



**Development Control Committee B – 29 April 2015****Application No. 14/05030/F: Gloucestershire County Cricket Club Nevil Road Bristol BS7 9EJ****ADDENDUM REPORT****BACKGROUND**

Members will recall that this application was considered at the B Committee Meeting of 4<sup>th</sup> February 2015 when the resolution was to defer subject to a site visit and receipt of further information to consider alternative options.

Following the deferral, the applicant has submitted a report to review alternative design options and include details of a floodlight usage management plan. This new 'options report' is attached at Appendix 1, and the previous Committee report is attached at Appendix 2.

**OPTIONS REPORT**

The report sets out further details of the benefits of the proposed floodlights to Bristol and the Club's business case and reviews alternative design options. These include the number of proposed floodlights to be installed, types of floodlight design, cost and efficiency of various floodlighting schemes and their performance in order to meet the required England and Wales Cricket Board (ECB) and International Cricket Council (ICC) lighting standards.

**BENEFITS**

The key benefits of having the floodlights are listed as follows:

The economic impact – the City receives at least £1 million from each major international match hosted

Bristol would be able to host four Cricket World Cup matches in 2019, enhancing the City's profile and reflecting the multi-cultural nature of Bristol.

Having permanent floodlights also greatly improves the likelihood of the Club being granted international cricket more frequently.

The Club works with local charities and community groups including local schools, as well as supporting local clubs and institutions, all funded directly from the Club. To maintain the current level of funding the floodlights are required for the increased revenue they bring. Without the additional revenue it is uncertain whether the current level of community work can be sustained.

In addition to the economic, city profile and community benefits, the floodlights would allow for later start times, allowing more time for people to access the Ground especially after working hours. This supports one of the three dimensions to sustainable development identified in the National Planning Policy Framework, to perform a social role: *"Supporting strong, vibrant and healthy communities ... that support its health, social and cultural well-being"*.

**BUSINESS CASE**

The cost of the proposed solution is circa £1.1 million. The ECB has agreed to provide a fixed grant of £700,000 towards the cost, and the Club can secure the additional £400,000 if planning consent is secured on the strength of the potential revenue they would receive from the international matches and increased attendance for domestic T20 matches. The Club has no realistic additional funds available.

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The Club is primarily dependent on international cricket to trade a surplus. At least half of the planned international fixtures would be lost in the period 2015-2019 if the Club failed to secure permanent floodlighting.

The Club has one of the lowest cost bases in County Cricket and is good at controlling costs but with no cash reserves and circa £4m of debt to manage its sustainability and survival would be in doubt without regular international cricket and enhanced crowds for domestic matches. There is a possibility of a relocation should international cricket be lost or significantly reduced.

If floodlights are not installed Bristol would lose the 4 Cricket World Cup matches that have been awarded to the Club following a city-wide bid process which had support from the Mayor's office, the Bristol Sports commission, the City Director's office and a wide section of prominent educational, sporting and business establishments across the City. Bristol would also be unable to host any other ICC World tournament events to be staged in England and Wales, such as the Women's Cricket World Cup in 2017. This will lose important revenue and profile for the City and put the Club in financial jeopardy.

**PROPOSED SOLUTION**

The report details that the proposed solution follows a detailed review of all available options and consultation with technical specialists, Council officers and the local community both prior and post the deferral. Three separate light engineers have independently arrived at the same 6 pole solution as the optimum choice with the masts in the same positions and the same heights as that proposed. The ECB has advised that a 6 pole option is the optimum solution for the Ground and the ICC guidelines require a minimum of 6 poles in order to host ICC sanctioned competitive cricket matches, which includes the World Cup.

**THE FINAL PROPOSAL INCLUDES**

- 6 no 45m high floodlights
- A rounded head frame in place of the previous rectangular head frame following requests from local residents. (Amended plans showing this alteration are appended to this report.)

In addition there would be earlier programmed starts to T20 matches ensuring that all T20 competitive matches should be completed by 22:00 (21:15 is the scheduled finish time).

**ALTERNATIVE OPTIONS REVIEW****Option 1: Retractable Floodlights:**

These could be reduced to a minimum of no lower than 18 metres due to the size of the heads (8m width). This would reduce the visual impact on longer views but would increase the visual impact from shorter views, obviously including adjoining residents.

The diameter of the poles would increase from 1.2m to 2.0m and the foundations would have to be larger.

In terms of cost, halving the height essentially doubles the cost. The ECB would provide no additional funding so the Club would need to find an additional £1.3 million which it cannot afford. For reasons of cost and impact on nearby residents this option has been discounted.

**Option 2: Removable Head Frames:**

The process of removal and re-installation would be expensive and complicated. Each removal and re-installation would cost approximately £40,000, not including the cost of storage off-site. Due to

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additional wearing caused by the removal process, the Club would lose the manufacturer's warranty which also has cost implications. The life expectancy of the lights would also be reduced, requiring more frequent replacement, again at additional cost. The Club is forecasting an increase of c £40 a year in gate receipts relating to domestic T20 matches and this would be effectively negated. Given the costs and difficult practicalities involved this option has been discounted.

**Option 3: Four Floodlights in place of Six:**

This option would be an improvement for residents of Kennington Avenue in terms of visual amenity, however, it could increase light spill to the dwellings due to the increase in height and headframe required for the remaining lights. To meet the standards of the ECB the masts would have to increase in height by approximately 10m and the headframes would also be increased in size. This would have an increased impact on longer distance views to the Ground. The ICC does not accept the use of a 4 mast solution for their fixtures due to the compromised light efficiency and consequent failure to meet the required standards. This option has been discounted because it does not meet ICC guidelines and would have an increased visual impact on the City skyline.

In addition the ECB has stated that their recommendation would be to progress with a 6 mast solution on the basis that they could be physically accommodated within the constraints of the site, the playing area lighting quality would be far superior to that of a 4 mast solution, glare control and uniformity should be better, masts can be shorter and light spill reduced and better controlled. The ECB add that the 6 mast solution is the optimum one for the venue and is the only one the ECB would support at this time.

**Option 4: Four Retractable Floodlights:**

This would in part resolve the impact on the longer views when they are lowered, However, a 4 mast solution would not be supported by the ECB and is not acceptable for any ICC fixtures. In terms of cost, this would be similar to a 6 pole retractable scheme (see Option 1) due to the additional height and would not be commercially viable.

**Option 5: Retractable Floodlights and Removable Heads:**

For the reasons explained above this is not a feasible option.

**Option 6: Use of Eight Floodlights instead of Six:**

This would achieve the required light levels but would increase the visual impact due to additional clutter. Due to the size and constraints of the Ground the 8 poles could not be arranged in a sensible configuration.

**Option 7: Repositioning the Floodlights:**

Following advice, the proposed locations are the optimum solution in terms of minimising light spill and maximising efficiency, with the exception of mast P2 which has been relocated slightly further away from a nearby resident on Kennington Avenue. In terms of practicalities, cost and achieving the necessary lighting requirements, there is very limited scope to move the lights to reduce their impact.

**Option 8: Use of Temporary Floodlights:**

Although these have been used in previous years, the ECB have updated their requirements and now will not permit the use of temporary floodlights. The funding of the lights and granting of the games will only be provided on the basis that the floodlights are permanent.



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Option 9: Base Hinged Masts:

Base hinged masts are designed to fold over for short periods for maintenance or to avoid hurricane damage. For the majority of the year the masts must remain vertical. However, due to the constraints of the Ground the masts would not be able to fold in a satisfactory manner and would have to lie over the pitch, potentially damaging it and the lights, and preventing any use of the pitch during this time. For these reasons the option has been discounted.

Option 10: Lowering Head Frames:

The Club has reviewed the possibility of using lowering head frames via a winch type system. However, the number of bulbs required to meet ECB and ICC light level standards would result in head frames of such weight and size that lowering and raising them would be impossible. This design is only used for smaller and lighter head frames than those required for cricket.

## CONCLUSION

The report concludes that the evidence provided in terms of light spill, light efficiency, achieving the required lighting standards, short and long visual impacts and practical possibilities establish that the 6 pole option is the optimum solution. This is supported by the ECB and its independent lighting engineers.

In addition, Neil Johnson, an independent lighting consultant, was commissioned by the Club following recommendation from local residents. His review of the proposals confirmed that the design solution followed a rigorous investigation, proposed heights to provide optimum performance whilst minimising light spill, and used principles acknowledged as best practice by the lighting industry.

## FLOODLIGHT USAGE MANAGEMENT PLAN

This is a management plan detailing use of the floodlights in respect of times, frequency and maintenance as well as procedures to ensure ongoing communication with local residents.

The report states that the Plan is based on conditions recommended on the previous Committee report and following feedback from consultation with local residents.

## TIMES AND FREQUENCY OF USEAGE

The floodlights would only be used for competitive cricket matches on 15 occasions per year unless otherwise agreed with the Local Planning Authority (LPA).

The lights would not be used earlier than 10am and would be switched off as soon as practicable after a match, and no later than 11pm unless otherwise agreed in writing with the LPA.

At the end of play, the level of light will be reduced so that only 10% of the bulbs on each mast are used.

With the exception of televised matches, the lights shall be fully switched off within 30 minutes of the end of play and no later than 11:00pm.

Those matches that are televised would be subject to the same terms other than the 'reduced' lighting will be allowed at 50% through to 11pm from the end of play to allow for de-rigging of television equipment.

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The floodlights would be used for domestic and international Twenty20 (T20), 50 over matches (including World Cup matches) and as a 'top-up' for completing 4 day/test matches prior to 7pm if required.

The floodlights would be used at ECB light level requirements for all domestic matches and ECB sanctioned international matches. The floodlights will only be used at full capacity to ICC light level requirements for ICC sanctioned international matches, such as the World Cup.

Evening T20 Domestic Matches: The start time would be 6pm with a scheduled finish of 9:15pm. Play can be extended to 10pm in the event of rain.

Day/Night 50 Over Matches: The start time would be 2pm with a scheduled finish of 9:45pm. All matches would be concluded by 10pm.

4 Day Matches: The floodlights would only be used in a 'top-up' capacity for bad light when matches are close to a 'result' (i.e. not a draw) in their final day of play. The decision whether to use them would be taken by the umpires on the day and the lights switched off by 7pm.

These are the main points concerning the use of the lights. The report also includes details concerning maintenance, initial testing and checking.

#### CONSULTATION WITH LOCAL RESIDENTS

A small group of local residents who have expressed concerns have been directly consulted in the production of this Plan.

Notification: The Club will provide written information delivered to local residents prior to the end of March in any year indicating which matches will be played under floodlights and their start times. Details on whether the matches will be televised and whether the lighting will be to ECB or ICC requirements would also be provided.

