, and the reality is that police do not have the resources to monitor this either.
- Restrictions should be placed on the amount of noise coming from loudspeakers in the ground in the evenings.
- Noise reduction measures requested.

## TRAFFIC/ TRANSPORT ISSUES (KEY ISSUE E)

- The larger and more frequent matches will cause further traffic congestion in Bishopston. The Club has not been very successful in tackling this problem which can cause the entire neighbourhood to come to a standstill on match day.
- The last big match at the Club, supporters were parked all over the surrounding area and the congestion made it difficult both to get and park near our homes.

- The club used to have marshals keeping non-residents out of the local streets which worked really well but they have stopped doing this for some reason. To me this demonstrates their lack of consideration for the local community
- Without a major improvement in the provision of permanent public transportation options the ground simply isn't the right place to promote an increased level of major events.
- The roads around the ground are congested enough already there simply isn't capacity for more traffic / parking in the area.
- Moreover, congestion around the Nevil Road entrance means unsafe parking practices including sometimes even large coaches using small-scale residential streets for dropping off or waiting.
- Residential parking would be impacted with late night games. Residents already have limited space on narrow roads and this would be further impacted post end of normal working day with late night games from GCCC. Moreover even with the introduction of a residential parking scheme around GCCC parking would remain compromised unless any such residential parking had enforced restriction hours extended beyond 6pm.
- As a resident of Sefton Park Road we currently have bowling and tennis clubs causing parking issues on Derby and Sefton Park roads, the tennis club floodlights make the back of our house look like it's in daylight until way too late. City of Bristol College were allowed to sell their parking for building and now all the students park in the surrounding roads, the cricket club were allowed to do the same increasing the parking chaos. When there is a cricket match on at the weekend, we cannot use cars at all firstly because we can't usually get out of the road due to the number of spectators trying to park for free and if we do move our car can never get a space because of the spectators. I'm assuming they want to install floodlights so that they can have evening matches, so again our lives will be made miserable and complicated so that the cricket club can make money whilst causing extreme stress for their neighbours outside of Nevil road. They really don't seem to care about any of the other surrounding roads, as Nevil road gets closed to non-residential traffic and they give benefits to them as well but no-one else. All that does is move the problem one street away.
- In other areas (Twickenham Rugby ground for example) they successfully employ a match day residents parking scheme to ensure minimal impact to local residents. I have no idea how the Council hasn't enforced this for the Cricket ground or the Memorial Stadium on match days!
- Cars cannot squeeze pass each other through the narrow streets and this is exacerbated by
  the fact that the streets are fully parked up by night time when the cricket club spectators are
  leaving, leading to gridlock situations. This can lead to cars attempting to reverse long
  distances up the roads, damage to parked cars, and risk to any pedestrians crossing the roads
  at the time.
- The explanatory letter sent by the Club to local residents states that the intention is to have "park and ride" transport to the ground. The letter also refers to the new main entrance to the ground being at Ashley Down Road. However, there is no direct assertion that these two things will be linked. If the Committee does approve the application, I trust that it will insist that public transport should run to the new Ashley Down Road entrance and not to the Grace Gate one.
- This is a residential area and it just does not have the infrastructure to cope with matches where spectator numbers are 15,000+.

- I have observed several near misses involving pedestrians, including children, or cyclists on the concealed bends between Nevil Road and Kent Road.
- Traffic management measures to include blocking vehicle access to the area on match days (except for residents) from the Gloucester Road end of Nevil Road and Brynland Avenue and the Ashley Down Road end of Kennington Avenue. Double yellow lines to be provided on Nevil Road and Kent Road around the Nevil Rd entrance to the ground to ensure no unsafe parking around the concealed bend.
- Restrictions be placed on the use of the Nevil Road entrance to the ground, perhaps by opening up an alternative entrance on the Ashley Down Road side of the site where the roads are wider and already a bus route.
- Recommend that resident's parking is introduced which ran from 8am 8pm AND if the club committed to enforce, with stewards, road closures except to residents on match days.
- Suggest planning restrictions are placed and enforced beyond "encouraging" people to use
  public transport. I propose the condition of approval be the setting up of a residence parking
  scheme that does not expire until the ground closes and is paid for by the council or the cricket
  ground itself. The zone should then be patrolled by Wardens during match times. This would
  demonstrate the commitment to the local residents.

#### OTHER CONCERNS/ ISSUES RAISED

Concerns with application submission documents / consultation

- Concern expressed at the number of comments in support of the application made by people
  who live nowhere near the ground, or even in Bristol, who could not possibly be affected by
  the installation of lights.
- It is not clear that residents at some distance rather than those in the immediate area have been consulted by either the club or the council or are aware of what is being proposed.
- I found that the consultation sessions conducted by GCCC were skewed to obtain support and gave little opportunity to voice concerns. The club's line seemed to be that it would die if permanent floodlights were refused, retractable floodlights would be too expensive, times were dictated by the needs of TV.
- It has been very hard to interpret the information about light spill from the documents supplied by GCCC and we must be thankful that the council's Pollution Control team has finally provided a report that explains the matter in a comprehensible form.
- I believe that the developer has deliberately avoided and continued to resist providing these images (computer generated images) because they force the Committee to take full account of the permanent and continuous 365-day impact of these structures during the day. By focusing on the light spill issue they are trying to deceive the local community and planning authority into dismissing local impact issues as transitory and therefore outweighed by the alleged benefits that will be derived in the way of international cricket, civic pride and local economic impact. I say alleged because I don't believe these supposed benefits are supported by convincing evidence. Local residents are already testing some of the cricket club's assertions about the necessity for permanent floodlighting and finding them wanting.
- We have considered the new light spill report and the Environmental report and continue to have major concerns about the installation of permanent floodlights. The amount of time it has taken to get the light spillage report and therefore the Environmental report is unacceptable.

GCCC had all this information when we met them in September - why has it taken so long to publish them? This is too little too late and unfair on local residents most affected by the proposals given the timescales for comments.

- We would also urge BCC to get full clarity on the future plans for the Ground. Permanent floodlights were clearly intended when the last round of development took place yet not applied for. We presume it is corporate 'strategy' to apply for development bit by bit rather than all at once as this has a greater chance of success. What further plans to GCCC have for example for further permanent seating along the Kennington Avenue side of the ground?
- In their explanation of the need for the permanent floodlights, GCCC have, on numerous occasions, stated they are essential in order for the club to secure international and World Cup matches. Last Friday (9 January) I sent to following email to the ECB (England and Wales Cricket Board) "Could you please let me know whether it is an absolute pre-requisite for a cricket ground to have floodlight facilities in order to secure: One day international matches, 20/20 matches, World Cup matches. I would be most grateful if you could reply asap" (Note, I did not even say 'permanent, fixed floodlights'). I received the following reply within a few hours "No problem, happy to help. The answer is no, it is not a pre-requisite, but it is hugely advantageous as bad light can halt play during daylight hours". It appears we have all been grossly misled (to put it politely) by the GCCC. I feel the planning committee should be made aware of this.
- Since the planning application was first published on 11th October I have been trying to get adequate information, assessment and analysis of light spill into the neighbouring area. The information provided by the applicant was unintelligible to a lay person, unlike the high quality information produced in connection with some other cricket ground floodlight applications in other cities.
- The in-house assessment report from Environmental Health requested by the planning officer was finally published on the same day as the published closing date for comments on the application. It does seem that the timetable for consultation is being driven by the applicant with scant regard for local residents who will have to bear the negative effects of a rushed decision.
- The in-house Environmental Health Report is very concerning. Although it refers to the Institute of Lighting Engineers (ILE) standards for obtrusive light it dismisses them because they may refer to lights which are used every day. It then refers to the ECB guidance which must refer to floodlights used for cricket matches. The ECB guidance is that light spill up to 50m from the pitch should be no more than 40 vertical lux and at 200m no more than 20 vertical lux. From the applicant's information the illuminance at the rear windows of our property which are around 50 m from the pitch will be approximately 290 lux which is many times the ECB standard and we are not the worst affected. It is not possible to estimate from the applicant's information at how many properties in the area the light spill would exceed the ECB standard as many of the houses further away are not shown. However, it is clear that this would include a substantial number of properties in Kennington Avenue, Lancashire Road, Theresa Avenue, Salthrop Road, Cricklade Road, Kent Road, Surrey Road and Sefton Park Road.
- The Environmental Health Report states "I understand from the applicant that the numbers and positioning of the floodlights is the most effective from the point of view of minimising the overspill of light from the floodlights to nearby residential properties." I think this should be checked independently.
- The report makes the point that the light spill from the temporary lights previously used at the cricket ground was greater but did not give rise to significant complaints from residents. This is

true. The light spill was very intrusive, but as they were used, at most, on 2 or 3 occasions per year we put up with them.

- GCCC maintain permanent floodlights are essential to get international matches. In which
  case they should explain why Taunton has been awarded international and World Cup
  matches when it has no permanent floodlights and no plans for them.
- Concerned that it has taken so long to get a report about light spillage that we could understand and that we now have a very narrow window in which to respond. I believe this seriously undermines the so-called consultation process.
- The number of occasions being mooted changes constantly. Information circulated to local residents by the Club has repeatedly cited 8 and we were told that the 15 would be only during an exceptional year. If this is true (who knows?) this should be embedded in planning documentation.

#### Other Comments

- The reality is that GCCC is that is in totally the wrong place i.e. in the centre of a highly populated residential area causing gridlock with each big match and considerable impact to the local area and residents
- Bristol has become the Green capital of Europe- with the excessive light pollution that will be generated by these lights surely this contradicts the principles of being "Green"?
- Concerned that the club seems to have been awarded a number of big matches already before these lights have been agreed. Does this mean that the lights really are not demanded by the ECB after all, or are they pre-judging the outcome of what should be a fair, democratic procedure?
- Concerned that our administrative officers and elected counsellors do fairly represent and listen to the views of individual residents, not just to give in to the pressures of big business (to which this small club's vaulting ambition aspires) or the very loud sports lobby.
- There is little benefit directly to neighbours? E.g. Reduced rates at the gym, reduce ticket prices or per general sale offer to name just a few would be at step in the right direction.
- Has anyone collected data on the number of moths and species of moths killed when these light are in use? A huge number.
- There also appears to have been no detailed analysis of the impact of light pollution on this scale on local wildlife.
- Ravens and Peregrine Falcons are becoming increasingly frequent around Bishopston at present, only being constrained from breeding by a lack of nesting sites. As these are natural cliff nesting species which are increasingly taking to nesting on pylons it surely should be possible to integrate a nesting platform or two onto a couple of the pylons.
- The county ground have been sly about not installing-or attempting to install them-until all the flats in the [ugly] new housing block have been sold!
- Cricket is in need of change and I applaud GCCC in moving to adopt more 20:20 that brings a new generation of interest in to the national game. It is great that GCCC is the only international facility in the SW, but perhaps it is too hamstrung by its residential position and needs to now consider a relocation to a site that will not constrain its ambitions to be the

premier ground it so desires?