This information would also be displayed on notice boards at either entrance to the Ground and placed on the Club's website.

For the knockout stages of tournaments the same provisions will be made to advise local residents not less than 48 hours in advance of a match.

A complaint procedure is also in place should any issues arise concerning use of the floodlights.

#### RESPONSE TO PUBLICITY AND CONSULTATION

Re-consultation letters were sent to local residents and businesses that surround the site on 24<sup>th</sup> March 2015 with an expiry date for receipt of comment of the 14<sup>th</sup> April 2015.

At the time of writing the report, 52 comments had been received; 20 objections and 32 in support.

#### PUBLIC CONSULTATION COMMENTS

Comments on the Alternative Options:

- The only option that will go some way to reducing their unsightly presence in this conservation area is to have them lowered each season. Bristol might break new ground in commissioning a new version of hinged lighting columns that would have paved the way for a new approach

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to such developments in sensitive and densely populated urban areas. [The use of base-hinged masts has been discounted as a viable solution in the Options Report.]

- Temporary options should be supported, as this will allow local people to have a good living environment, whilst allowing the cricket club to do what they need to show one international per year. [The use of temporary floodlights has been discounted as a viable solution in the Option Report.]
- GCCC appear to be relying heavily on the cost of alternatives as a reason for discounting them. Simply because a better alternative will cost more is not an appropriate reason for GCCC to reject it, particularly when these structures will become a permanent and prominent feature of the Bristol skyline. [See Key Issue 1.]
- GCCC should be granted planning permission for 4 not 6 floodlights. This appears to have been rejected on the basis that it is not recommended by the ECB/ICC. However, the key and historic international cricket grounds in the country are equipped with 4 lights (Lords, Old Trafford, Headingley and the Oval). [The appropriate solution for each ground is dependent on the characteristics of the individual site. A four mast solution would not meet ICC standards and would not be supported by the ECB at the Bristol Ground.]
- The club has dismissed removable lights on the permanent poles because of cost but the cost could be met through income generated from international matches.
- While I am encouraged that the Cricket Club sought advice from the alternative lighting supplier (Abacus) and an independent lighting engineer (Neil Johnson) I am concerned that their remit may have been to validate the previous proposals rather than to genuinely explore other options instead of permanent fixed masts.
- I remain unconvinced that the mast heads removed out of season, or base-hinging masts are non-viable options. If the application were refused or deferred again these would have to be fully explored.
- An alternative solution suggested by the residents group Howzat GCCC is based on a mast which hinges near its base to lie flat out of season. It is argued that there is no engineering reason why the masts could not be left in the horizontal position, provided they were supported at intervals along their length. The lighting arrays could then be covered to protect them during the winter. Whilst it may be that some masts would be easier to accommodate than others, with some minimal relocation, all could theoretically be lowered to lie in directions that still permit circulation and don't cover the playing surface. The Howzat GCCC group have also amended the Options Table from Appendix 8 of the Options Report.

[The applicants have submitted a detailed response to the suggested solution put forward by Howzat GCCC which also covers the inserted comments from Howzat CCC into the Options Table. The full submission from Howzat GCCC and the response from the applicant are shown at Appendix 3 of this report.]

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## COMMENTS MADE ON THE FLOODLIGHT USEAGE MANAGEMENT PLAN (FLUMP)

The FLUMP conditions should be amended to read as follows:

Any televised game should be concluded at 22:30 and concluded at 22:00 for non-televised fixtures.

- (a) With the exception of those areas designated for hospitality use, all public bars and catering outlets should close at the completion of play or 22:00, whichever is the later, (other than for the purpose of cleaning / maintenance) and that spectators (other than those in hospitality areas) will simultaneously be asked to leave the ground.
- (b) A Travel Plan should be presented at committee and should deter spectators from driving to the ground without a pre-agreed car parking permit or pass. In addition, all match day spectators (bar those with car parking adjacent to the Grace Gates) will be supplied with the postcode (for satnav or other use) for the entrance adjacent to College Mews at the Ashley Down Road entrance. [Traffic Management is not part of the FLUMP. However, a planning condition requiring an updated Traffic Management Plan is recommended.]
  - All lights should be permanently switched off by 22:30 to reduce the impact on the local community. - The lighting levels purported to be monitored again remains unclear and must be clarified for effective monitoring to take place.
  - Although there has been some progress towards clarity over the usage and operation of the floodlights in the production of the Floodlight Usage Management Plan (FLUMP), with some minor concessions over hours of operation, the investigation of options for mitigating the permanent daytime impact of the lighting masts and floodlight arrays has fallen well short of expectations. [The FLUMP is discussed in Key Issue 2]
  - I would like to see the club submit a plan which is not just the best option economically but more importantly an option which takes into account the concerns raised by the local community. The argument that the club has no money is weak and irrelevant to the planning submission. If this argument is valid then anyone could build anything. I would request these plans are rejected and that the club reviews alternative retractable lights similar to those used at Lords. [See Key Issue 1.]

## OBJECTIONS TO LIGHTSPILL / HARMFUL IMPACT TO RESIDENTIAL AMENITY

- Light pollution. The game should be played in daylight hours only.
- There are no further changes suggested to reduce light spillage to neighbouring properties so it is assumed it remains significantly above ECB recommendations, rendering local houses uninhabitable during floodlit matches. [Light levels would vary depending on whether the matches had to meet ECB or ICC standards.]
- The location of floodlight P2 cannot be moved further away from residential properties due to the impact on seating and yet no analysis of the loss of seating has been conducted. [The impact on amenity from the positioning of floodlights was assessed within Key Issue B of the previous Committee report – see Appendix 2.]

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- Compliance with the Floodlight Usage Management Plan (FLUMP) should be a condition of any planning consent to protect local residents. [It is recommended that the provisions of the FLUMP are included in the planning conditions.]
- Regardless of the change to the lighting heads there is still going to be shadow cast from the structures. [The impact of shadow cast by the floodlights was assessed in Key Issue B of the previous Committee report.]
- Concern about the possible reflection from the structures when the sun hits them at certain angles. There is already a problem from the sun reflecting off the flats at certain times of the year.
- The matter of light spillage has not been adequately addressed in the report. The impact of light spillage should be explored further. [The issue of light spillage was considered in Key Issue B of the previous Committee report for the proposed floodlighting design. The Options Report mentions that the four mast option would result in greater light spillage.]
- GCCC have failed to grasp that they are situated in an inner city urban area, completely surrounded by densely populated residential streets and a conservation area.
- The light spill to neighbouring properties is still not acceptable. While ICC lighting levels at the pitch are 20-30% higher than ECB standards, at some properties the light spill projected is 16 times the ECB recommendations. The estimates 320 lux level on neighbouring roads is equivalent to internal office light levels. This is unacceptably high and the club has not done enough to address this.

**OBJECTIONS TO THE VISUAL IMPACT OF THE PROPOSAL**

- Permanent floodlights will tower over the surrounding area and be an eyesore which will spoil the skyline. [The impact on visual amenity was considered in Key Issue C of the previous Committee report.]
- Floodlights will be unsightly and blight the residential neighbourhood.
- Erecting 6 enormous permanent metal structures in this area will be highly detrimental to the environment and is inappropriate in this urban setting.
- The skyline has already been negatively impacted by the addition of flats. The overall size and permanent nature of this development will worsen the impact.
- Floodlights will change the character of the area.
- The club maintains that retractable lights would have a greater visual impact from ground level, but the drawings provided do not offer an adequate visualisation of this, and do indicate where shade will fall on neighbouring properties from lighting of different heights; this prevents a fair comparison from being made.
- The Council's own Landscape Department says the proposed development will 'cause substantial harm to the Ashley Down Conservation Area and should be refused'.
- The computer generated images, as included with the new information, do not give an accurate impression of how the floodlights will impinge on the skyline. Although they are steel they will look dark silhouetted against the light sky.

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- The floodlights will lead to more activities in the area at night which means more people, more noise and more congestion. [Noise/Disturbance was considered in Key Issue B of the previous Committee report.]

**Traffic/Transport Issues**

- There should be more detail of robust traffic and crowd management measures to ensure the impact of crowd disturbance is minimised. [Transport implications were considered at Key Issue E of the previous Committee report.]
- GCC have continually stated that they have paid the Council for traffic control, but there is little evidence of this, as the operatives who are on control have no idea who is actually a resident/neighbour and consequently let anyone through who says they live in that particular road.
- There is no clear plan in place for reducing the impact of traffic/transport.

**Other Comments/Issues Raised**

- Most supporting comments posted are from individuals who live well outside the ward (and neighbourhood) or whom would not have to live or experience the ramifications of fixed 45m floodlights.
- The lights will consume large amounts of electricity at a time when we are seeking to reduce carbon emissions.
- It is acknowledged that GCCC has sought some alternatives to their floodlight plans, however, all new ideas seem to come with caveats that indicate an inevitable return to their original plans.
- It is important that there is a balanced relationship between GCCC and its immediate neighbours. If GCCC state economic challenges with other options then perhaps the wider issue is viability of its own business model and the restrictions to operate within inner city neighbourhood.
- Virtually nothing has changed from the previous application.
- The main reason put forward by GCCC for these floodlights is financial, which should not be relevant to planning decisions.
- At a time when Bristol has been awarded European Green Capital is this really the legacy the club wants to leave behind for 2015? Is this option really the best for the environment, landscape and local community? I believe that Bristol should be striving to set standards for other countries to follow not simply choosing the cheapest option to permanently scar our landscape.
- Much emphasis is placed on the economic benefits to the City of the club hosting floodlit international or T20 matches. Whilst there may well be an economic benefit, the extent of that benefit is not proven.



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## SUPPORT COMMENTS

## Benefits to Bristol/Wider Area

- Bristol has had a lack of top class sport for decades. If International cricket was prevented it would lead to a considerable loss of income to the city and a lost opportunity to highlight Bristol to the rest of the world.
- The additional events and fixtures made possible by their arrival of the floodlights can only add to the prestige, vibrancy and commercial success of the Club, the local area and the whole city.
- Bristol is the only place that anyone can hope to watch major international sport in the South West of England.
- Too often the Bristol area has been held back either through funding or planning objections, we are a big city and deserve the top sport and recreational facilities and functions that go with it, we've had a taste of International cricket and it's fantastic, let's make sure we keep it and move forward.