- Does the second division County team have a huge demand for such extra games. Yes I would welcome more international games but these are played in the day. There are a few 20/20 games which at present are very well attended, current lighting is acceptable, so I am not clear why there is such a need for such a permanent fixture and how this would significantly increase the County grounds income plans compared to the continuous negative effect on the local residents.
- Has Bristol's air ambulance and police helicopter services been notified. Please consider the negative impact for the residents, on the negative impact to Bristol's skyline and for air safety reasons, do not approve this application.
- As the proposed lights will be the tallest structure in the area, will they need to display permanent aircraft 'warning lights' at their summit? The ground is very close to the new Southmead Hospital Air Ambulance landing site and the floodlights may constitute a safety hazard. Warning lights were displayed on the cranes used in the construction of the last 'development' by the ground and we suspect the proposed floodlights will be at least as tall as the cranes. If the answer to this question is 'yes' this will be yet another intrusion on the environment of the area as the warning lights will need to be on 24 hours a day for 365 days of the year.
- It is worth remembering that each lighting array might have to have a red to warn aircraft have the CAA been consulted?
- I am dismayed that the development has not had to consider environmental concerns where are the solar panels, the cycle path to join the one through St Werburgh's, if we are to have monstrous lights at the bottom of our gardens why not a wind turbine, etc.? Rumour has it that the plate glass windows of the flats are not of the correct thermal requirement as light reflected off them would potentially blind the bowlers and batsmen, and as a result the flats are ether very hard to heat or too hot. Where is the social housing? They have done nothing for the wider local community or safeguarded the environment.
- Whilst the proposed floodlights may well use less energy under current proposals they are planned to be used more regularly than temporary floodlights resulting in increased emissions and energy use. As a result the proposed development does not comply with this policy.
- The installation of these flood lights does not guarantee that GCCC will win the opportunity to host the international matches that they hope to therefore I am also concerned what other plans they may have for them in future.
- These lights are another example of a commercial entity, namely GCCC, acting under the guise of a community organisation, to extract as much profit from the current site as possible.

#### SUPPORT COMMENTS

- I fully support this proposal and believe that its approval is paramount in maintaining a world class cricket ground in Bristol
- If this planning application is rejected, the long term viability of Gloucestershire County Cricket Club will be at risk. However, there is much more at stake here than the future of this important Bristol sporting institution. The England and Wales Cricket Board (ECB) have stated that international cricket will continue in Bristol for the long term only if floodlights are installed. The huge positive impact of international cricket on the economy of Bristol as a whole must not be underestimated, nor should the way it raises the profile of our city. As always, there is a

balance to be drawn between what is best for the Cricket Club & the City of Bristol and the concerns of some residents in the immediate vicinity of the County Ground.

- I note that the permanent lighting will be less intrusive than temporary floodlighting.
- Permanent floodlights would be a benefit to the Club and the community. The club and spectators would benefit as games would not finish due to "bad light," meaning commercial interests, (shop, bar, cafe, ice-cream van etc.) would not end trading early. Bristol, The Club and local businesses would benefit as the ECB is far more likely to award International fixtures to the Club. T20 matches would start later in the evening, (on a Friday predominately), allowing for less traffic congestion in the area.
- As someone within the wider "catchment area" of Bristol when it comes to top level cricket I'd like to support this application. Oxfordshire has no cricket at this level and the other options are Birmingham, London or Southampton. Please make Bristol even more attractive to visitors who are prepared to travel 1-2 hours and how commit to significant expenditure when we visit.
- Having a first class county based in Bristol is an advantage for the West Country. Increasingly, the most popular cricket for people to come and watch around the country is in the summer evenings. Floodlights will also enable Bristol to be a more appealing venue for England oneday matches as well.
- In domestic cricket, T20 is the money earner that supports the longer form of the game right through to international and World Cup levels. However, to maximise income, it is essential that matches be provided out of working hours which, even in mid-summer, necessitates floodlighting. T20 cricket also provides a thrilling and entertaining amenity for the city and publicity through exposure on Sky Sports and other TV channels at home and abroad. As far as the future of international cricket is concerned (and Gloucestershire CCC has been provisionally allocated ODIs in 2017 (England v West Indies), 2018 (England v India) and 2019 England v Pakistan), plus 4 ICC Cricket World Cup matches in 2019. The city is one of very few in the whole of the UK (and the only one in the South West) privileged to have the opportunity to stage international sports fixtures which will directly contribute to its standing and to the local economy. However, the provision of suitable floodlighting is a non-negotiable pre-requisite.
- The lights will only be used for a limited number of days during the summer, when it is light into the late evening anyway.
- I support the floodlights, especially as if we get them we will be able to host 4 World Cup
  games which would be great for Bristol as a city and for the sporting community of Bristol.
- The installation of floodlights is obviously part of the ongoing development of the cricket ground and, since the council has permitted development thus far, it is unreasonable to withhold permission of this element. The club has made every reasonable effort to canvas, listen to, and react to local opinions and cannot be faulted on its concern for its neighbours.
- International days don't just bring in revenue to the club but the surrounding area and businesses benefit enormously both on the day itself and in the build-up. Other cities are desperate to host the big international games and have been backed by their councils in making these developments. Bristol risks being completely left behind yet again unless it at least attempts to keep up.
- The floodlights have been positioned to minimise glare and disruption to neighbours and are going to be used so infrequently. We are talking a maximum of 10 times a year I'd have thought, for a few hours at a time with the lights turned down by 10:15 which I do not see as

being so terrible. Floodlights are used in similar situations including at St Johns Wood, London (Lords) without issue. While neighbours should definitely be consulted on issues that affect them it has to be remembered that the club have been playing here longer than any of the current residents have been living here! The alternative is the club struggles on as it has done in recent years until it eventually runs out of money, folds and decides to sell the ground for more houses or a big supermarket!

- The move to permanent lights will allow tailored and more efficient design and use and provide more flexibility to the club to stage matches.
- Please get on and build this, planning is taking far too long. I do not appreciate antidevelopment mail I have received from opposition to this work.
- I don't see light pollution to be a major issue even though one of the lights would be directed towards my building in the middle. It seems to me, from the artwork, that the light will be mostly downwards facing so shouldn't cause too much of an inconvenience.
- The proposal can only be good for the club and the immediately located businesses if the club has a higher profile.
- I believe that the Club has addressed all the concerns of local residents concerning traffic and stewarding.
- The Cricket Club have made clear their commitment both to the local community, through their engagement with local businesses- and the wider Bristol community, through their engagement with city wide schools' coaching, Street Chance etc. To be viable they need to be the best, and that means lights that work, and at the same time create minimal light pollution. This design is not the cheapest, but it fits both criteria and I believe their enterprise should be supported.
- We have already lost the swimming baths, let's not force another local landmark to close. I
  would support the restrictions limiting the number of times the lights can be used per year and
  that it should be just for cricket.
- A fantastic prospect for everyone, and worth millions in advertising the city.
- W G Grace is an icon recognisable by almost everyone. He and Gloucestershire Cricket are a valuable part of our heritage. We should do everything to maintain and develop this.
- Having more international matches will greatly enhance the Bristol economy.
- By starting evening T20 games later under lights permits supporters to travel to the ground outside of the city "rush hour" and allows a greater number to enjoy matches after work.
- The floodlights meet the newly upgraded ICC and ECB lux standards, incorporate the latest design technology, use low-energy lamps and address concerns about "back-spill" lighting.
- The economic benefits for the surrounding area fully outweigh the minor inconvenience of on a few days a year there may be a high traffic volume and the possibility of a few cricket fans who may have had a pint too many. Particularly considering the loss of the rugby & football crowds due to the closure of the memorial ground and the knock on effect to local business because of this.
- I have lived in the area for a long time I have never experienced any unpleasant antisocial behaviour from drunken cricket fans.

- We should do what we can to support our sports teams and this is an essential part of the clubs business model and financial viability.
- Creating the 'feel-good factor' that comes with being at the centre of a national, indeed global, event.
- Later finish to games is surely beneficial to these factors, as people will not be leaving the venue, as they currently do, between the busy period of 6-7pm, and instead will leave between 9-10pm, when the roads are much quieter. Parking is a non-issue, as the inevitable residents parking zones will soon mean that, at the time of arrival, no spectator can park in your road (regardless of floodlights). Other than perhaps one extra game for England, there will be no increase in the number of Gloucestershire games played at the ground, and therefore no increase in the number of match days where the roads are affected.
- Regarding the appearance and effect of the actual lights there is football ground just up the road which has floodlights and I don't hear a lot of complaints about them.
- Local residents can, on one hand, choose to live in close proximity to an international sports venue, and on the other, expect it not to be developed over time.
- Young talented players groomed through our extensive youth coaching programme from Exeter Cricket Club - have in the past played for and have been invited for trials and specialist training at Gloucestershire Cricket Club so I do have a further interest in the already excellent club facilities being further enhanced.
- The game has to compete with many other forms of entertainment and it must adapt accordingly to attract support. Evening floodlit games have a special atmosphere in sport and cricket is no exception.
- I think it will be great to have a facility capable of supporting world class cricket teams for evening fixtures more suitable for families.
- Day/night cricket is a great way to open up live cricket to spectators who wouldn't normally be able to attend due to constraints such as work
- Support the promotion of sport from youth upwards and hope that the installation of floodlights gives rise to a number of opportunities, sporting and otherwise, which will benefit the general public.
- Application has been amended to address local resident's concerns.
- Every effort appears to have been made to reduce the visual intrusion which aims to appease the concerns of those directly impacted by the scheme.
- I would welcome floodlit conditions in my garden save my electricity when having parties and drinks in the garden on hot summer nights wonderful.
- Moving forward with decent facilities. This can only attract more quality players.
- Gloucestershire County Cricket Club need these lights in order to participate in lucrative day/night matches, and also to avoid loss of play due to bad light in daytime matches an issue which affects both the club and paying customers.

### **POLLUTION CONTROL**

Comments incorporated into Key Issue B of the main report below.

#### TRANSPORT DEVELOPMENT MANAGEMENT

Comments incorporated into Key Issue E of the main report below.

#### NATURE CONSERVATION

The proposed period of operation is reasonably limited, although it is during the bat flight season. Restricting the use of the floodlights to not beyond 11 pm is helpful with respect to the potential presence of foraging and commuting bats. Given that the required bat update survey has been undertaken and that a lux plan has now been provided down to zero lux in all directions, I don't consider that any planning conditions are now required on ecological grounds (providing that you will be conditioning the times of operation of the floodlights which you indicate that you will be doing).

#### CRIME REDUCTION UNIT

No objection to the proposed installation of 6 x permanent floodlights within the cricket ground. But to enhance the security of this system and prevent unauthorised persons from climbing up the lighting columns I would recommend that these should be fitted with some form of anti-climb and anti-vandal guards.

#### CITY DESIGN GROUP

Comments incorporated into Key Issue C of the main report below.

### **CIVIL AVIATION AUTHORITY**

I would like to confirm that the CAA have no comments on the Planning Application and can also advise you that this application does not have any safety implications.

## NATIONAL AIR TRAFFIC SERVICES

The proposed development has been examined from a technical safeguarding aspect and does not conflict with our safeguarding criteria. Accordingly, NATS (En Route) Public Limited Company ("NERL") has no safeguarding objection to the proposal.

However, please be aware that this response applies specifically to the above consultation and only reflects the position of NATS (that is responsible for the management of en route air traffic) based on the information supplied at the time of this application. This letter does not provide any indication of the position of any other party, whether they be an airport, airspace user or otherwise. It remains your responsibility to ensure that all the appropriate consultees are properly consulted.

If any changes are proposed to the information supplied to NATS in regard to this application which become the basis of a revised, amended or further application for approval, then as a statutory consultee NERL requires that it be further consulted on any such changes prior to any planning permission or any consent being granted.