## Support from/for the Local Area

- As a resident in the flats at the County Ground I support the application. The use of the floodlights is only for a few occasions during the year and is important to maintain the vitality and offering of the County ground. It is important for the area and for the City that cricket is played there and the operation is commercially viable. The proposal will help with this and the impact locally will be minimal.
- I chose to live here knowing that a major ground was nearby, and wish to embrace a development that I feel will be beneficial to the area as a whole.
- We all choose to live near a sporting venue and must accept that as a result sometimes our private lives will be inconvenienced. That is not a valid reason to object to this proposal given the number of games that will be played at night is so low.
- Visitors are more likely to visit the wide range of shops, restaurants and pubs along Gloucester Road, thereby improving the local economy.
- The cricket club have made significant efforts in recent years with local businesses and schools. It would be a great shame if we were to lose the opportunity of hosting international sporting events in our own community.
- As someone growing-up in Horfield, I know that the opportunity to watch the best players perform in my own local area was a great inspiration and helped to encourage my participation in the game.
- Permanent lights would avoid the inconvenience to local traffic of having to bring temporary lights when a day/night fixture is scheduled.
- The floodlights would allow domestic cricket to start a little bit later in the evening, which would help ease traffic along the A38.
- Traffic congestion is as a result of residents owning too many cars. The flood lights will help the cricket club to spread this traffic congestion by starting games outside the 'rush hour'.

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- The possible disadvantages of the floodlights are minor compared with the advantages of having a major sporting facility in this part of Bristol.
- It is disappointing that a decision is still yet to be made. This is all too typical of a council that does not appear to understand the socio-economic benefits that professional sport can bring to a city.
- The latest additional information comparing the options for the floodlights make the case for approval very strong.
- People who buy houses next to railway lines, sports stadia, roads and the like should not be surprised when there are planning applications to invest in them and bring them up to current day standards.
- If the club does not get floodlights (and thus loses international cricket) the club will certainly sell the ground and move – if that happens the land will be developed for retail or residential use which will have a far greater impact on the local area than half a dozen games of night cricket.
- The new designs of the head frames are an improvement on the previous design, the traffic management plan will assist with the parking difficulties and planning should be approved. It would be wrong if this proposal is rejected on the basis of the very small number of residents.

**POLLUTION CONTROL**

Following the receipt of further information, the original comments remain valid however the suggested conditions should be amended as follows:

1. Prior to the first use of the floodlights for competitive cricket the lux levels, for both vertical and horizontal illuminance, shall be checked against those on the Predicted Overspill Footprint Drawings (140615H 26 November 2014 Vertical & Horizontal lux). Lux levels shall be checked at the boundary of the Gloucestershire County Cricket Club Ground and at any other reasonable location within 50 metres boundary of the Gloucestershire County Cricket Club Ground as requested by an authorised officer of Bristol City Council Pollution Control Team. For the avoidance of doubt, the floodlights shall only be checked between 10.00 hours and 23.00 hours.

If the lux levels are 5% above those on the Predicted Overspill Footprint Drawings then appropriate mitigation measures shall be carried out in agreement with an authorised officer of Bristol City Council Pollution Control Team.

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

(i) The Floodlights shall only be used in accordance with the Floodlight Usage Management Plan submitted with the application. Any proposed amendments or revisions to The Floodlight Usage Management Plan shall be submitted to and approved in writing by the Local Planning Authority.

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[The original comments contained in the previous Committee report are 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 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 is 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 is above the recommended levels from both the ILE and the ECB guidance documents.

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

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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 of 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.”]

CITY DESIGN GROUP

The case for approving the floodlighting proposals is made within the supporting document entitled NPPF Heritage Statement, section 7 Impact Assessment notes that the key test of whether the proposed floodlights would have an adverse impact on the Conservation Area and the Listed buildings is thus to what extent they will affect the landmark qualities of the Listed buildings in the wider landscape, and to what extent any change to these qualities will harm or enhance the heritage significance of the Listed buildings and the conservation area.

**Development Control Committee B – 29 April 2015****Application No. 14/05030/F: Gloucestershire County Cricket Club Nevil Road Bristol BS7 9EJ**

The argument given is that although from important viewpoints the floodlight masts appear above the listed buildings within the Ashley Down Conservation Area, substantial harm does not arise because the buildings remain in their prominent location; the floodlights serve to direct attention of viewers to them. The issue of less substantial harm caused is then measured against any benefits arising from the proposal. This cannot, however, be the case. If the prominence of the listed buildings is the one of the most important factors in the creation of the Ashley Down Conservation Area, the greater prominence given to the floodlights that rise above the buildings must reduce the significance of the latter by substituting their landmark role. The term prominence refers to a quality that cannot be relative in this context. There might be some merit in the argument that new structures could draw attention to existing buildings if they complimented them, but the floodlights are entirely alien in the context of the conservation area in both their design and material components. Additional information relating to the design of the mast heads which have been reduced in size result in a lessening of impact on local views, but the overriding conclusion from this assessment is that the harm caused to the conservation area by the development proposal is substantial.

In the apparent absence of any scope to reduce the height, location or numbers of the floodlight structures to lessen the effects of visual intrusion the application should be refused on the grounds of harm to the setting of the listed buildings within the conservation area.

[This issue was considered in Key Issue C of the previous Committee report.]

**KEY ISSUES****(A) HAS THE OPTIONS REPORT SUBMITTED FOLLOWING DEFERRAL ADEQUATELY JUSTIFIED THE PROPOSAL AS THE OPTIMUM SOLUTION?**

The report submitted has provided detail on the floodlighting options that could be considered and why they have been discounted. In the process, the proposed design has been amended so that the headframes are more rounded in shape and would appear less bulky as a result.

From the comments received, the option most favoured by local residents is a hinged-base mast system, with the masts lying flat during the close season. This option has been investigated and the advice received from light specialists Musco Lighting, an independent lighting consultant Neil Johnson, and Abacus Lighting (the hinged base masts designers) is that this is an unrealistic and impractical option for the Ground.

The proposed option of 6 static masts is supported by the 3 lighting specialists referred to above, together with the ECB.

It is considered that the Club have adequately justified that the proposal is the optimum floodlighting solution for the Ground.

**(B) ARE THE PROVISIONS OF THE FLOODLIGHT USAGE MANAGEMENT PLAN ACCEPTABLE?**

The draft FLUMP was discussed with local residents and amended to take account of their views. The contents have been assessed by Pollution Control and are considered acceptable. The provisions of the FLUMP are considered to set out an appropriate balance between the requirements of the Club and the amenity concerns of local residents.

**Development Control Committee B – 29 April 2015****Application No. 14/05030/F: Gloucestershire County Cricket Club Nevil Road Bristol BS7 9EJ****CONCLUSION**

The evidence put forward has demonstrated that the floodlighting proposal being considered is the optimum solution for the Ground. The design has been improved which will be of benefit to short distance views.

It is acknowledged that the floodlights will have a harmful impact on residential amenity through light pollution, although the adoption of the FLUMP will serve to minimise this as much as is realistically possible. The floodlights would also visually harm both the immediate setting of the area and longer distance views of the site, including harm to the setting of the listed building.

However, this harm has to be weighed against the significant public benefits that would arise in terms of the cultural and economic significance of the Cricket Club through its ability to host international matches that would otherwise be played elsewhere. It is considered that this significance outweighs the harm caused by the proposal which is, accordingly, recommended for approval.

**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)**

## 2. Prior to the first use of the floodlights for competitive cricket the lux levels, for both vertical and horizontal illuminance, shall be checked against those on the Predicted Overspill Footprint Drawings (140615H 26 November 2014 Vertical and Horizontal lux). Lux levels shall be checked at the boundary of the Gloucestershire County Cricket Club Ground and at any other reasonable location within 50 metres of the boundary of the Gloucestershire County Cricket Club as requested by an authorised officer of Bristol City Council Pollution Control Team. For the avoidance of doubt, the floodlights shall only be checked between 10:00hours and 23:00 hours.

If the lux levels are 5% above those on the Predicted Overspill Footprint Drawings then appropriate mitigation measures shall be carried out in agreement with an authorised officer of Bristol City Pollution Control Team.

Reason: In the interests of protecting residential amenity.

## 3. The floodlights shall be used on no more than 15 days in any calendar year.

Reason: In the interests of protecting residential amenity.

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

Reason: In the interests of protecting residential amenity.



**Development Control Committee B – 29 April 2015**

**Application No. 14/05030/F: Gloucestershire County Cricket Club Nevil Road Bristol BS7 9EJ**

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:

The floodlights shall only be used in accordance with the Floodlight Usage Management Plan submitted with the application. Any proposed amendments or revisions to the Floodlight Usage Management Plan shall be submitted to and approved in writing by the Local Planning Authority.

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**

9. List of approved plans and drawings

The development shall conform in all aspects with the plans and details shown in the application as listed below, unless variations are agreed by the Local Planning Authority in order to discharge other conditions attached to this decision.

140615PS Pole Configuration P2 & P5 (sheet 3 of 3), received 23 March 2015

140615PS Pole Configuration P1 & P6 (sheet 2 of 3), received 23 March 2015

140615PS Pole Configuration P3 & P4 (sheet 1 of 3), received 23 March 2015

(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

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

**Development Control Committee B – 29 April 2015**

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

Sustainability Details, received 9 December 2014

Lux Level Plan to Zero, received 15 December 2014

Updated bat survey, received 15 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](mailto: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  
Landscape

9 January 2015  
25 November 2014  
2 December 2014  
14 January 2014  
8 December 2014  
15 December 2014  
9 April 2015



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**Proposed Floodlights at  
Gloucestershire County Cricket Club Ground  
Nevil Road  
Bristol**

Application reference - 14/05030/F

|              |          |             |       |
|--------------|----------|-------------|-------|
| Prepared by: |          |             |       |
| Author       | GT/WB/SF | Approved By | WB/SF |

Date of Issue: March 2015



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## EXECUTIVE SUMMARY

This report accompanies planning application ref: 14/05030/F as deferred by Bristol City Council Development Control Committee 'B' on 4 February 2015.

The proposal for 6no. permanent floodlights at Gloucester County Cricket Club/Bristol County Ground ('the Club') has been independently assessed and endorsed by a leading lighting consultant in the UK (recommended for use by a resident local to the ground) and both of the two leading manufacturers of floodlighting solutions. The need for a 6 pole permanent design is clearly demonstrated through the ECB and ICC requirements and also in further communications.

The proposed development would bring significant benefits to the local economy in excess of £1m both across the Gloucester Road Traders Association (GRTA) and the wider city, demonstrated by the UWE economic study and the statement from the GRTA.

Securing the ICC Cricket World Cup in 2019 was a clear priority listed by the Bristol Sports Commission set up by the Mayor and the bidding for such tournaments (for which it has always been known that floodlights would be a requirement) has received overwhelming support from the Mayor's office, City Director's office, local businesses, educational establishments, community groups and the general public.

The social and cultural benefits of having a vibrant and successful Club are huge, having an outdoor meeting place for the public in an inspiring and sports driven environment, encouraging visitors to participate in sport and be with others of a different cultural background are certainly significant.

The Club's finances have been shared, highlighting the need for International cricket (both ICC and ECB) for the Club to remain viable as a business.

There has been a change to the headframe design to improve the design and visual amenity of the structures in response to committee and public feedback.

Solutions used by other International grounds have been clearly listed and all alternative options have been explored further, even those not viable at the Bristol County ground.



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At the request of the case officer and residents, a “Floodlight Usage Management Plan” (FLUMP) has been completed after full consultation with a group of local residents, clearly defining guidance on a number of areas including start / finish times and the testing / maintenance of the lights. In particular the finish time for Domestic matches between 21:15 and 22:00 further emphasises the fact that the floodlights will be used almost exclusively for “top-up” purposes.

If the floodlights were not granted permission and the Club was to do nothing, the implications of this would be significant. Firstly the Club would lose the World Cup matches and secondly chances of gaining future international fixtures would be immediately greatly diminished and made almost impossible in the long term, especially in a context where other Grounds around the country have got or are getting permission to install permanent floodlights. Such international fixtures are highly unlikely to be granted to Grounds without permanent floodlights and for ICC tournaments they definitely would not be. This would mean a huge loss of revenue to the Club and the City and would ultimately threaten the commercial viability and longevity of the Club.

Conversely the positivity in approving the application is significant; further endorsement of city council initiatives, cementing Bristol as a leading International sports venue and enabling various social and cultural groups to enjoy both International and Domestic cricket at a more amenable time are very important. When coupled with the undeniable economic benefits to the region there is clearly an overwhelming benefit in approving this application.



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## 1 INTRODUCTION

- 1.1 This report is produced at the request of Bristol City Council Development Control Committee 'B' (the 'Committee') following the decision on 4 February 2015 to defer planning application ref: 14/05030/F awaiting further details of alternative design options for 6no. 45m proposed permanent floodlights at Gloucestershire County Cricket Club. Please see **Appendix 1** for the Proposed Site Plan associated with the application for ease of reference.
- 1.2 This report sets out further details of benefits of the proposed floodlights to Bristol and the Club's business case. The report also reviews the alternative design options including the number of proposed floodlights to be installed, types of floodlight design, cost and efficiency of various floodlighting schemes and their performance in order to meet the required English Cricket Board (ECB) and International Cricket Council (ICC) lighting standards (contained at **Appendix 2**).
- 1.3 The recent deferral at Committee has resulted in the Club losing approximately £40,000 in revenue this year as it is now not able to install the floodlights for the 2015 cricket season, as well as incurring additional consultants' fees. These floodlights are needed before the start of next season (April 2016) in order for the Club to ensure additional revenue and have a good chance of success at being granted future international games which are currently being bid for. The current awarded 2019 World Cup cricket matches will be removed from Bristol and allocated to other grounds if permanent floodlights are not installed to ICC requirements.
- 1.4 Accordingly in the event that the floodlights are permitted at the 29 April 2015 Committee meeting, the Club intends to install the floodlights between October 2015 and March 2016.

## 2 BENEFITS TO BRISTOL

- 2.1 The UWE Economic Impact Study submitted with the application (see **Appendix 3**) estimates the City will receive circa £1million from each of the major international cricket matches. This is a conservative estimate based on 2009 data. A research paper published by the House of Commons (March 2015) demonstrates that in 2009 the UK suffered the worst of the recession and the data available at the time of the study would have been influenced by this. Accordingly, taking this into account in addition to the

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Club's now increased seating capacity, each match would feasibly bring in excess of £1million to the wider Bristol City economy.

- 2.2 In 2014 the Bristol Sports Commission formed by Mayor George Ferguson produced the first report of recommendations and priorities. One of the top 10 priorities was identified as the "bid to host 2019 Cricket World Cup games in Bristol", a key component of which is the requirement for permanent floodlights to be in place. A working group including the City Directors Office and the Club was formed and the support of the City Council was a key part in being awarded four Cricket World Cup Matches in 2019. The Sports Commission is clearly focussed on developing sports facilities and attracting and delivering events to Bristol which it has recognised as being hugely beneficial on both a social, cultural and economic scale.
- 2.3 Members will recall Martin Hunt (Secretary of the Gloucester Road Traders Association (GRTA)) speaking at the planning committee meeting on the 4th February 2015 about the ongoing success and vibrancy of the Club being very important to the vitality and economy of the defined Gloucester Road Town Centre. Uncertainties over the future of Bristol Rovers and the Memorial Ground, together with the recent loss of Bristol Rugby Club, have heightened concerns about the loss of important business that the sports fans bring. The GRTA have openly supported the Club's application for floodlights seeing it as a benefit to the businesses and communities on the Gloucester Road.

*"As Secretary of Gloucester Rd Traders Association (GRTA) I have made contact with many traders regarding the benefit or otherwise of large attendance matches at the County Ground. The traders were located on the Glos Rd from the Arches upwards. The response was very positive, particularly from those establishments near to where the side-roads lead towards the County Ground such as Ashley Down, Dongola, Brynland, Somerville and of course Nevil Rd. Bars and pubs were the main beneficiaries of the extra business but many cafes and restaurants also indicated that they benefited from extra custom before and after matches. Many of these traders have taken part in joint promotional activities with the cricket club to help build a happy and fun atmosphere on the Glos Rd and plan to continue this in the future, particularly when International matches are being held. I am unable to put any monetary values on this information as GRTA has a policy of not asking for sales information from traders."*<sup>1</sup>

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<sup>1</sup> Martin Hunt – Secretary of the Gloucester Road Traders Association and owner of Joe's Bakery

- 2.4 Having permanent floodlights in place will secure the four Cricket World Cup matches already awarded for 2019 and also greatly improves the likelihood of being granted better quality International Cricket more frequently. International and high quality domestic cricket remains hugely popular in terms of television audiences (the rained off England vs India ODI in August 2014 was likely to have been broadcast to a vast global audience) and this provides a unique opportunity to showcase Bristol to a worldwide audience.
- 2.5 The Club does a huge amount of activity with local charities and community groups including local schools (through our “Howzat for Healthy” and “Brilliant Bristol” campaigns as well as days out at the cricket) multiple sclerosis and dementia patients within the Bristol region, carers in the community, individuals trying to get into employment for the first time and also supporting numerous local clubs and institutions, all funded directly from the Club itself. To maintain this level of investment the Club needs permanent floodlights and the increased revenue they bring, without this revenue (see Club finance table in “Business Case” section) it is uncertain whether the Club will be able to sustain this level of voluntary activity.
- 2.6 As well as the economic, city profile and community benefits outlined above, the installation of permanent floodlights will allow for a later start time to domestic cricket matches such as the T20 and one day 50 over formats. This will allow more time for more people to access the ground which in turn supports one of the three key dimensions of sustainable development identified in national planning policy; the requirement to “*support strong, vibrant and healthy communities... that support it’s health, social, and cultural well-being*”<sup>2</sup>. Encouraging people to mix in an open-air, social environment with different cultures and in an environment that reflects a healthier lifestyle (i.e. participation in sport) is an undoubted benefit.
- 2.7 The award of four Cricket World Cup Matches granted in 2019 is reflective of the multi-cultural nature of Bristol. With 91 first languages and a rapidly growing population (e.g. West Indian and South Asian groups) cricket is the sport of choice for many in Bristol, and through hosting the Cricket World Cup (for which permanent floodlights are essential) this provides a unique opportunity to celebrate the wide diversity of the City.

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<sup>2</sup> National Planning Policy Framework, paragraph 7.

2.8 Finally, as seen on the Council's planning application portal (to 19th March 2015) there is significant support for the installation of the permanent floodlights (over double the number of supporters to objectors). This support has come both from the immediate Bristol area and also from further afield and individuals who travel, dine, shop and stay in the city as part of their visit to the Club, contributing significant sums to the local economy.

### **3 NEED FOR THE FLOODLIGHTS AND LIGHT LEVEL REQUIREMENTS**

3.1 Cricket in England and Wales is governed by two bodies, the England and Wales Cricket Board (ECB) and the International Cricket Council (ICC). The ECB currently oversees the delivery of domestic cricket (i.e. County cricket) and touring teams from overseas (e.g. Australia and India). The ICC looks after all major international cricket tournaments such as the Men's and Women's Cricket World Cups and the ICC Champions Trophy. These ICC tournaments are the showpiece tournaments in world cricket and hosting them is now restricted to only England, India and Australia – countries identified as having the best facilities and the largest support bases for cricket.

3.2 The recent redevelopment of the ground ensured the Club maintained its status as a permanent international venue. At this point permanent floodlights were not required. Subsequently, the ECBs desire for British venues (including GCCC) to have world class facilities means that the Club is now required to install permanent floodlights to both the ECB and ICC specifications. The majority of other county grounds and virtually all international venues now have permanent floodlights in place and Bristol cannot remain competitive without.

3.3 When the ECB announced its intention to award international matches, it confirmed that host grounds must have permanent floodlights, and accord with ECB specifications and ICC guidelines. As such, to be able to host ICC sanctioned international cricket matches the Club has to achieve the ECB requirements for technical design whilst simultaneously achieving the ICC requirements for lux levels to host the World Cup fixtures.

3.4 ICC requirements focus solely on lux levels in the middle of the pitch; they are silent on lux levels external to the pitch. However the ICC lux levels are 20-30% higher than the

ECB for the middle of the pitch (see lux level requirements comparison table in **Appendix 2**) and accordingly the ECB guidelines relating to lux levels external to the pitch are therefore necessarily exceeded. The ECB actively requires the Club to achieve these ICC lux levels (and therefore exceed their own guidance). Without meeting the ICC levels there would be no ICC sanctioned international games including World Cup games in Bristol.

- 3.5 The lux levels required for cricket are very different in nature, frequency and use from standard rugby and football floodlights. The ECB levels are required to top up existing daylight and twilight only in the summer months between April and September (mainly May to August) with ICC level lighting only being required for ICC sanctioned international matches. The floodlights will only be used for 15 days during these summer months, from 18:00hrs in the evening, dimming at 22:30hrs and switching off at 23.00hrs. This can be controlled by conditions. One of these is a requirement for a Floodlight Usage Management Plan ('FLUMP') which offers further control over the exact details of usage. This FLUMP has been produced by the Club in consultation with local residents and Bristol City Council Planning and Environmental Health Officers. It accompanies this report at **Appendix 4**.

#### **4 BUSINESS CASE**

- 4.1 This section contains further details on where the proposed funding for the lights will come from and further information on the Club's long term forecasts, strategy and budgets.
- 4.2 The cost of the proposed solution is circa £1.1m comprising build fees, an upgrade to the power supply and various consultants' fees. The ECB has agreed to provide a fixed grant in the sum of £700,000 to enable the Club to provide permanent floodlights to meet these requirements. Provided the Club get permission for the lights, it can secure funds for afford to pay an additional £400,000 to ensure the best possible design is achieved. This is however on the strength of the potential revenue that it is likely to receive from the international matches and an increased attendance for Domestic T20 matches. This £400,000 has only been made possible through a proposed change to banking provision by the Club.