#### **RELEVANT POLICIES**

## **National Planning Policy Framework – March 2012**

#### **Bristol Core Strategy (Adopted June 2011)** BCS8 Delivering a Thriving Economy BCS9 Green Infrastructure BCS10 Transport and Access Improvements Transport and Access Improvements BCS10 BCS13 Climate Change BCS14 Sustainable Energy BCS15 Sustainable Design and Construction BCS21 Quality Urban Design BCS22 Conservation and the Historic Environment BCS23 Pollution

### Bristol Site Allocations and Development Management Policies (Adopted July 2014)

DM15	Green infrastructure provision
DM19	Development and nature conservation
DM26	Local character and distinctiveness
DM27	Layout and form
DM28	Public realm
DM31	Heritage assets
DM23	Transport development management
DM33	Pollution control, air quality and water quality

### **Supplementary Planning Guidance**

PAN 2 Conservation Area Enhancement Statements (November 1993)

#### **KEY ISSUES**

## (A) IS THE PROPOSAL ACCEPTABLE IN PRINCIPLE?

The need for permanent floodlights at cricket grounds has recently become a requirement of the England and Wales Cricket Board (ECB) and the International Cricket Council (ICC). This has been verified with the ECB who have provided the following response:

### Televised Domestic and International Cricket

The ECB Floodlight Guidelines were written in 2008 when floodlit cricket in England and Wales could be delivered by the provision of temporary mobile floodlights. Since 2011 FCC (First Class County) venues cannot stage any televised domestic or international floodlit cricket matches unless they have permanently installed floodlights that meet the lux requirements. It also must be noted at this time that Gloucestershire CCC are one of the only two International venues that do not have permanent floodlights. Having all International venues with permanent floodlights going forward is extremely important.

### ICC Global Events

Gloucestershire CCC have been provisionally awarded 4 matches in the 2019 ICC Cricket World Cup. This award is made subject to the following condition being met by the venue:

GCCC's installation of permanent floodlights at the Venue which comply with the applicable ECB and ICC floodlight regulations'.

The principle of improving current sports facilities is acceptable in principle, subject to other detailed considerations, as set out below. This proposal follows the approval of the major redevelopment of the County Ground in 2012.

(B) DO THE PROPOSALS SAFEGUARD THE RESIDENTIAL AMENITIES OF NEIGHBOURING OCCUPIERS?

## POLLUTION CONTROL/LIGHTING CONSIDERATIONS

Policy BCS23 of the Bristol Core Strategy and Policy DM33 'Pollution Control, Air Quality and Water Quality' seeks to ensure that any proposal for a potentially polluting development is accompanied by an appropriate scheme of mitigation, and to resist potentially polluting development that cannot be satisfactorily mitigated.

Given the technical nature of this application and to ensure that a robust assessment has been made of the potential light impact to local residents, detailed discussions have taken place between the City Council's planning and pollution control officers and the applicant/ agent for the scheme.

Following a meeting with the applicant/ agent in November, further information was requested with regards to the lighting levels when the temporary floodlights were previously in use for matches, in addition to the discounted alternative methods of lighting which were explored at the site. This information was submitted and publicly consulted upon, under the third round of public consultation for this application. In summary, the following alternatives were explored, none of which are considered to be capable, practically or financially for the site.

## Continued use of Temporary floodlighting

Temporary system does not meet ECB requirements for lux level, uniformity, glare control or technical spec for broadcast requirements. Permanent provision is required to meet regulations.

The proposal for permanent floodlights vs the temporary floodlighting scenario allows better light control due to the external visor and tilt of the headframes.

Varied no of masts (4, 6, 8 masts considered)

4 masts reduces the number of visual sources, but the head frames would be larger and will increase the overall number of floodlights needed to get proper light distribution.

8 masts allow the best control of light to the playing area, while 4 masts would produce the highest spill levels. 6 masts would fall between, and has been proposed after evaluation.

Furthermore, the ECB have stated that 4 masts are not acceptable. 8 masts are not practical/ feasible given the ground limitations.

### Retractable masts

The height of the column in use would not change. The retractable mast height when not in use would vary based on the number of sections. A two section mast would collapse to half it's working height (around 23 m). Greater sections would mean a wider mast and larger foundations, a hydraulic system requiring maintenance and an increase in cost. It is likely that the project would be financially unviable under this scenario. It would also prove difficult to site the structures under this scenario as the head-frame would have to be given ample space to lower, which could prove difficult with other structures at ground level within the grounds.

Masts with removable heads

The agent for the planning application has confirmed that whilst this solution is not impossible, it is not 'what the lights are designed for and the Club would lose the warranty (with the lighting design specialists)'. 'The Club would also incur large maintenance costs and it would require moving cranes in and out of the ground causing frequent disruption to the local area and also reduce the life of the lights which means further disruption for their replacement'.

With regards to funding, it is understood from the agent for the application that the Club are receiving £700k from the ECB (estimated at about 70% of total costs). This is a standard amount they are offering to counties to either install or upgrade the floodlights to be able to produce the required ICC lux levels and given this already sizeable commitment they would not offer any further funding.

As such, the proposal is considered to be the optimum deliverable solution for the site, as submitted by the applicant/ agent.

Significant objections have been received regarding this key issue, and the concern regarding light pollution to residential properties, as summarised within the 'Response to Publicity and Consultation' section of this report.

The City Council's Pollution Control officer's advice on this proposal, which is reflected in the proposed conditions to this application, is as follows:

It would be usual for the Environmental Protection Team to assess any application for external lighting in accordance with the guidance given in Obtrusive Light Limitations for Exterior Lighting Installations in table 2 of the Institute of Light Engineers Guidance Notes for the Reduction of Obtrusive Lighting, GN01:2011 (ILE Guidance). This document suggests maximum obtrusive light limitations for exterior lighting installations for different locations from protected dark areas to sub urban and urban surroundings and suggests light levels both before and after 23.00 hours. The most relevant measurement within the ILE guidance is the vertical illuminance in lux on windows. The ILE Guidance suggests a maximum level to avoid obtrusive light of 25 lux in an urban surrounding before 23.00. It should be noted that this area would fall within the category of a suburban surrounding where a maximum level to avoid obtrusive light of 10 lux is suggested by the ILE Guidance.

It must be noted that the ILE Guidance is intended to be used for lighting likely to be used every day as opposed to the lighting here which would only be used during the cricket season and for a restricted number of times. A higher level may be acceptable to local residents than the levels suggested within the ILE Guidance.

In addition to the ILE Guidance the England & Wales County Cricket Board (ECB) has also published Guidelines for Floodlighting of Cricket Pitches. Whilst this document is largely based on lighting levels for the field of play it does give in section 7 Environmental Analysis levels that in the absence of local guidelines, the following levels should be used for design - within 50 metres of the ground 40 lux maximum vertical and within 200 metres of the ground 20 lux maximum vertical.

The highest predicted light levels for the proposed floodlighting scheme will be at properties of Kennington Avenue (75-127), which back onto the North West side of the ground. The light levels at the rear facades of these houses are predicted to range from around 60 lux to 320 lux. The fronts of the houses on the opposite side of Kennington Avenue (66-122) range from about 32 lux to about 140 lux. Light levels then reducing the further you get from the ground. The predicted light levels from the floodlights at the majority of these properties are above the recommended levels from both the ILE and the ECB guidance documents.

Due to greater shielding from buildings the predicted light levels in Lancashire Road are significantly lower with the highest predicted levels being at the front of the properties of Lancashire Road which

do not back on to the cricket ground. Here levels in the region of 50 to 60 lux are predicted. These levels are still above the recommended levels from both the ILE and the ECB guidance documents.

The predicted light levels for the floodlights submitted by the applicant show that at the nearest residential properties to the ground at Kennington Avenue and Lancashire Road that horizontal light levels will be above those recommended by the ECB for properties within 50 metres of the ground and at some properties of Kennington Avenue vertical light levels will be significantly above the levels recommended by the ECB. Vertical light levels at properties with 200 metres to the North West and south west of the ground will also be above the vertical light levels recommended by the ECB. The properties immediately to the north west of the site will be particularly well lit.

I understand from the applicant that the numbers and positioning of the floodlights is the most effective from the point of view of minimising the overspill of light from the floodlights to nearby residential properties. I also understand that there are a number of other cricket grounds in residential areas around the country where floodlights will be used.

Temporary floodlights, which would give a greater overspill of light than the proposed permanent lights, have previously been used at the ground without cause for significant complaints from local residents.

Whilst I feel it is inevitable that local residents properties, particularly those to the north west of the ground, will be lit by the lights the number of times that the lights will be used will be restricted and the lights will only be used during competitive cricket matches and switched off when cricket matches finish and no later than 23.00. The lights will only be used during the cricket season, generally April to September. Sunset in April and August is usually between 8 pm and 9.30 pm falling to 7 pm by the end of September. To try and put the level of predicted lighting in to some sort of context sunrise or sunset on a clear day is said to be around 400 lux, a winter's day, overcast sky 900 - 2,000 lux and a summer's day, clear sky up to 100,000 lux.

If this application is granted I feel that the use of conditions to control the use of the floodlights will be of utmost importance in order to try and minimise the effect of light from the floodlights on local residents. From documents submitted with the number of times the floodlights will be used varies from 10 to 20 matches per year. Looking at planning consents for floodlights at Sussex, Northants, Chelmsford and Leeds planning permissions have restricted the use if the floodlights to between 15 and 20 times per year with lights having to be switched off by between 23.00 and midnight.

I would therefore suggest the following conditions, or variances of, should the committee be minded to grant the application:

- 1. Within 1 month of the commencement of the authorised use hereby approved a report detailing the illuminance levels at neighbouring residential properties shall be submitted to and approved in writing by the Council. If the illuminance levels at neighbouring properties are above those predicted on the Predicted Overspill Footprint Drawings for both vertical and horizontal illuminance submitted with the application then a further report detailing mitigation measures shall be submitted to and approved in writing by the Local Planning Authority and the approved works shall then be completed in full within a month of the approval.
- 2. The floodlights shall be used on no more than 15 days in any calendar year.
- 3. The floodlights shall not be used between 23.00 hours and 10.00 hours.
- 4. Apart from essential maintenance the floodlights shall only be used in connection with competitive cricket matches.
- 5. Floodlight Usage Management Plan

No use of development shall take place until there has been submitted to and approved in writing, by the Council, a Floodlight Usage Management Plan. The plan shall set out details of:

When and what games the lights will be used for.

The times when the floodlights will be used.

When and how the lights will be turned down to a lower setting. When and how the lights will be maintained and tested How local residents will be notified as to when the lights will be used'.

Following on from the above, original comments regarding this application and comments from local residents and members regarding noise and mitigation measures Pollution Control have commented further on this application:

'Mitigation measures and other options for floodlighting

The applicant and their lighting consultant were asked to investigate options of floodlighting including different numbers of floodlights. This is detailed in the Floodlight System Design Evaluation. It is my understanding that due to the layout of the ground and surrounding area that the proposed scheme gives the least impact on residents when taking visual amenity and light spill in to account The Design Statement submitted with the application states that the 'uniquely designed luminaire uses a system of reflectors and visors to control and re-direct light onto the pitch, thus significantly reducing the impact of the floodlights on nearby roadways and residences. Each luminaire is custom designed and built according to its specific purpose for the pitch lighting'.

I am not aware of any further mitigation measures that can be imposed on the lights themselves to minimise light spill but still give the necessary illumination on the pitch in accordance with ICC Guidelines to allow for international cricket matches under floodlights to be played. Issues such as light level management and switching off lights at the end of play will help reduce light spill to neighbouring properties and these are areas that I would want to see covered in the management plan for the use of the floodlights.

### Comparisons with Headingly application

I have looked in more detail at the Headingly application, in particularly the revised light spill report submitted with the Headingly application. 3.11 on page 4 of the report clearly states that the 10 lux is achieved when the lights are at 10 % for de-rigging post curfew (curfew is 11 pm and the ground are allowed to use the lights 6 occasions per year between 23.00 and midnight). 3.1.2 on page 6 details the light spill during normal operations which they say will be in the region of 50 lux vertically. These were the light levels submitted with the application. A condition was placed on the approval requiring the submission of further light intensity plots and a condition that when the floodlights are in full operation the light spill shall not exceed 10lx when the vertical illuminance is measured at any residential window. Further light spill plans were submitted with the discharge of condition application which show light levels below 10 lux. It is not clear from light plans whether they are for the lights running on full or at 10%.

The other difference with the Headingly Ground compared to Gloucester County Cricket Ground is that Headingly pitch is virtually completely enclosed by stands whilst Gloucester has no stands facing on to the rear of Kennington Avenue. The stands and buildings will offer shielding from the floodlights. Whilst there are temporary stands used at the Kennington Avenue these haven't been taken into account in the light spill plans

The Headingly lights are to be installed for spring/summer 2015 so there is no way of currently seeing how accurate the predicted levels are'.

Please note, following discussions with the agent and the pollution control team it is recommended that condition 3 of the proposed conditions for the application (covering the number of days of use) is worded as follows to allow for essential maintenance:

'Apart from essential maintenance, the floodlights shall be used on no more than 15 days in any calendar year. Reason: In the interests of protecting residential amenity'.

### Summary

In conclusion whilst it is considered inevitable that local residential properties, particularly those to the north west of the ground, will be lit by the lights; the number of times that the lights will be used will be restricted and the lights will only be used during competitive cricket matches and switched off when cricket matches finish and no later than 23.00. The lights will only be used during the cricket season, generally April to September. Sunset in April and August is usually between 8 pm and 9.30 pm falling to 7 pm by the end of September. The proposal is therefore considered to be acceptable subject to the detailed controls set out in conditions.

### SITING OF THE FLOODLIGHTS

Policy BCS21 of the Bristol Core Strategy requires that development safeguards the amenities of neighbouring developments.

A shadow study has been prepared for the application, which demonstrates that the floodlight structures will create a shadow on some surrounding properties. However, given the shape/ size of the proposed structures, whilst a shadow will be created to affected properties, it is not considered that this will create excessive overshadowing or lead to substantial loss of daylight/ sunlight given the scale/ mass of the structures themselves.

Objections have been received regarding the siting of Floodlight P3, which is adjacent to the enabling development apartments on the edge of the Cricket Ground.

It is understood, following discussions at pre submission stage with the agent, that floodlight P3 was relocated from its original position (lined up in profile with the apartments) because of a resident's earlier concern that P3 was too close. It was moved to the current location, prior to the application submission, to accommodate this initial request.

The new position of the floodlight would affect the view of the properties on Kennington Avenue from some apartments in the new residential apartment block, given the angle and location of the apartments and the position of P3. However, whilst the floodlight pole will be visible, it is not considered to substantially overshadow or create a substantial loss of light to the properties affected given the reduced mass/ bulk of the proposed structures.

It is understood that the agent has explored all other alternatives and have been advised that P3 is unable to be repositioned on the basis of the following:

'An underground carpark is in close proximity to the column location. The final position was settled on as it provided adequate space from the foundation (which is designed as a 5.70m square pad). The column is currently roughly 6m from the edge of the underground carpark (estimated). If the column is set further back, floodlight column foundation could encroach or very nearly encroach on the foundation of the underground car park, which is obviously a significant structural concern. Using cantilevers is likely to be extremely costly and would increase disruption and likely prolong the installation of the proposal.

The lighting design is already compromised to being fully compliant of the ECB/ICC lighting requirements, specifically in the East Boundary. This is due to the columns P3 and P4 being pushed too far forward than would be desirable due to the siting of the new apartment block.

Furthermore, the agent for the scheme has clarified that moving the P3 column location to the north of the current location, and further away from the East Boundary, will cause further negative impact to the current lighting design levels which may not be approved by the ECB and their engineers.

With regards to the siting of P2 and requests that it is moved further from the adjoining residential area, the following justification has been provided by the applicant/ agent following an officer request:

Between the proposed position and the pitch is a road (around 4m in width), the walking bus route for the school and an area used as car parking for the majority of matches and for the temporary stand on International match days.

Given we clearly can't be moving this floodlight into the road / walking bus route we would then have to be placing it in the area for the temporary stand / car park. By our estimation this would either lose or restrict the views of up to 600 seats which would put us under the ECB requirements and put a severe strain on other areas of the ground and compromise both spectator "flow" and health and safety. We were advised earlier in the year by the sports ground and safety authority that "flow" was an area of concern they had and we can't risk compromising it further.

As detailed previously P2 originally started on the boundary wall of two Kennington Avenue properties but we have moved it over 30 feet nearer to the pitch to alleviate some of the concerns that we envisaged they would have (we undertook this move before residents requests). We have had 2 lengthy private consultation meetings with the residents that have raised these concerns and have also discussed additional benefits to their amenity such as an element of landscaping and redecorating certain areas but I understand their desire to push for more; I also believe that the moving of the lights off their boundary wall has significantly improved the position with regards shadow'.

On the basis of the above, it is considered that the locations of the proposed floodlights are in the optimum position to meet the technical requirements of the cricket club.

### IMPACT ON ADJACENT PRIMARY SCHOOL

Brunel Field Primary School is situated in close proximity to the GCCC grounds. Whilst there will be some light spillage to the school, this is likely to be in the evenings, outside normal primary school operational hours. It is understood from the agent for this scheme that Gloucestershire County Cricket Club (GCCC) have a good relationship with the School and that the school uses the Ground for sports during primary school hours and on Saturday mornings for football, but not within the times when the lights would be in use. The agent has clarified that communication will continue between GCCC and Brunel Field to discuss GCCC events and timings and to ensure that the operation of the proposed floodlights will not affect the running or enjoyment of the school.

#### NOISE/ DISTURBANCE

The additional use of the Cricket grounds, into the evenings between September and April, will create some additional noise and disturbance as a result of the general comings, goings and number of visitors to the matches. However, given that only 15 matches per year are proposed to be operated under floodlighting and that the matches are proposed to cease by 23:00hrs, it is not considered that this would create an unacceptable impact beyond that already experienced under the existing temporary floodlighting scenario at the site.

The Pollution Control Team have responded as follows;

The playing of cricket matches under floodlights is likely to increase the potential for local residents to be affected by noise by both supporters leaving after matches and by noise from within the ground itself. Noise from supporters leaving will generally be outside of the controls of the cricket club and will be restricted in both times it occurs and how late it occurs through restrictions on the numbers of times the floodlight scan be used and time restrictions on their use. Noise from within the ground is likely to consist of crowd noise and music noise particularly for Twenty20 matches. Music is already played at Twenty 20 matches and this has not given rise to significant noise complaints. Again any

such noise will be restricted in both times it occurs and how late it occurs through restrictions on the numbers of times the floodlights can be used and time restrictions on their use.

It is also my understanding that conditions cannot be placed on any consent with regards to noise'.

The Police Crime Reduction team have also been consulted and have offered no objection to the scheme, subject to exploring anti vandal measures on the structures to prevent people climbing the poles. This issue is discussed in greater detail in key issue C below.

## (C) IS THE PROPOSAL VISUALLY ACCEPTABLE?

The National Planning Policy Framework (NPPF), 2012, states that great importance should be given to the design of the built environment. In determining applications, weight should be given to outstanding or innovative designs which help to raise the standard of design in an area. Policy BCS21 of the Bristol Core Strategy seeks to deliver high quality urban design which contributes positively to an area's character and identity, creating or reinforcing local distinctiveness. Policy BCS22 is also relevant and which seeks to safeguard or enhance heritage assets and the character and setting of areas of acknowledged importance including listed buildings and conservation areas.

Significant objections have been received regarding this key issue, as summarised within the 'Response to Publicity and Consultation' section of this report.

The City Design Group have formally commented that the proposal will cause substantial harm to the setting of the listed buildings and skyline.

'Having fully assessed the submission, it is apparent that there are local views and some distant views that have not been assessed. In the absence of these views and considering the height of the masts the assessment has been made on the basis of the information provided.

The Gloucestershire Cricket Ground is considered to be a non-designated Heritage Asset due to the historic use, a cricket pitch. The site bounds the Ashley Down Conservation Area and is in close proximity to a number of Grade II listed Buildings including Davy House, Cabot House, Allen House, Brunel House, Muller House, (which are known as the Former Muller Orphanages).

Whilst we are supportive of the principles that seek to maintain the continuing use of the site, the proposal will cause harm to the setting of the listed buildings and skyline. Any harm would need to be balanced against the wider public benefit of the proposal.

At present, the Orphanage Buildings dominate the sky line due in part to their elevated position and secondly due to their robust institutional scale when compared to the adjacent residential buildings of typically 2 to 3 residential storeys. The harm is derived from the juxtaposition of the masts with the listed Orphanages and draws the skyline interest away from them, appearing above the ridge line. This can be perceived from long distance views breaking the skyline from Main Street and important open spaces such as Horfield Common and Purdown Ridge, Shaldon Road and Millennium Green.

- Due to the height of the masts against that of the listed buildings, it is highly likely that the proposals would Impact the setting of the former Muller Orphanage, visible from local views for example Ashley Road and the Car Park see image below. We would urge the applicant to provide these views to confirm this assessment.
- The degree of harm caused to the setting of the designated heritage assets is due to the impact of the cumulative perceived mass of the proposal on the asset i.e. six masts with large lighting heads in close proximity to each other. This harm in our view is substantial.

In order to satisfy the requirements of section 12 of the NPPF notably paras 132 and 133 of the impacts of the proposed scheme needs to be robustly justified, part of this justification should explain why the current proposal is the most benign option and what are the precise public benefits associated with the proposal'.

Following a meeting between the City Design Group, Council Planning and the applicant/ agent, further information was submitted to explore the alternative options for the site, all of which have been discounted as unsuitable for the site. No further comment has been provided by the City Design Group, and the objection on the proposal still stands.

In accordance with Paragraph 133 of the National Planning Policy Framework (NPPF), Local Planning Authorities should refuse consent unless it can be demonstrated that the substantial harm is necessary to achieve substantial public benefits that outweigh that harm or loss. In addition to this Section 66 of the Planning (Listed Buildings and Conservation Areas) Act 1990 states that:

- "In considering whether to grant planning permission for development which affects a listed building or its setting, the local planning authority ... shall have special regard to the desirability of preserving the building or its setting or any features of special architectural or historic interest which it possesses."

Harm to the setting to the listed buildings would be caused by the proposed permanent floodlights, when viewed from a number of locations. The application proposal would however result in the public benefit of retaining first class cricket matches in Bristol at a Cricket Club which has historical and cultural significance within the City. Bristol (GCCC) has now been awarded 7 International Matches between 2017 - 2019 and the agent has stated that each International match is likely to bring around £1 million additional revenue to the City, therefore having a significant boost to the Bristol economy over the next two years. On balance, it is considered that there is a cultural and economic benefit to be attached to this proposal which would outweigh the visual harm. This passes the tests set out in the NPPF and s66 of the Planning (Listed Buildings and Conservation Areas) Act 1990.

With regard to the proposed colour/ materials of the scheme, the agent has confirmed the use of Steel ASTM A572 GR65. This colour/ material is considered to be appropriate to ensure that the proposal assimilates, as far as reasonably practicable, into its context. Following liaison with the Police's Crime Reduction Team, and the need to reduce the opportunity for people climbing on the structures, the agent explored the opportunity to use anti-climb paint but is not considered to be practical, however the proposed floodlights will be made of galvanised steel which is smooth, making it difficult to get any foot or handhold onto. Moreover any anti-climb paint may make the masts more visible and have a negative impact in this regard.

Anti-vandal guards would also be prominent on the proposed mast by adding bulk and could have a further negative impact with regards to the visual impact of the proposal.

### (D) SUSTAINABILITY ISSUES

Policies BCS13 to BCS15 of the Bristol Core Strategy addresses sustainability issues within the scheme. Policy BCS13 sets out a requirement for development in Bristol to take into account the impact of climate change. Development is required, by a variety of means, to both mitigate it's own impact on climate change and adapt to the effects of climate change.