4.3 The Club has no realistic additional funds available. The Club's contribution does not roll over so there would be no additional funds next year. The floodlights are the way for the Club to create additional revenue and each postponement, deferral or refusal would see the Club losing money rather than gaining additional income. Other avenues of funding have been explored but other than the grant awarded by the ECB (originating in part from Sport England and broadcast deals) there are no other available opportunities for additional funding for this type of equipment. Whilst there is no fixed timescale in which the grant must be spent, clearly if the application is rejected the funding already offered will at some point be under review. Crucially the Club is at the limit of what it can borrow in the financial markets and is already reliant on a £450,000 loan to remain solvent.

4.4 The Club is primarily dependent on international cricket to trade a surplus. The table below sets out forecast budgets for the whole of Gloucestershire County Cricket Club for the years 2015-2019 (inclusive) both with international cricket and without it. At least half of the international fixtures would be lost in the period 2015-2019 if permanent floodlights were not granted. The table below can also be taken as indicative for years beyond 2019 without Internationals being played at the Bristol County Ground.

|   | 2015/16         | 2016/17         | 2017/18         | 2018/19         | 2019/20         |
|---|-----------------|-----------------|-----------------|-----------------|-----------------|
|   | <i>Budget 1</i> | <i>Bus Plan</i> | <i>Bus Plan</i> | <i>Bus Plan</i> | <i>Bus Plan</i> |
| Surplus/Deficit <b>WITH</b> Internationals    | -£59,000        | £73,000         | £170,000        | £202,000        | £929,000        |
| Surplus/Deficit <b>WITHOUT</b> Internationals |                 | -£296,000       | -£199,000       | -£217,000       | -£190,000       |

4.5 The Club has one of the lowest cost bases in County Cricket and is very good at controlling costs but with no cash reserves and c. £4m of debt to manage it is clear that its sustainability and survival would be in doubt without regular international cricket and the enhanced crowds for domestic matches. Given the asset and land value tied up in the Club's 126 year home in Bristol there is the possibility of a relocation should international cricket be lost or significantly reduced.

## 5 DO NOTHING

5.1 Currently the Bristol County Ground has been awarded an unprecedented 4 Cricket World Cup matches in 2019 after a hugely popular City-wide bid process which had support from the Mayor's office, the Bristol Sports commission, the City Director's office and a wide selection of prominent educational, sporting and business establishments



across the City, as well as local traders, local residents, and grass roots supporters locally and across the country. These matches have been granted to Bristol, fulfilling the Sports Commission priority to bid and host the 2019 Cricket World Cup, on the basis of achieving certain conditions one of which is that the Club will:

*“...install permanent floodlights at the Venue which comply with the applicable ECB and ICC floodlight regulations...”<sup>3</sup>*

- 5.2 ECB and ICC matches are allocated to successful venues after a bid process which allocates “scores” to each city / venue based on their ability to fulfil certain criteria ranging from city engagement (how a city will embrace a tournament) through to having the required facilities. For ECB sanctioned matches “points” are scored for the facilities each venue has and floodlights are one of the areas identified as being important. Not having permanent floodlights will impact significantly on the overall scorecard and result in Bristol being considered not on a par with competitor venues – at best Bristol may continue to attract one or two lower quality International matches, at worst Bristol will not be considered at all.

*“The Bristol County Ground has...been awarded 4 ICC Cricket World Cup matches in 2019. The award of these matches is subject to the installation of permanent floodlights meeting the International Cricket Council (ICC) guidelines. Without these permanent floodlights in place then the “award” could be retracted and reallocated. It is clear that to have permanent floodlights is critical for all International Cricket Venues in the future. Furthermore, in bidding for other International Cricket Matches that are sanctioned by the England and Wales Cricket Board (ECB) those International venues without permanent floodlights in place will be subject to a lower facilities “score” as part of the bid process for these matches which would severely impact their ability to be awarded future International matches.”<sup>4</sup>*

- 5.3 It is important to note that at present Bristol is one of only two cities with a permanent “international status” in England and Wales that don’t have permanent floodlights. The other is Durham County Cricket Club who has recently submitted an application for 6no. 55m high lights and 20 usages per year.

<sup>3</sup> Gloucestershire CWC 2019 venue agreement (ECB / ICC and GCCC)

<sup>4</sup> Ben Green, Broadcast Operations and Facilities Manager, ECB - see Appendix 5 for full formal statement

5.4 Without permanent floodlights in place, these ICC Cricket World Cup matches will be lost to Bristol and re-allocated elsewhere. This principle is also true of all other ICC World tournaments to be staged in England and Wales in the future (including the Women's Cricket World Cup in 2017). This will lose important revenue and profile for the City and also put the Club in financial jeopardy.

## 6 PROPOSED SOLUTION

6.1 The proposed solution follows a comprehensive detailed review of all available options and extensive consultation and liaison with technical specialists, Council officers and the local community both prior and post the earlier deferral. Three separate light engineers have independently arrived at the same 6 pole solution as the optimum choice with the masts in the same positions and at the same heights as that proposed. The ECB has advised that a 6 pole option is also the optimum solution for the Ground (see **Appendix 5**) and the ICC Guidelines clearly state that the ICC requires 'a minimum of 6 poles' in order to have ICC sanctioned competitive cricket matches (including the World Cup).

6.2 Taking into account all the information and views received, the final proposed solution comprises the following:

- 6no. 45m high floodlights as approved (and required) by the ICC and ECB and confirmed as the optimum solution by the ECB independent engineers and three additional independent lighting specialists;
- Earlier start times (and therefore finish times) to T20 matches ensuring all T20 competitive cricket matches should be completed by 22:00 (21:15 is the scheduled finish time). This will ensure lights are primarily for topping up natural light rather than replacing it (for example June sunset is circa 21:30);
- In response to a specific request from a resident on Kennington Avenue, the Club has agreed to provide this property with blackout blinds for first floor bedroom windows on the rear elevation to ensure no light affects this particular property;
- A rounded head frame is proposed following requests from local residents. This is a minor change from the previous rectangle shape improving the visual

amenity of the lights supported by local residents. **Appendix 6** shows the local views of the rounded headframes. Amended plans showing the round head frames accompany this report as an alternative design solution to the originally proposed rectangular head frames. It has no effect on lux levels on and around the Ground (see confirmation of this from the light engineer at **Appendix 7**).

- 6.3 Further details of the solution can be found as part of the general application. The following sections comprise a review of alternative options that have been explored to arrive at the optimum solution (a summary table is contained at **Appendix 8**).

## 7 ALTERNATIVE OPTIONS REVIEW

### Alternative Option 1: Retractable Floodlights

- 7.1 Retractable lights would only reduce to a minimum of approximately 18m; they could not go lower due to the size of the heads (circa 8m width). Whilst this option would reduce the visual impact on longer views, it will result in an increased visual impact to the detriment of nearby residential properties at this height.
- 7.2 The diameter of the poles would increase from 1.2m to 2m and the foundations of each mast would have to be larger than the current 5m x 5m foundations. The exact size of the foundations of all the masts depends on height of the pole and design of the head. The bigger the mast and head frame the greater the weight and wind load (Effective Pressure Area ('EPA')) resulting in a greater size of foundation. However, the space to enlarge the foundations is limited due to the constraints of the site. Please see paragraph 7.12 below for a detailed description of the Ground constraints.
- 7.3 Cost wise, halving the height essentially doubles the cost. If the masts were to go lower than half it could triple the cost (see **Appendix 9**). The ECB would provide no additional funding which means the Club would have to pay £1.3 million in addition to the ECB grant which it simply cannot afford. As such, given this option is economically unachievable for the Club and has a detrimental impact on immediate neighbours, it has to be discounted. Nevertheless, for the purposes of this report

**Appendix 10** provides comparable images of views from agreed locations shown on the accompanying location plan.

Alternative Option 2: Removable Head Frames

- 7.4 Visually, removable heads would result in steel poles protruding from the Ground for half the year. More importantly, the process of removal and re-installation would be inordinately complicated as a crane large enough to reach 45m would have to be brought in and out of the ground which would be extremely difficult if not impossible given the location. If it were possible, the question of adequate storage arises and it is difficult to find appropriate long-term storage of 8m wide delicate mast heads (inclusive bulbs) and this will certainly not be possible on-site.
- 7.5 Cost wise each removal and re-installation would cost the Club approximately £40,000 not including the cost of storage (see **Appendix 11**). Due to additional wear and tear of the removal process, the Club would also lose the manufacturer's warranty which also has significant cost implications. Such wear and tear would also reduce the life expectancy of the lights and require more frequent replacement again at additional cost. The Club is forecasting an increase of c. £40k a year in gate receipts relating to domestic T20 matches and this will be effectively negated. Accordingly given the extensive costs associated with this option and the difficult practicalities of the removal, re-installation and storage, this option has been discounted.

Alternative Option 3: Four Floodlights instead of Six

- 7.6 In terms of visual amenity, a 4 pole option could make an improvement to the residents at Kennington Avenue as it would remove mast P2, however it could increase light spill to the properties by virtue of the increase in height and headframe required for the remaining lights. As such, to be able to reach the standards required by the ECB and ICC, the masts would have to increase in height by approximately 10m and the head frames would also have to be increased resulting in an increased impact on the longer views from the wider city and increased shadowing. Moreover, it would compromise the light standards and efficiency on the pitch and would not be approved for use by the ICC or supported by the ECB (see **Appendix 5**).

- 7.7 Cost wise, this is a cost-neutral option for the Club as the increased height for 4 cancels out savings made on reducing the number of poles from 6. However this solution has been discounted because of the increased visual impact on the City skyline and is not acceptable under ICC guidelines on the basis of compromised light efficiency and failure to hit the required standards.
- 7.8 Additionally, the ECB confirm in their formal statement contained at **Appendix 5** that "[their] recommendation would be to progress with the 6 mast solution as a minimum on the basis that they could be physically accommodated within the constraints of the site. The playing area lighting quality will be far superior to that of a 4 mast solution. Glare control should be better, uniformity should be better, masts can be shorter and spill light should be reduced and better controlled" and as such "the 6-mast option [the Club is] proposing is the optimum one for the venue and indeed is the only one that the ECB would support at this time".