Whilst a sustainability statement was not formally required for this proposal, it is understood that efforts have been made to improve the sustainability of the existing Club Cricket Ground and the proposed floodlights. Following an officer request for further information regarding sustainability considerations, additional information has been provided.

Solar panels are not viable on the proposed floodlights as they would be too small to be efficient, too heavy for the slim floodlight headers and could have a detrimental impact on the visual amenity of the area. Accordingly these are not appropriate in this context. However, the proposed lights themselves are more energy efficient than the existing temporary lighting arrangement, using less light and generating less heat. It is also understood that the proposal out performs other lighting options currently available on the market.

### Light Efficiency

The following figures outline the efficiency of the Musco system when compared to alternatives on the market, specifically with regards to the design of the luminaire itself and the proprietary design of the system. This design allows performance to be guaranteed without the need to over-design the system by 25% to offset light depreciation. Due to these efficiencies, the proposed floodlights use a 1500w lamp instead of the typical 2000w lamp used in the industry whilst using a similar number of floodlights to achieve the same or better performance.

**Energy Comparison** 

Proposed Musco Floodlight System 436 x 1500w floodlights = 680.2 kW

Alternative 2000w System 436 x 2000w floodlights = 959.2 kW

Reduction of 279 kW of energy consumed per hour

Based on an estimated 60 hours of use per year (12 matches at 5 hours per use), the Musco system reduces total energy consumed by 16,740 kW per year or 167,400 kW over a 10 year period.

The specialist light engineer for the proposal reviewed CO2 comparisons based on the above figures and it is estimated that a reduction of around 2 tons of CO2 emissions over a 10 year period can be achieved using the proposed Musco floodlights vs. a standard market 2000w floodlight system.

## (E) TRANSPORT IMPLICATIONS

Policy DM23 of the Site Allocations and Development Management Policies relates to Transport Development Management considerations.

### Principle

The cricket ground currently holds large cricket matches and this proposal will allow this to be extended into the evening hours. The accessibility and principle of travel to the site is already established. The transport impact of the application in question is simply the impact of the extended hours of operation allowed by the difference in hours of the site's operation.

### **Impact**

The use of the lights will allow the extension of later afternoon matches when light is poor, which will allow matches to be played until later. It is not anticipated that here will be additional traffic arising from this use. The lights will also allow matches to be played later in the evenings. Traffic will increase on these occasions, as visitors will make specific trips to the ground. Currently due to the lighting, these matches commence at 5.30mpm, meaning that those spectators choosing to drive would conflict with residents searching for on-street spaces. This will be reduced by the later commencement of matches, as a later start at 7pm will allow many residents who have been out in their cars in the day to park before spectators start to arrive. This will not completely remove the

difficulties arising from additional traffic arising from spectator parking and it is acknowledged that the lack of parking arising from this causes inconvenience and frustration. In the absence of residents' parking in the area, parking on-street is in high demand. However, the NPPF requires planning authorities to consider the transport impacts of developments in terms of their severity. Inconvenience, whilst fully acknowledged and appreciated, is not considered to warrant a refusal on grounds of 'severity'. Safety is, however, and measures to mitigate any unsafe situations arising from the proposals must be mitigated.

The amenity issues arising from the parking inconvenience and noise associated with later night traffic is considered within the relevant section of this report 'Noise /Disturbance'.

## Mitigation

The Club have previously undertaken to contribute to implement a scheme of waiting restrictions to prevent obstructive parking, and Officers are drawing up proposals to reduce this obstruction. This should assist in some of the concerns that residents have about inconsiderate and obstructive parking. Any scheme will be consulted on in due course.

For larger matches the club is required to implement a Traffic Management Plan. The Traffic Management Plan should therefore be extended to cover these later matches. This will include the provision of park and ride, parking associated with advance match tickets, stewarding and road closures. It is not unreasonable for the Club to provide these extended facilities.

It is apparent from comments received on this application that there are times that the Traffic Management Plan fails to meet the expectations of the local residents, and this should be reviewed in consultation with the residents.

In view of this, an updated Traffic Management Plan should therefore be conditioned and approved prior to first use.

## **Construction Management**

It is clear that the transportation of these large structures will be difficult through the residential streets, as is shown at present by the transportation of the temporary lighting. Consultation with Network Management Officers will be required to ensure that the means by which these are transported is safe and creates minimum impact on residential streets. An informative is recommended to this effect.

### (F) CULTURAL CONSIDERTIONS

GCCC was founded at around 1870, amalgamating and superseding three former rival clubs. Among the players who helped to establish the new county club were the Grace brothers, including W.G Grace, who was club captain until 1899. The club's inaugural first-class match was played on Durdham Down, Bristol in 1870. For a few years the club used the grounds of Clifton College, Bristol before finding a permanent site.

In 1888 the club purchased its own site. Its main neighbour, with the exception of a few scattered villas, was the Muller Orphanage. Ashley Down was still largely open farmland when the cricket club built their new ground. Bristol's suburbs were growing rapidly and by 1903 the GCCC ground and the orphanage were surrounded on all sides by dense streets of terraced housing.

There is a cultural significance in preserving the Cricket Club which has been at this Bristol City site, for a significant period of time. The application proposal would result in the public benefit of retaining first class cricket matches in Bristol at a Cricket Club which has historical and cultural significance within the City.

# (G) ECONOMIC CONSIDERATIONS

The National Planning Policy Framework sets out the Government's commitment to securing sustainable economic growth through the planning system. Significant weight should be placed on the need to support economic growth through the planning system. Policy BCS8 of the Bristol Core Strategy 'Delivering a Thriving Economy' is relevant which seeks to support the city's continuing economic growth and competitiveness.

Bristol (GCCC) has now been awarded 7 International Matches between 2017 and 2019 and the agent has stated that each International match is likely to bring around £1 million additional revenue to the City, therefore having a significant input to the Bristol economy over the next two years.

Further details of the recent announcement regarding the forthcoming International Matches:

GCCC has been awarded the following matches in Bristol in addition to circa 7xT20 domestic matches subject to the approval of the floodlights:

- 2017 England v West Indies One Day International (ODI);
- 2018 England v India ODI;
- 2019 England v Pakistan ODI;
- 2019 ICC Cricket World Cup (4 matches).

# (H) NATURE CONSERVATION CONSIDERATIONS

Policy BCS9 of the Core Strategy is relevant and requires the retention of protected species and habitats, and the compensation for any unavoidable loss of existing features. BCS9 also protects individual green assets, such as trees. Policy DM19 of the Bristol Site Allocations and Development Management Policies provides further detailed criteria for the consideration of proposals affecting nature conservation sites and features of value in Bristol

Following consultation with the City Council Ecologist, an updated bat survey was prepared for the site, in addition to further bespoke lux level lighting information. The City Council ecologist is satisfied with the findings of the updated bat survey and has no objection to the proposal, or the draft conditions recommended in this report and has no further recommendations to make regarding the ecological merits of the proposal.

# (I) AIRCRAFT/ RESIDENTIAL SAFETY CONSIDERATIONS

Comments have been received relating to concerns with the height of the proposed floodlights and whether a warning light is required at their highest point with regards to low lying planes/ helicopters landing at Southmead and Filton. Conversely, comments have also been submitted stating concern that an additional warning light will cause further visual nuisance and light pollution, which would be in use throughout the year.

Please note, the proposal as submitted, does not include safety warning lights.

Following consultation with NATS (National Air Traffic Services), it is understood that there is no safeguarding objection to the proposal, with regards to the height of the floodlights and no warning lights provided.

The agent has also provided evidence from the Civil Aviation Authority (CAA) who have confirmed that six floodlights of 45m in height would not require an aircraft warning light, which are officially required on structures of 150m and above.

The CAA and Southmead Hospital have been consulted (Southmead Hospital given the use of the Helipad at the site). The CAA have no objection to the proposal taking place and offer no further observations. A response has not been received to date from Southmead Hospital.

#### CONCLUSION

The proposed floodlights are a logical addition to the major redevelopment of the Country Ground that was granted planning permission in 2012. The new pavilion / media centre and spectator seating (facilitated by the associated residential development) have cemented the County Ground's and Bristol's presence as a first class cricket venue, giving it national and indeed an international profile – with One Day Internationals and 2019 World Cup games awarded.

Whilst the proposed floodlights will detrimentally affect residential amenity through increased light pollution, given that the use of the floodlights will be controlled by condition; including the number of days of operation and the hours of use, it is considered that 'on balance' the proposal will be acceptable. It is further noted that the floodlight proposal will give rise to significant visual harm within the immediate setting of the proposal and from longer views of the site, including harm to the setting of listed building. On balance, it is considered that the significant public benefits with regard to the cultural and economic significance of the Cricket Club and their ability to host international matches outweighs the harm caused by this proposal. The proposal is recommended for approval, subject to conditions.

# RECOMMENDED GRANT subject to condition(s)

# Time limit for commencement of development

1. Full Planning Permission

The development hereby permitted shall begin before the expiration of three years from the date of this permission.

Reason: As required by Section 91 of the Town and Country Planning Act 1990, as amended by Section 51 of the Planning and Compulsory Purchase Act 2004.

# Pre commencement condition(s)

Within 1 month of the commencement of the authorised use hereby approved a report detailing the illuminance levels at neighbouring residential properties shall be submitted to and approved in writing by the Council. If the illuminance levels at neighbouring properties are above those predicted on the Predicted Overspill Footprint Drawings for both vertical and horizontal illuminance submitted with the application then a further report detailing mitigation measures shall be submitted to and approved in writing by the Local Planning Authority and the approved works shall then be completed in full within a month of the approval.

Reason: In the interests of protecting residential amenity.

3. Apart from essential maintenance, the floodlights shall be used on no more than 15 days in any calendar year.

Reason: In the interests of protecting residential amenity.

4. The floodlights shall not be used between 23.00 hours and 10.00 hours.

Reason: In the interests of protecting residential amenity.

5. Apart from essential maintenance, the floodlights shall only be used in connection with competitive cricket matches.

Reason: In the interests of protecting residential amenity.

## 6. Floodlight Usage Management Plan

No use or development shall take place until there has been submitted to and approved in writing, by the Council, a Floodlight Usage Management Plan.

The plan shall set out details of:

- When and what games the lights will be used for.
- The times when the floodlights will be used.
- When and how the lights will be turned down to a lower setting.
- When and how the lights will be maintained and tested
- How local residents will be notified as to when the lights will be used.

Reason: In the interest of protecting residential amenity.

## 7. Traffic Management Plan

An updated Traffic Management Plan including measures to reduce the on-street impact of spectator parking shall be submitted and approved in writing prior to the use being commenced.

Reason: In the interests of highway safety and residential amenity

## Pre occupation condition(s)

#### 8. Materials

Development shall be carried out in accordance with specified material - Steel ASTM A572 GR65; unless otherwise agreed in writing by the Local Planning Authority.

Reason: To ensure that the external appearance of the floodlights are satisfactory.

## List of approved plans

(08)01 Site location plan, received 15 October 2014

(08)100 Site plan, permanent seating layout, received 15 October 2014

(08)101 Site plan, temporary seating layout, received 15 October 2014

Musco column of floodlight, received 15 October 2014

Musco column of floodlight, received 15 October 2014

Musco column of floodlight, received 15 October 2014

Design and Access Statement, received 15 October 2014

Floodlight Guidelines, received 15 October 2014

Ecology and Protected Species Assessment, received 15 October 2014

Heritage Statement, received 15 October 2014

Planning Statement, received 15 October 2014

Statement of Community Involvement, received 15 October 2014

Sunlight Shadow Path Analysis, received 15 October 2014

Musco Lighting Assessment, received 31 October 2014

Musco Detailed Lighting Assessment Sheets (Pages 1 -32), received 31 October 2014

Horizontal Spill Document (Lighting), received 4 November 2014

Spill Calculation Documents (Permanent, Horizontal, Vertical and Sky Glow), received 9 December 2014 Sustainability Details, received 9 December 2014

Reason: For the avoidance of doubt.

#### **Advices**

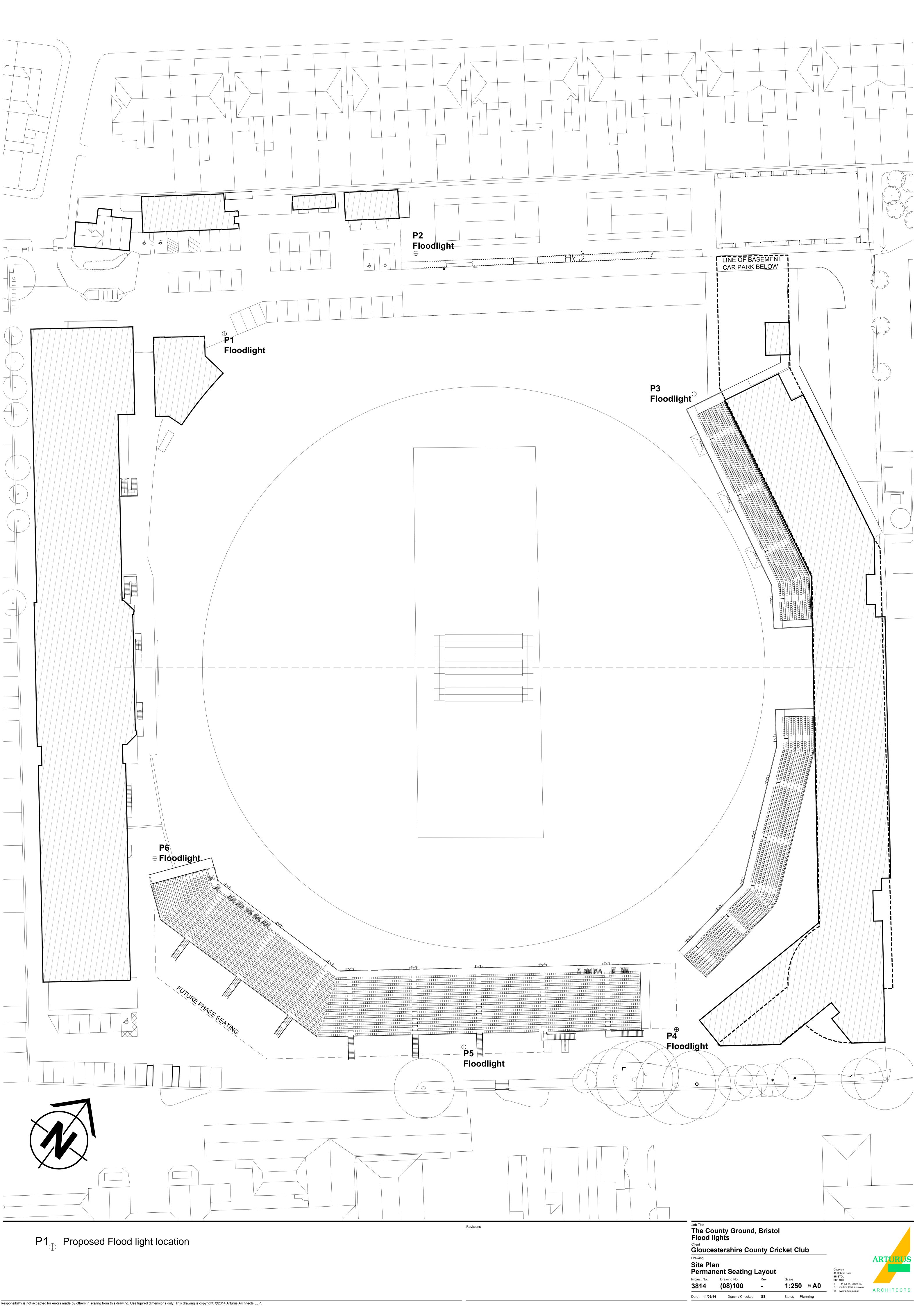
1. The development hereby approved is likely to impact on the highway network during its construction. The applicant is required to contact Highway Network Management to discuss any temporary traffic management measures required, such as footway, Public Right of Way or carriageway closures, or temporary parking restrictions. Please call 0117 9031212 or email traffic@bristol.gov.uk a minimum of eight weeks prior to any activity on site to enable Temporary Traffic Regulation Orders to be prepared and a programme of Temporary Traffic Management measures to be agreed.

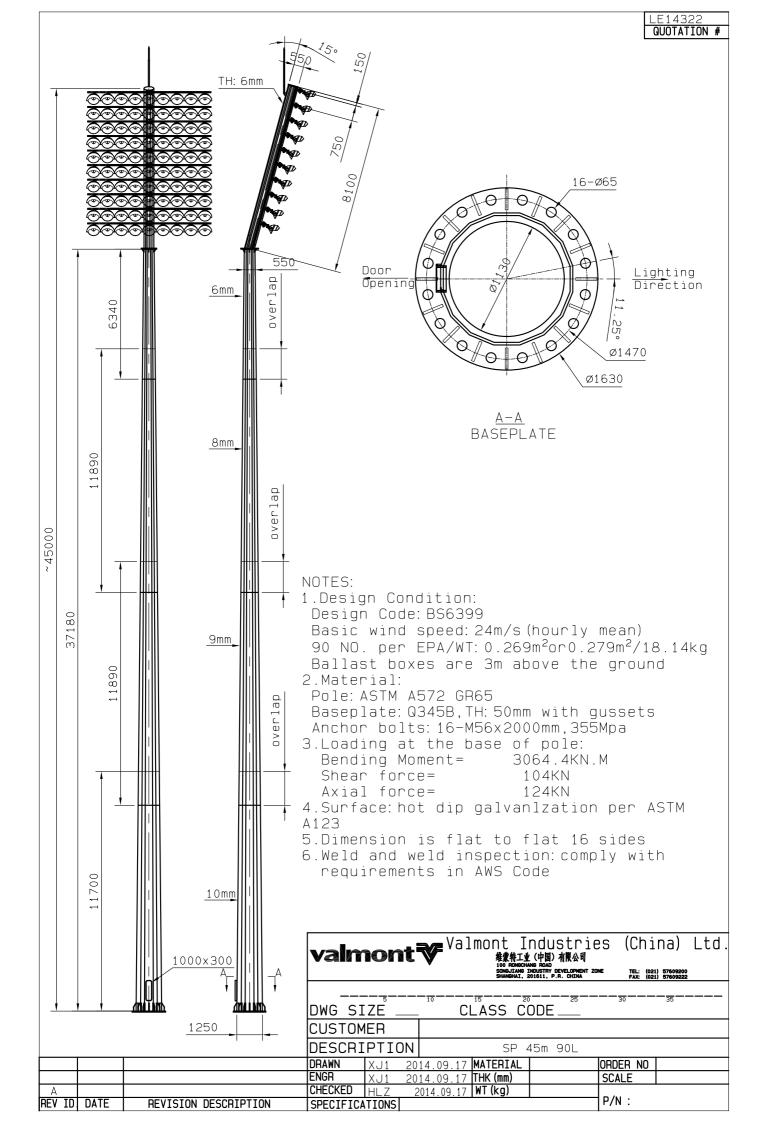
#### **BACKGROUND PAPERS**

Transport Development Management Crime Reduction Unit Conservation Section Civil Aviation Authority National Air Traffic Services Nature Conservation Officer 9 January 2015 25 November 2014 2 December 2014 14 January 2014 8 December 2014 15 December 2014











6 October 2014

Gloucestershire County Cricket Club Floodlighting Development - Planning Application Bristol City Council

#### Musco Lighting Europe Limited

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Phone: +44 (0) 1942 811 777 Fax: +44 (0) 1942 811 389 E-mail: eurosales@musco.com

www.musco.eu

# FLOODLIGHTING DESIGN STATEMENT

# **Overview**

Gloucestershire County Cricket Club has engaged Musco Lighting Europe Ltd. to provide lighting design and assessment services as part of the club's planning application for the installation of permanent floodlighting in accordance with the requirements of the English Cricket Board (ECB) and the International Cricket Council (ICC) for evening cricket matches.

## **Experience**

Musco Lighting Europe Ltd., through its parent company, Musco Sports Lighting LLC, has over 35 years of experience in the sports floodlighting industry worldwide. Musco has had a presence in the United Kingdom for over 20 years, installing floodlights on a number of iconic sports venues such as Wimbledon Centre Court, The Millennium Stadium, Twickenham Stadium, White Hart Lane, and the Britannia Stadium. Furthermore, Musco has significant experience with Cricket grounds for both temporary and permanent applications. Permanent lighting references for cricket include Northampton County Cricket Club, Lancashire County Cricket Club, Hampshire County Cricket Club, and Sussex County Cricket Club, to name a few (see **Appendix 1**).

Each project involves unique locations that require very specific designs to accommodate the facility users as well as the surrounding residents and road networks. Musco has an extensive team of project engineers who design in accordance with specific codes and guidelines of each individual project location to provide the optimum floodlighting solution.

For the purpose of this design the primary performance requirements have been outlined by the ECB (see **Appendix 2**) and ICC. Additional resources that have been consulted for the lighting design and system design are BS EN 12193:2007 - Sports Lighting, CIBSE LG4: Sports, and ILP Guidance Notes on the Reduction of Obtrusive Light.

In addition to actual project experience, Musco is consistently on the cutting edge of floodlighting technology in product design and performance. In 2005 Musco introduced the Light Structure Green System, which cut operating costs by at least 25%, significantly reduced off-site spill and glare, eliminated all maintenance for 10 years, and guaranteed the actual performance of the system for 10 years – all covered by a comprehensive 10











Year Warranty.

# <u> History - Temporary Lighting</u>

Temporary floodlighting has been used at Gloucestershire CCC to allow evening cricket matches at the Ground. The temporary lighting trucks are used for short-term or one-off events to provide good standard lighting suitable for television broadcast at sports grounds or event venues that do not have any or adequate permanent lighting. Prior to county cricket grounds installing permanent lighting systems in more recent years, Musco regularly provided temporary floodlights using the mobile trucks for televised evening cricket. It is important to understand the difference in design and construction of the temporary floodlights and the permanent system that Musco is proposing for Gloucestershire CCC. The temporary floodlight trucks each utilise 15no. 6,000watt floodlights. These floodlights are designed to produce a significant amount of light for a short period of time, with minimal function to control light spill or glare. Since they are only temporary solutions and have many different applications, the use of a visor or significant light control technique would not be beneficial.



(Example of the temporary lighting trucks in operation)

In contrast, as detailed in the next section, the permanent Musco system being proposed utilises 1500watt floodlights, each with customised reflectors and visors which reduces glare and allows significantly greater control of the light output to the target area.