#### Alternative Option 4: Four Retractable Floodlights

- 7.9 The option of 4 retractable poles would in part resolve the impact on the longer views when they have been lowered. However given the larger heads required for 4 poles, even at circa 20m in height these would have an increased impact on the visual amenity of the local residents. It would have a greater light spillage given the height, and a 4 pole option is not accepted by the ICC. Cost wise, this option is similar to a 6 pole retractable given the increased height of the masts and therefore is not commercially viable. Moreover, it would not be supported by the ECB at this time (see **Appendix 5**). Accordingly, this option has been discounted.

#### Alternative Option 5: Retractable Floodlights and Removable Heads

- 7.10 For reasons previously explained as to why the retractable lights have been discounted, the added burden of costs, storage and logistics associated with removing these heads renders this option even less viable and has as such been discounted.

---

#### Alternative Option 6: Eight Floodlights instead of Six

- 7.11 This option would achieve the required light levels but there would be increased visual impact by virtue of the increased number of poles. Furthermore, given the size and constraints of the Ground it is impossible to fit 8 poles into the Ground at the optimum equidistance around the circumference of the pitch; they simply will not fit in a sensible configuration. Accordingly, this option has been discounted.

#### Alternative Option 7: Repositioning the Floodlights

- 7.12 On the advice from the lighting specialist, architect and in accordance with ECB and ICC requirements, the proposed locations are the optimum solution in terms of minimising light spill and maximising efficiency, with the exception of mast P3 which has been relocated slightly further away in response to a request from a resident. Moving the mast north, closer to Kennington Avenue, would increase the impact on the residents in Kennington Avenue. Moving it closer to the pitch would prevent the temporary seating being installed and reduce the capacity of the Ground. Moving it east is constrained by the existing foundations of the occupied residential apartments and the underground car park (see briefing note from the lighting engineers at **Appendix 12**). In terms of practicalities, cost and achieving the necessary lighting requirements, there is very limited scope to move these lights and the option of repositioning them has been discounted.

#### Alternative Option 8: Temporary Floodlights

- 7.13 The Club has previously employed temporary lights however these needed to be brought on and off site which was a complex operation. They also had to be powered by a generator and were significantly louder than any other option. Moreover the temporary lights were a poorer design and resulted in excessive light spillage, far more than that resulting from any other option. Additionally, the ECB have updated their requirements from the 2008 guidelines and now will not permit the use of temporary lights. As such the funding of the lights and granting of the games will only be provided on the basis that the floodlights are permanent. Accordingly this option has been discounted.

#### Alternative Option 9: Base Hinged Masts

- 7.14 The Club has explored the possibility of installing base hinged masts. The base hinge masts are designed to fold over only for short periods of time for maintenance or in places such as Antigua, when hurricanes are forecast. For the majority of the year the masts must remain vertical and as such the benefit would be limited by virtue of the visual impact remaining markedly similar to the proposed. Moreover, base hinged masts simply cannot fit into the Ground given the size of the masts at 45m and the logistics and constraints of the Ground. The masts would have to fold over the pitch, potentially damaging it and the lights, and preventing the use of the pitch during this time. Accordingly this option has been discounted.

#### Alternative Option 11: Lowering Head Frames

- 7.15 The Club has reviewed the possibility of using lowering head frames via a winch type system. It has been established that the number of luminaries (i.e. number of bulbs) required to meet the ECB and ICC light level standards would result in head frames of such weight and size that lowering them and raising them would be impossible. This design is intended for a much smaller number of luminaries and designed for lighter head frames than required for cricket. They are designed for circumstances where lower light levels are appropriate such as docks, port terminals and airport lighting. Notwithstanding this, where they are employed, the only time they are lowered is for maintenance purposes and would not be repeatedly lowered and raised in any event. Accordingly this option has been discounted.

## **8 OTHER CRICKET GROUND SOLUTIONS & REQUIREMENTS FOR UPGRADE**

- 8.1 The majority of the County Cricket Clubs in England and Wales now have permanent floodlights in place and all but two with permanent international status have them. The Bristol County Ground is one, the other being Durham County Cricket Club ('DCCC') who currently has an application in with the local council for a 6 pole option designed by Musco following advice from and supported by the ECB. The DCCC 6 pole option is 55m in height, seeking 20 games a year (ref: DM/15/00808/FPA).



- 8.2 Given the unique nature of each individual cricket ground it is impossible to compare one against the other, the position of stands, pavilions and other structures as well as the size of the playing surface play a major role in defining where the lights are positioned and also the way in which light is delivered to the pitch itself:

*"Each cricket venue is uniquely different based both on the facilities they have on-site and the physical constraints under which they operate. With specific regards to floodlights the presence of stands and buildings can significantly impact the number and positioning of the lights and the impact on the spread of light. Given this variation each ground has to be evaluated on an individual basis and it is impossible to practically compare infrastructure at one venue with another. It is worth noting that with the exception of Emirates Durham ICG, the Bristol County Ground is the only International venue in England and Wales that does not have permanent floodlights in place"<sup>5</sup>.*

- 8.3 Neil Johnson, an independent lighting consultant, was recommended and introduced to the Club by local residents in order for him to independently review the proposed solution forming the planning application. His considerations can be found in full at **Appendix 13**. Further details of the examples of solutions at other Grounds can be found at **Appendix 14**.

## 9 CONCLUSION

- 9.1 In light of this review and the evidence provided in terms of light spill, light efficiency, achieving the required lighting standards, the short and long visual impacts, the site constraints, economic impact and practical possibilities, it is established that the 6 pole option is the optimum solution. This is supported by the ECB and its independent engineers, is required by the ICC and supported by additional lighting specialists who have independently arrived at the same 6 pole design with permanent heads and permanent frames in the same position at the same height. Accordingly the proposed application for 6no. 45m floodlights is a clear, well considered and thoroughly researched proposal. The Committee, by approving this application would assist in securing great benefits to the City and would recognise, and realise, Bristol as a World Class Cricket venue.

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<sup>5</sup> Ben Green - Facilities and Broadcast Manager at the England and Wales Cricket Board (ECB)

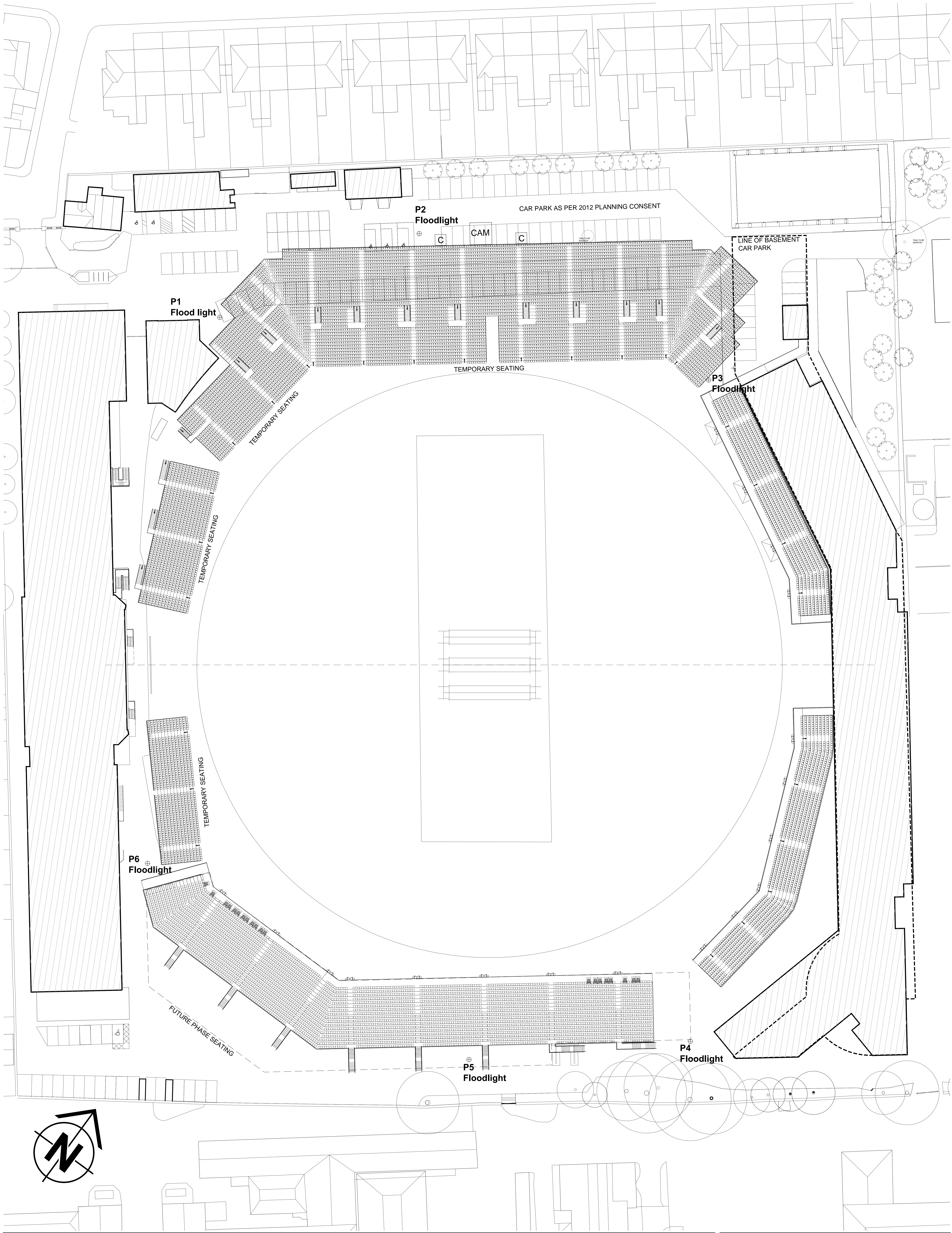




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## APPENDIX 1: PROPOSED SITE PLAN





P1 ⊕ Proposed Flood light location

Revisions

Job Title  
**The County Ground, Bristol  
 Flood lights**  
 Client  
**Gloucestershire County Cricket Club**  
 Drawing  
**Site Plan  
 Temporary Seating Layout**  
 Project No. **3814** Drawing No. **(08)101** Rev **-** Scale **1:250** © **A0**  
 Date **11/09/14** Drawn / Checked **SS** Status **Planning**



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## APPENDIX 2: ECB AND ICC LIGHT REQUIREMENTS & ICC GUIDELINES

### **ECB and ICC Lux Level Requirements**

In order to be able to host international cricket games, the Club have to achieve ECB requirements for technical design and simultaneously have to achieve the ICC requirements for lux levels as it is the ICC event (the World Cup) that GCCC is hosting.