# **System Design and Construction**

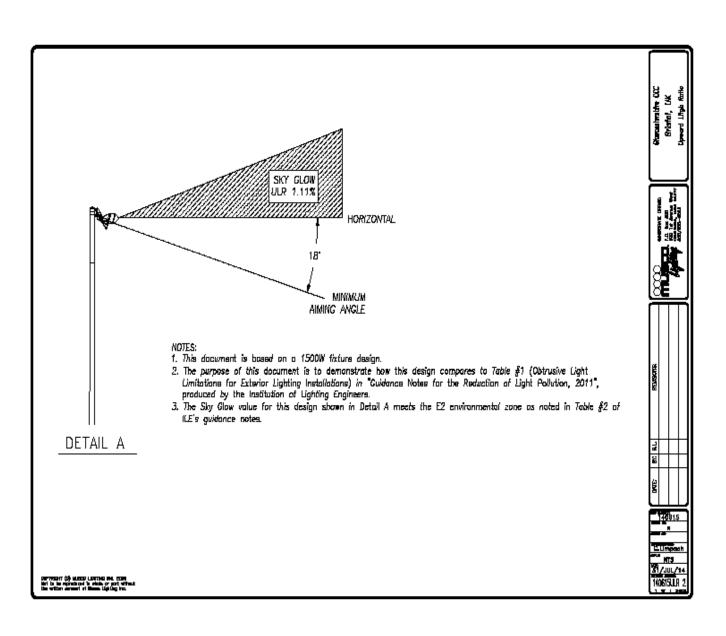
Musco's uniquely designed luminaire uses a system of reflectors and visors to control and re-direct light onto the pitch, thus significantly reducing the impact of the floodlights on nearby roadways and residences. Each luminaire is custom designed and built according to its specific purpose for the pitch lighting. To put this in perspective, most floodlighting manufacturers when designing a system will choose from three beam patterns – narrow, medium, and wide beam. Musco's engineers choose from over 2000 different beam patterns to design their systems, providing a significantly greater level of accuracy and quality in the design.



The proposed system also significantly reduces the negative impact of upward light or skyglow. Sky glow is the illumination of the night sky by an artificial light source. Musco's luminaire is designed to redirect upward light back down to the pitch, using the custom design visor and reflectors. The ILP Guidance Notes on the Reduction of Obtrusive Light sets out requirements for acceptable levels of upward light (ULR) and sky glow, to which the proposed design is compliant.

Below is a diagram specific to the Musco design for Gloucestershire CCC, that details the acceptable ULR ratio and sky glow levels. In addition, sky glow calculations have been included in the full lighting design file that has been submitted with the planning application.

The location by virtue of its proximity to the defined local centre of Gloucester Road, already has a fair amount of skyglow and the proposed floodlights are not being introduced to an intrinsically dark landscape.

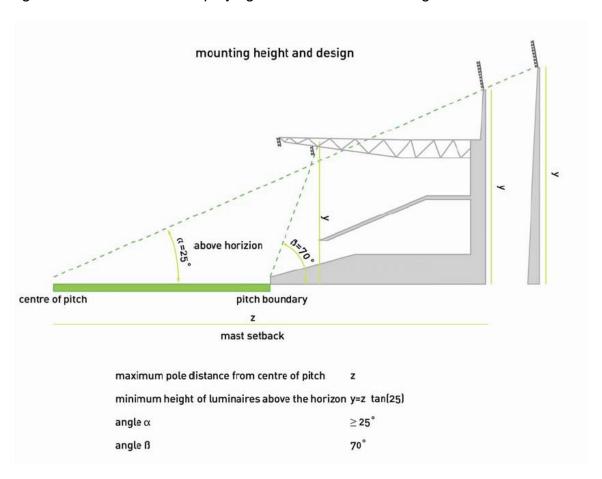


# **Design Requirements**

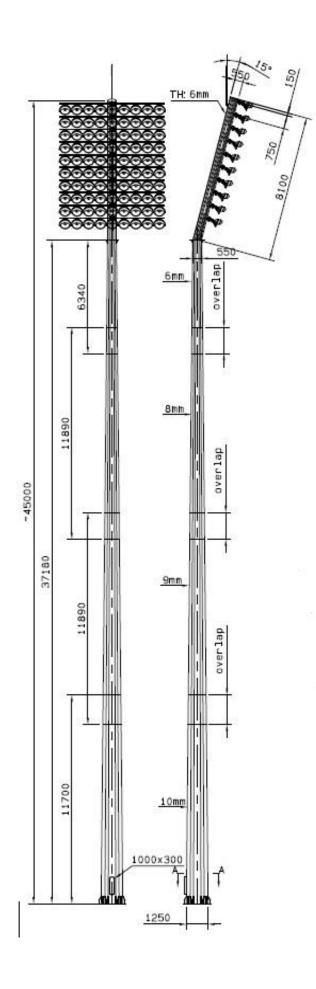
As noted above, the primary performance requirements for this project have been set by the ECB and the ICC. These requirements have been included in the planning application to accompany this report.

Beyond the basic performance light levels to allow match playability (horizontal light levels) the ECB specifies required lighting levels that allow high definition television broadcast (vertical light levels). In order to achieve both the horizontal and vertical light levels, it is extremely important that the number of columns, height of columns, and location of columns is correct. Both the ECB and the ICC recommend a 6 mast arrangement, which has been adhered to for the Gloucestershire CCC design.

Also, the ECB requires that the bottom crossarm of floodlights is at an angle of not less than 25 degrees to the centre of the playing area - shown in the diagram below:



Designing with appropriate angles as noted above, not only allows for proper playability, it also ensures the reduction of glare for the players, spectators, and surrounding area. The proposed Musco design for Gloucestershire CCC is compliant with the 25 degree requirement by using the proposed 45m columns. To further control the direction of the light output and to reduce spill and glare, the headframes of the columns will be tilted forward as shown in the diagrams below:



Sample drawing of proposed column for Gloucestershire CCC. Column shown is indicative for P3 and P4 Columns shown on Musco Lighting Design.

As noted above there are a number of horizontal and vertical lighting requirements that the ECB and ICC have set out in order to provide adequate lighting for inter-county and international cricket, and in order to allow the match to be broadcast. In basic terms, the main requirements are noted below:

- 1. Wicket Lighting Levels
  - a. Vertical to Camera 2,500 lux
  - b. Horizontal 3,000 lux
- 2. Inner Field Levels
  - a. Vertical to Camera 2,000 lux
  - b. Horizontal 2,500 lux
- 3. Outer Field and Boundary Levels
  - a. Vertical to Camera 1,500 lux
  - b. Horizontal 2,000 lux

The proposed design is compliant with the above lighting level requirements, thus allowing Gloucestershire CCC to hold both inter-county and international televised cricket matches.

The requirement for such high levels of lighting is needed for a number of reasons:

- 1. Cricket has one of the largest playing areas of any ball sport in the world.
- 2. Cricket uses a small ball which travels at very high speeds, thus the players, spectators, and cameras need high levels of light to be able to clearly and safely see the ball in play.
- 3. The ball is in play at any location within the playing area boundary, thus the need for high levels of light in all areas of the playing field.
- 4. At various points and for various reasons, super slow motion cameras are needed for correct rulings during play. These super slow motion cameras need uniform high levels of light to ensure accuracy.

# **Spill Calculations**

Considering the need for such high levels of light on the playing area, it is vitally important to minimise the amount of light spill off the playing area. It would be impossible to completely eliminate light spill, but the proposed Musco system is specifically designed to get as much light as possible from the floodlights to the pitch. The methods Musco has proposed for controlling light has already been outlined in previous sections of this report (internal reflectors, proper mounting heights, tilted headframes, and external control visors), but a blanket spill light calculation of the surrounding area has been included in the design file as part of the planning application.

Please note - the calculations are worst case scenario, with no blockage from buildings, trees/vegetation, walls etc... taken into account. In actual practice, the levels will likely be quite a bit lower than the design file, certainly in particular areas that are blocked by surrounding buildings.

# **Energy Efficiency**

Reducing the environmental impact of the floodlights goes beyond the control of light pollution. Making every effort to limit the amount of energy required to operate the floodlights was a key factor in Musco's system design. Through efficiencies that have already been addressed in this report such as advanced reflectors and visors, eliminating the need to over-design the system, and reducing the light level, Musco has significantly reduced the energy requirement when compared to previous designs. In addition, Musco's

Light Structure Green system utilises a 1500 watt lamp as opposed to the typical 2000 watt lamp that is often used by other suppliers.

Based on the advanced design of the Musco luminaire and the system in which it operates, the overall number of floodlights required to provide the desired light level on the pitch does not increase, while the energy required to operate the system is 25% less than a typical 2000 watt system. Similarly, the CO<sup>2</sup> emissions of the proposed Musco system would be 25% less than a typical 2000 watt system.

# Conclusion

In summary, Musco has extensive experience in the sports lighting industry, and in particular the lighting of cricket grounds at the highest level. The system proposed has been designed in accordance with the relevant lighting guidelines for inter-county and international cricket broadcast requirements which is absolutely necessary for Gloucestershire CCC. While achieving these requirements, specific efforts have been made to minimise the impact of the lighting on the surrounding area by using custom designed luminaires with internal reflectors and external visors, tilted headframes, and adequate column heights - all contributing to the directional control of the light to the playing area and limiting unwanted spill, glare and sky glow.

EQUIPMENT LIST FOR AREAS SHOWN								
Pole				Luminaires				
QTY	LOCATION	SIZE	GRADE ELEVATION	MOUNTING HEIGHT	LAMP TYPE	QTY / POLE	THIS GRID	OTHER GRIDS
2	P1, P6	45m	-	45m	1500W MZ	72	72	0
2	P2, P5	45m	-	45m	1500W MZ	56	56	0
2	P3-P4	45m	-	45m	1500W MZ	90	90	0
6	TOTALS				436	436	0	



MY PROJECT

Name: Gloucestershire CCC - ECB Funding
Location: Bristol,South East

**GRID SUMMARY** 

Name: 200m Spill
Size: 10m x 28m
Spacing: 10.0m x 10.0m
Height: 1.0m above grade

CONSTANT ILLUMINATION MAX VERTICAL LUX **Entire Grid** Scan Average: 61.34 Maximum: 605.9 Minimum: 0.0 Min / Avg: 0.00 Min / Max: 0.00 UG (adjacent pts): 230.63 No. of Points: 1265 MINAIRE INFORMATION Luminaire Type: Green Generation Design Usage Hours: 5,000 hours Design Lumens: 134,000 Avg Lamp Tilt Factor: 1.000 No. of Luminaires: 436 Avg KW: 681.91 (741.2 max)

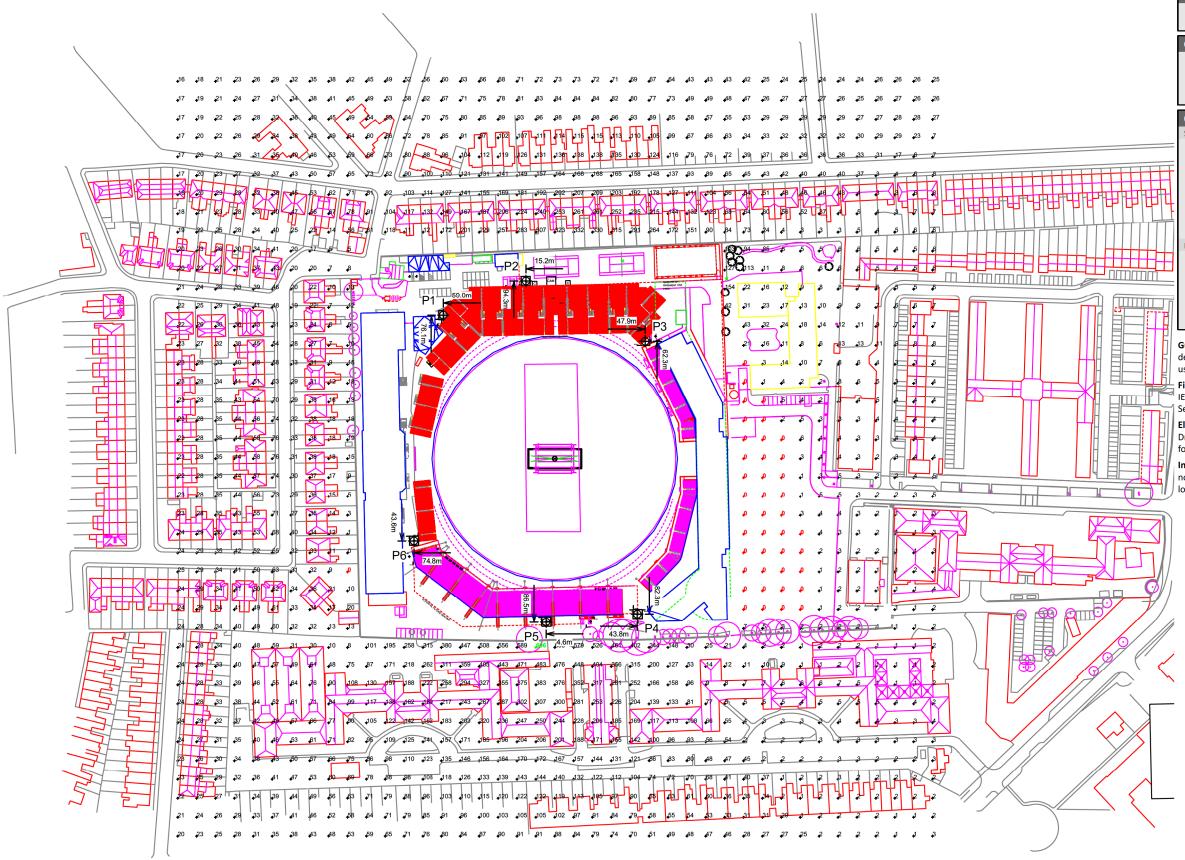
**Guaranteed Performance:** The CONSTANT ILLUMINATION described above is guaranteed for the design usage hours of the system.