Below is a comparison of the ICC and ECB performance requirements in lux levels as an overview:

| LIGHTING REQUIREMENT                              | ECB       | ICC       |
|---|-----------|-----------|
| Wicket Horizontal Lux Level                       | 2,200 Lux | 3,000 Lux |
| Wicket Vertical to Camera Lux Level               | 2,000 Lux | 2,500 Lux |
| Inner Field Horizontal Lux Level                  | 2,000 Lux | 2,500 Lux |
| Inner Field Vertical to Camera Lux Level          | 1,800 Lux | 2,000 Lux |
| Outer Field/Boundary Horizontal Lux Level         | 1,500 Lux | 2,000 Lux |
| Outer Field/Boundary Vertical to Camera Lux Level | 1,300 Lux | 1,500 Lux |

The following guidelines are required for ICC International cricket matches and these have to be achieved in order to host the ICC sanctioned international games.

Full details of the need for both the ECB and ICC light level requirements are found in the main floodlight option review report.



# Lighting specification Cricket

International level

# Introduction

Cricket is defined by the CIE as a class C sport due to the potential fast speed of the ball. The ball can travel at up to 160 km/h and so careful attention needs to be paid to the lighting quality on the wicket. Sufficient vertical illuminance should be provided to enable the ball to be clearly seen in the air.

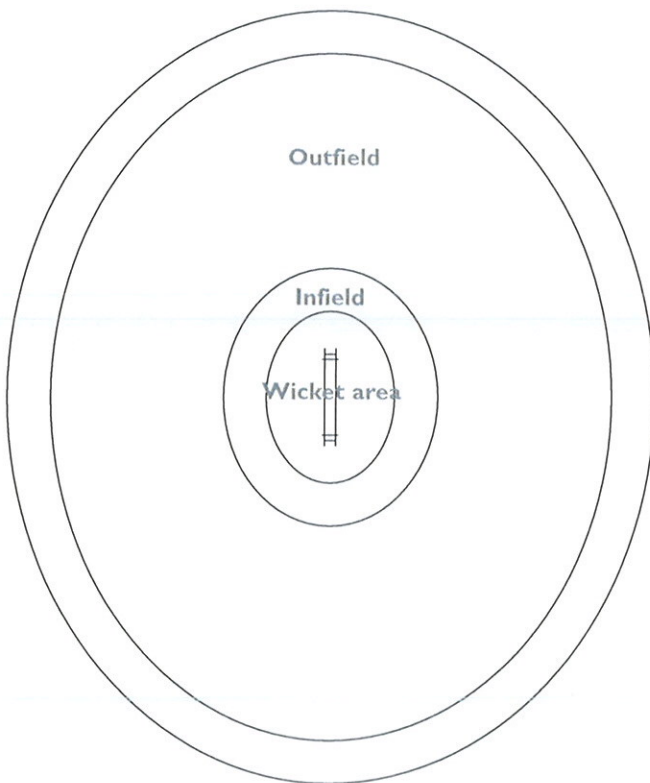
As the game is played in two directions, the lighting solution should be symmetrical and in order to prevent the batsman or bowler looking directly into a light source a zone should be provided behind the wickets without lighting.

As with all other sports where there is to be television coverage illuminance should be provided in the direction of cameras.

## Cricket pitch zones

The pitch should be divided into the following zones to enable a practical lighting solution to be provided:

- Wicket area
- Inner field
- Outfield and boundary



## Lighting requirements

The lighting should meet the needs of the users of the facility who can be defined as:

- players
- umpires
- spectators at the venue
- spectators on television

## Lighting parameters

The following factors should be considered:

### illuminance (E)

- E<sub>h</sub>. Horizontal illuminance
- E<sub>v</sub>. Vertical illuminance
- E<sub>cam</sub>. Illuminance in camera direction

### Uniformity

- Min/Ave. Ratio of minimum divided by average illuminance.
- Min/max. Ratio of minimum divided by maximum illuminance.

### Colour Temperature

This is colour appearance of a light source.

### Colour Rendering

This is the ability of a light source to make a surface colour appear natural. Daylight renders colours at 100Ra. A good colour rendering light source will be above 90Ra.

### Glare

In addition to the 'forbidden zone' luminaires aimed at shallow angles should be avoided. 70 degrees can be used as a rule of thumb for the maximum aiming angle, however Glare Rating calculations should also be undertaken.

# Lighting Specification

## Masts

Should be situated outside the 'forbidden zone' as shown in the diagram opposite. In defining this zone account should be taken of the space necessary to move the wicket.

A minimum of 6 masts should be used if a good lighting result is to be achieved. With less masts than this it will be difficult to achieve the specification on the outer field and there is a danger that harsh shadows will be created.

A daylight study should be undertaken to reduce and ideally prevent the time there is any shadow on the wicket

Eh at 0m. Ecam at 1.5m.

## Wicket

Ecam 2500 lx  
Eh 3000 lx  
Min/ave 0.7  
Min/max 0.6

## Inner Field

Ecam 2000 lx  
Eh 2500 lx  
Min/ave 0.6  
Min/max 0.5

## Outer Field and boundary

Ecam 1500 lx  
Eh 2000 lx  
Min/ave 0.5  
Min/max 0.4

## Glare Rating

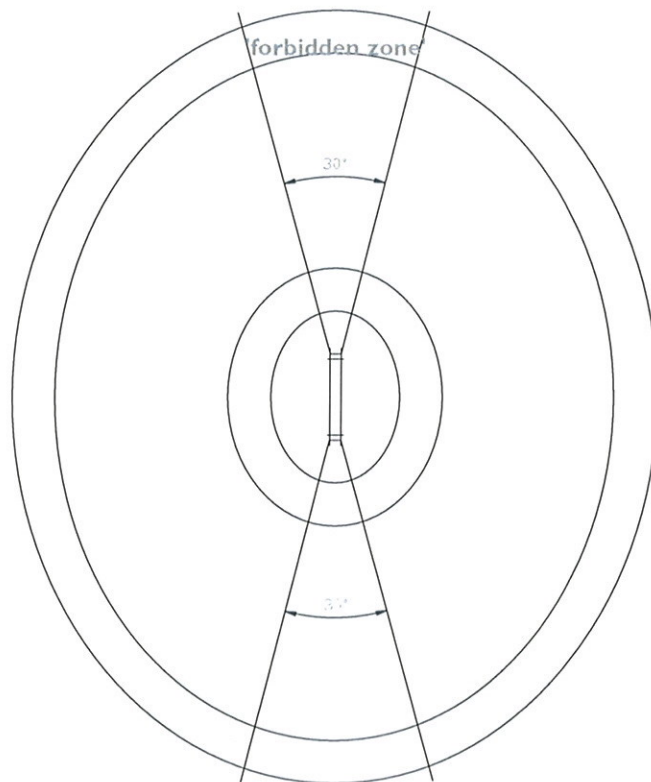
Glare Rating calculations should be carried out at key positions including for the batsman and for camera positions. <40 is recommended by the CIE for critical observer positions.

## Colour Rendering

Lamps with colour rendering properties of >90 should be installed.

## Colour Temperature

The same colour temperature lamps should be used throughout the sports lighting installation. >5500 is recommended.





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**Date: September 2006**

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## APPENDIX 3: UWE ECONOMIC IMPACT STUDY

# The Economic Impact of International Cricket on Bristol

# **The Economic Impact of International Cricket at Bristol**

## **Executive Summary**

This is a preliminary report into the likely economic impact on the City of Bristol of an expanded programme of international cricket at the County Ground, Nevil Road, Bristol. It is based on data from one day international matches (ODIs) held recently at Bristol in conjunction with regional accounts and the authors' data. Economic impact analysis usually involves extensive surveys of spectators *ex post*; this study could not do so and as such its findings must be treated with some caution. In this light, we have provided a range of estimates of economic impact based on different assumptions of pricing and of the activity of spectators and other participants. We find that a Test match at Bristol would have a likely economic impact of between £3.08m and £5.74m. We would estimate that the impact of a T20 World Cup series or a Cricket World Cup series would be in the middle of this range.

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Anthony Plumridge\*

Michelle Edwards\*

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## **The Economic Impact of International Cricket at Bristol**

An economic impact involves three somewhat distinct stages: the *direct income* from an event; *indirect income* from the event; and *induced income* from activity of those receiving income in the direct and indirect stages. Overall, the economic impact is the amount of income generated from outside the area (in this case, City of Bristol), taking into account the extent to which that income stays within the area in subsequent rounds of expenditure. It should also be noted that the impact of an event is influenced by a wide range of factors from the accommodation and additional entertainments available, to infrastructure and merchandising. All studies agree that greater capacities and attendance help to maximize returns, often with increasing returns to scale.

There are relatively few economic impact studies carried out on major sporting events in the UK that are in the public domain. The studies that are available for comparison tend to employ very similar techniques, with the majority of them utilizing the UK Sport approved methodology devised by SIRC (Sport Industry Research Centre, at Sheffield Hallam University) (1999). This method is summarized in Appendix 1.

This study of an economic impact of international cricket on Bristol was unable to follow the standard methodology, principally because there was no opportunity to undertake a survey. Instead, we have used desk research and data supplied by Gloucestershire CCC and associated partners to arrive at estimates of economic impact. Extensive use was also made of SIRC's (2001) study of the IAAF World Half Marathon Championships and BUPA Bristol Half Marathon. We have also employed the regional economic model Econ-I to calculate induced expenditures.

### **1. Direct impacts**

Direct impacts are those incomes received by Gloucestershire CCC. The largest by far of these is ticket revenue. Estimated ticket revenues were based on detailed information provided by the club on the ODI held in May 2009. The estimates were based on the proportions of different types of tickets sold (including those to members, juniors and the disabled) by the club, multiplied up to reflect the likely number of tickets sold, which would be 18000. Another 2000 tickets would be distributed either as complementary, for instance to visiting teams, allocated to stadium boxes, or as hospitality. Three different pricing structures for tickets were considered, using recent actual prices as the most pessimistic. The ticket revenues in Table 1 also assume full capacity per day, which may itself be optimistic. Table 1 also includes revenue streams such as commission on food and drink sold, advertising revenue and potential sponsorship, for instance from selling the naming rights for the stadium. An estimate for hospitality surplus is given, the central figure reflecting actual past data. These various estimates are important given that different visiting teams may have very different economic impacts. For example, because of income and cultural differences, a match against Australia would likely have a much larger impact than one against, say, Bangladesh.

Table 1: Projected direct total income per day (£ at 2009 prices)

| <b>Item</b>                 | <b>Optimistic</b> | <b>Pessimistic</b> | <b>Central</b> |
|-----------------------------|-------------------|--------------------|----------------|
| Ticket revenue (ex VAT)     | 953069            | 750775             | 824817         |
| Hospitality surplus         | 135000            | 100000             | 117000         |
| Advertising and sponsorship | 225000            | 225000             | 225000         |
| Other revenues              | 68000             | 42340              | 54500          |

Source: GCCC accounts, authors' calculations

These figures were then adjusted to take into several factors, including net administration fees for ticket purchases. They were then multiplied to reflect projections of attendances at international matches. Three scenarios were considered: full attendance at 5, 4 and 3 days. Based on other studies, the middle scenario is most realistic. It is also useful for projecting the income from series in the T20 World Cup and the Cricket World Cup.