Field Measurements: Illumination measured in accordance with IESNA LM-5-04 and CIBSE LG4. Individual values may vary.

See the Warranty document for details.

**Electrical System Requirements:** Refer to Amperage Draw Chart and/or the "Musco Control System Summary" for electrical sizing.

Installation Requirements: Results assume +/- 3% nominal voltage at line side of the ballast and structures located within 3 feet (1m) of design locations.



SCALE 1 : 2000

Pole location(s)  $\bigoplus$  dimensions are relative to 0,0 reference point(s)  $\bigotimes$ 

| Nathan Chizek | File # / Date: | 140615H | 26-Nov-14

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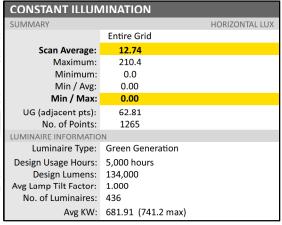
EQUIPMENT LIST FOR AREAS SHOWN									
Pole				Luminaires					
QTY	LOCATION	SIZE	GRADE ELEVATION	MOUNTING HEIGHT	LAMP TYPE	QTY / POLE	THIS GRID	OTHER GRIDS	
2	P1, P6	45m	-	45m	1500W MZ	72	72	0	
2	P2, P5	45m	-	45m	1500W MZ	56	56	0	
2	P3-P4	45m	-	45m	1500W MZ	90	90	0	
6	TOTALS				436	436	0		





GRID SUMMARY
Name: 200m Spill

Size: 10m x 28m
Spacing: 10.0m x 10.0m
Height: 1.0m above grade

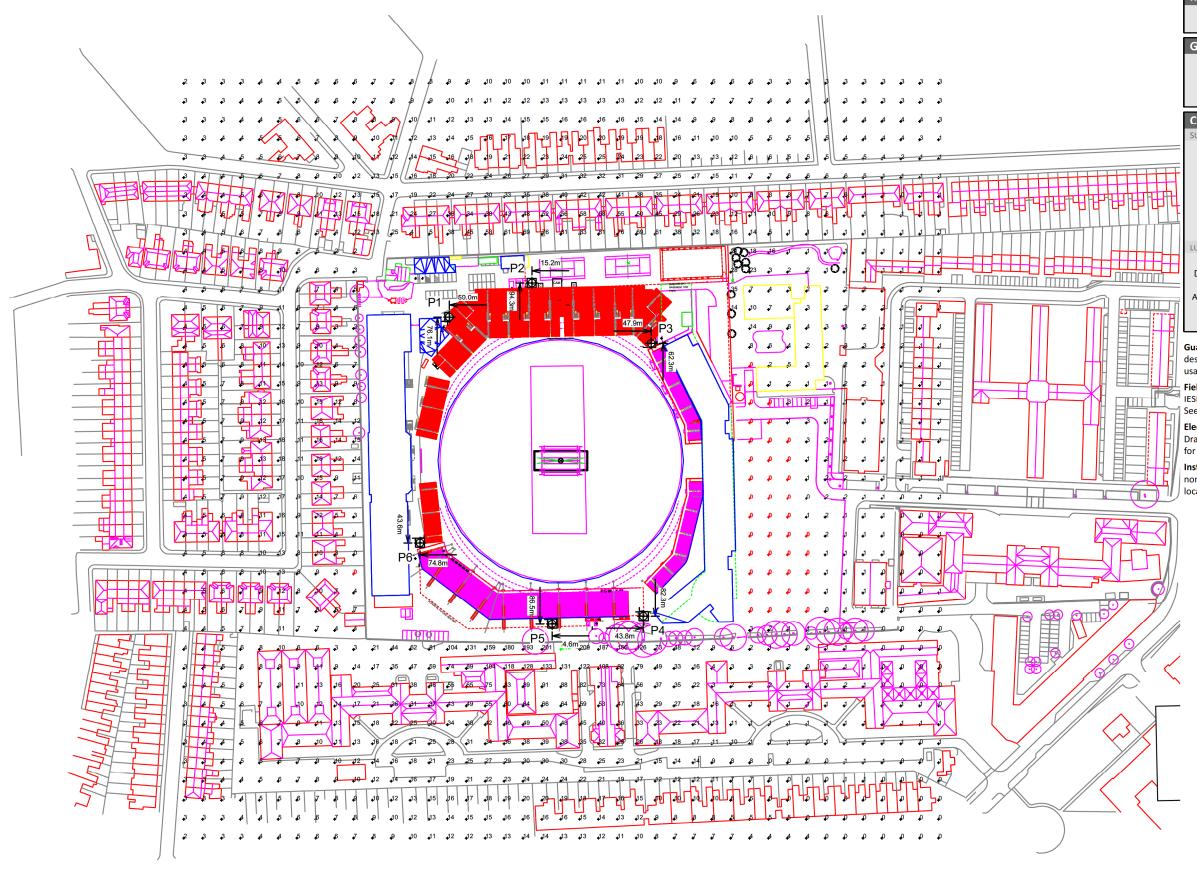


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Pole location(s)  $\bigoplus$  dimensions are relative to 0,0 reference point(s)  $\bigotimes$ 

By: Nathan Chizek
File # / Date: 140615H 26-Nov-14

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# Lux Light Level Chart

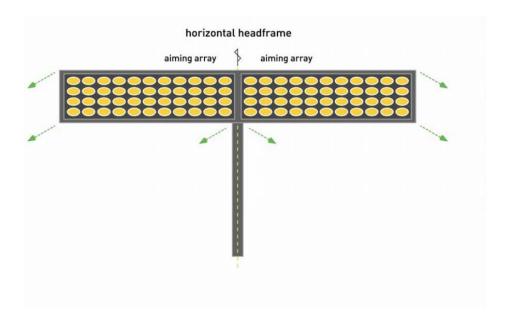
	LUX	DESCRIPTION
	50,000	British summer sunshine
	5,000	Overcast sky
<b>*</b>	500	Well-lit office
	300	Minimum for easy reading
	50	Passageway/outside working area
	15	Good main road lighting
	10	Sunset
	5	Typical side road lighting
	2	Minimum security risk lighting
	1	Twilight
	0.3	Clear full moon
	0.1	Typical moonlight/cloudy sky
	0.001	Typical starlight
	0.0001	Poor starlight



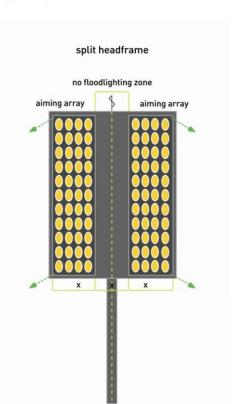
# Mast Headframe and Array Design

The design of the luminaire arrays also plays a vital role in the player performance. Large rectangular arrays fill a large visual portion of the players view and some players may experience eye fatigue or strain from continually looking through the large arrays. As a preferred alternative design it is recommended that the luminaires be placed in thinner arrays, either horizontally or vertically, with no more than 4 luminaires placed in the thinnest direction. The thin light arrays allow the players' eye to quickly scan through the array which helps to limit eye fatigue.

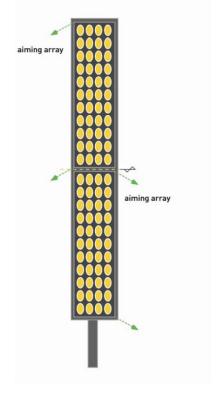
# Typical horizontal headframe with multiple aiming arrays.







Typical split headframe and vertical headframe with multiple aiming arrays.



vertical headframe

### Multi-zone Aiming and Shadow Control

The limitation of hard-line shadows on the field of play is a significant issue for high-definition digital quality media used by many broadcasters. The installation of a sports lighting system should provide an environment whereby the pitch is free from hard-line shadows. The use of multizone-aiming is recommended. Multi-zone aiming is the repetitive aiming from different luminaire array locations to similar locations on the field of play. It is this repetitive aiming from several locations which limits the hard-line shadows created by the players. When a player is symmetrically surrounded with illumination from multiple angles a balanced modelling is achieved. A shadow free environment is not achieved until hard-line shadows no longer exist on the field.

The 6 and 8 mast aiming diagrams show the field of play divided into 4 equal quadrants. For all events the aiming shall have a minimum of two overlapping lighting arrays per quadrant.



Where an area to be lit lies on the boundary of two zones the obtrusive light limitation values used should be those applicable to the most rigorous zone.

NB: Zone E0 must always be surrounded by an E1 Zone.

#### **DESIGN GUIDANCE**

The following limitations may be supplemented or replaced by a LPA's own planning guidance for exterior lighting installations. As lighting design is not as simple as it may seem, you are advised to consult and/or work with a professional lighting designer before installing any exterior lighting.

Table 2 – Obt Observers	rusive Ligh	t Limitatior	ıs for Exteri	or Lighting	Installation	s – General		
Environment al Zone	ULR (into Windows) I [candelas] <sup>(3)</sup> [Max E <sub>v</sub> [lux] <sup>(2)</sup>		l Zone ULR (into Windows)		(into Windows)		Luminaire Intensity I [candelas] <sup>(3)</sup>	
	_	Pre- curfew	Post- curfew	Pre- curfew	Post- curfew	Average, L [cd/m²]		
E0	0	0	0	0	0	0		
E1	0	2	0 (1*)	2,500	0	0		
E2	2.5	5	1	7,500	500	5		
E3	5.0	10	2	10,000	1,000	10		
E4	15	25	5	25,000	2,500	25		

- **ULR** = **Upward Light Ratio of the Installation** is the maximum permitted percentage of luminaire flux that goes directly into the sky.
- **E**<sub>v</sub> = **Vertical Illuminance in Lux** measured flat on the glazing at the centre of the window.
- I = Light Intensity in Candelas (cd)
- L = Luminance in Candelas per Square Metre (cd/m²)
- Curfew = the time after which stricter requirements (for the control of obtrusive light) will apply; often a condition of use of lighting applied by the local planning authority. If not otherwise stated 23.00hrs is suggested.
- \* = Permitted only from Public road lighting installations
- (1) Upward Light Ratio Some lighting schemes will require the deliberate and careful use of upward light, e.g. ground recessed luminaires, ground mounted floodlights, festive lighting, to which these limits cannot apply. However, care should always be taken to minimise any upward waste light by the proper application of suitably directional luminaires and light controlling attachments.