However, not all of this income contributes to economic impact because much of it comes from within the City of Bristol. Spending associated with the event on the part of individuals and organisations based in the city might merely replace expenditure that would have taken place in the city anyway. Alternatively, of course, it might replace expenditure that would have been made elsewhere. However, we have assumed the former in the interests of caution. Based on actual ticket data and taking into account estimates used in other studies, we estimate that 50% of income emanates from outside Bristol and is additional to that which would occur normally.

## 1.2. Summary

Based on a range of assumptions, we can arrive at a range of projected direct incomes which contribute to economic impact for a Test match. The most optimistic is £3,498174; the most pessimistic is £1,698123. A central estimate of £2,471834 could also be used to project the direct impact of a series of one day matches.

## 2. Further impacts

In addition to the direct impact assessed above, there will be further impacts as a proportion of the income of GCCC circulates within the Bristol economy, increasing the income of local business and their employees. The analysis below considers the additional income deriving from the holding of an additional major event of any duration and additional income per day that such an event runs. In each case, optimistic, central and pessimistic projections are provided. These further impacts consist of further direct income (associated with subsistence expenditure by spectators and contractors' staff), indirect income (associated with expenditure on locally sourced inputs) and induced expenditure (associated with the spending of the additional incomes of locally based staff). All these sources of income are additional to those that would have occurred through the ongoing activities of GCCC.

As it has not been possible to conduct a survey of spectators and suppliers, certain assumptions have had to be made based on other studies (see above) and information supplied by GCCC. The total impact of the spending of indirect income has been

estimated using multipliers derived from econ-i, an input-output based model of the South West regional economy. This gives indicative multipliers for Bristol for some 90 industrial sectors. It also allows induced income to be estimated resulting from additional payments to employees and temporary staff. However, this is only available for the region as a whole rather than Bristol alone.<sup>1</sup>

## 2.1. Further income per event

Certain expenditure is associated with each major event held, irrespective of its duration. Most of this is indirect expenditure and that received by businesses and individuals based in Bristol. Establishment costs refer to GCCC staffing costs that are dependent on the continued holding of major events. Table 2 below summarises these sources of further income together with the resulting total income generated for the Bristol economy as some of this circulates between other businesses and their employees.

**Table 2: Further income per event**

| Income per event<br>Item | Initial expenditure |               |               | Final income |              |              |
|--------------------------|---------------------|---------------|---------------|--------------|--------------|--------------|
|                          | Optimistic          | Pessimistic   | Central       | Optimistic   | Pessimistic  | Central      |
| Printed material         | 5469                | 3828          | 4375          | 10057        | 7040         | 8046         |
| Advertising              | 12644               | 9834          | 11239         | 20447        | 15903        | 18175        |
| Ground Cleaning          | 6330                | 4923          | 5626          | 9373         | 7290         | 8331         |
| Establishment costs      | 94000               | 94000         | 94000         | 52640        | 52640        | 52640        |
| Telecommunications       | 504                 | 504           | 504           | 741          | 741          | 741          |
| <b>Total</b>             | <b>118946</b>       | <b>113089</b> | <b>115744</b> | <b>93258</b> | <b>83614</b> | <b>87933</b> |

Source: GCCC, Regional Accounts and authors' calculations

## 2.2. Further income per day

Some spectators will spend a night in Bristol and pay for subsistence and accommodation. The proportion that do so and the amount spent has been based on the Half Marathon study. Subsistence expenditure also applies to journalists, technicians and certain contractors' staff. Typical spending habits of these groups have been suggested by GCCC, Table 3 below summarises these sources of further income together with the resulting total income generated for the Bristol economy as some of this circulates between other businesses and their employees.

**Table 3: Further income per day**

| Further income per day<br>Item    | Initial expenditure |               |               | Final income  |               |               |
|-----------------------------------|---------------------|---------------|---------------|---------------|---------------|---------------|
|                                   | Optimistic          | Pessimistic   | Central       | Optimistic    | Pessimistic   | Central       |
| Retail spending: Globe Sports     | 8000                | 4800          | 6000          | 9463          | 5678          | 7097          |
| Journalists subsistence           | 14400               | 8000          | 12000         | 18679         | 10377         | 15566         |
| Team subsistence                  | 5100                | 5100          | 5100          | 6616          | 6616          | 6616          |
| Spectator subsistence             | 353000              | 206000        | 258000        | 457901        | 267217        | 334670        |
| Contractor/technician subsistence | 14720               | 10600         | 12720         | 19094         | 13750         | 16500         |
| Security/traffic management       | 6544                | 5090          | 5817          | 9704          | 7548          | 8626          |
| Temporary staffing                | 18248               | 14193         | 16221         | 10219         | 7948          | 9084          |
| Catering staff                    | 11596               | 9019          | 10308         | 6494          | 5051          | 5772          |
| <b>Total</b>                      | <b>431608</b>       | <b>262802</b> | <b>326165</b> | <b>538170</b> | <b>324184</b> | <b>403930</b> |

Source: GCCC, Regional Accounts and author's calculations

<sup>1</sup> This will tend to overstate induced income as the smaller the geographical area, the greater the proportion of income that is spent outside the local economy.

### 2.3. Summary

From Tables 2 and 3 above, a five day test match might lead to further income of £2,245,937 on an optimistic estimate, £1,380,350 on pessimistic assumptions and £1,703,654 as a central estimate. This assumes that the last day will not take place so only a four day event is assumed.

### 3. Overall impact

Total economic impact will involve the combination of direct, indirect and induced incomes. Thus the final impact will sum the figures in sections 1.2 and 2.3. These are shown in Table 4 below.

**Table 4: Total economic impact of a Test match (£ at 2009 prices)**

| Item                      | Optimistic | Pessimistic | Central   |
|---------------------------|------------|-------------|-----------|
| <b>Direct</b>             | 3,498,174  | 1,698,123   | 2,471,834 |
| <b>Indirect + induced</b> | 2,245,937  | 1,380,350   | 1,703,654 |
| <b>Total</b>              | 5,744,111  | 3,078,473   | 4,175,488 |

Thus, a test match could generate approximately between three and six million pounds income to Bristol. This is clearly a large interval of possibilities and it would be useful to evaluate where in the spectrum is most likely to turn out.

There are certain reasons to expect that the lower end is more likely, particularly if account is taken of likely negative impacts of international cricket on the local economy through congestion and displacement of other economic activity. These may be significant but are likely to be lower than otherwise because of the location of the County Ground in a low impact area; and they can be reduced further by improved transport links. It should also be noted that a SIRC (2005) study of a Test match at Headingley (with a similar capacity to the proposed extended stadium at Bristol) estimated an economic impact of £2.6m.

There are other compelling reasons to believe that the impact might be towards or even above our upper estimate. These are that other estimates of economic impact of Test matches have been higher: £5m at Birmingham 1997 (SIRC, 1997); and between £9.5m and £10.8m for Lord's Tests (London Economics, 2007). Further, our estimate of impact is sensitive to the proportion of spectators assumed to come from Bristol. Arguably the proportion could have been lower. All of these factors suggest that the optimistic scenario is more likely. Overall, it seems likely that a Test match (or T20 World Cup or Cricket World Cup series of matches) would yield an economic impact of around £5m.

This report is preliminary and would benefit from further research. In particular survey data on cricket spectators' behaviour would increase our confidence in assessing indirect impact. We should also like to investigate congestion and displacement effects further. Lastly, the study is based on assumptions about likely market conditions, which ought to be subject to sensitivity analysis.

## **Appendix 1: SIRC methodology**

The UK Sport approved methodology was devised by SIRC (Sport Industry Research Centre, at Sheffield Hallam University) (1999). This method essentially involves ten stages, which can be summarized as follows:

- ✧ Quantify the proportion of respondents who live in the host city and those who are from elsewhere;
- ✧ Group respondents by their role in the event, e.g. spectators, competitors, media, officials etc.;
- ✧ Establish basic characteristics of visitors e.g. where they live and composition of the party;
- ✧ Determine the catchment area according to local, regional, national or international respondents;
- ✧ Quantify the number of visitors staying overnight in the host city and the proportion of these making use of accommodation;
- ✧ Quantify how many nights those using commercial accommodation will stay in the host city and the cost per night;
- ✧ Quantify for those staying overnight (commercially or otherwise) and day visitors, the daily spend in the host area, in standard expenditure categories;
- ✧ Quantify what people have budgeted to spend in the host city and for how many people such expenditure is for;
- ✧ Establish the proportion of people whose main reason for staying in the host city is the event;
- ✧ Determine if any spectators are combining their visit to an event with a holiday in order to estimate any wider impacts.

*(From: UK Sport)*

Information is sourced through a combination of questionnaire surveys, interviewing key interest groups, and reference to 'local' database sources. Analysis is undertaken with specialist statistical software packages to calculate expenditure in the local economy, and thus the direct effect. In some, although not all, cases multipliers are then used to determine the total economic impact, i.e. direct, indirect and induced effects.



## Appendix 2: Event Economic Impact Studies Reviewed

- ✧ Ryder Cup Wales 2010 projection
- ✧ Lord's Cricket Matches, 2007, npower Test Match, England v West Indies, May 2007.
- ✧ World Rowing Championship, 2006, Eton.
- ✧ Volvo ISAF World Youth Sailing Championship, 2006, Weymouth/Portland.
- ✧ FEI Blenheim Pet Plan European Eventing Championship, 2005, Blenheim.
- ✧ UCI Women's World Cup Cycling Grand Prix of Wales, 2005, Celtic Manor.
- ✧ UEFA Under 19 Football Championships, 2005, Northern Ireland.
- ✧ Bearing Point Rowing World Cup, 2005, Eton.
- ✧ England v South Africa Test Match, Trent Bridge, Nottingham, August 2003.
- ✧ World Indoor Athletics, 2003, Birmingham.
- ✧ World Cup Triathlon, 2003, Manchester.
- ✧ Football World Cup, 2002, S. Korea.
- ✧ World Snooker Championship, 2002, Sheffield.
- ✧ Western Counties Swimming Championships, 2002, Millfield.
- ✧ Middlesbrough Open Meet, 2002.
- ✧ Satellite Open Meet, 2002, Macclesfield.
- ✧ IAAF World Half Marathon Championships & BUPA Bristol Half Marathon, 2001, Bristol.
- ✧ The City of Sheffield Designated Open Meet, 2001.
- ✧ World Amateur Boxing Championship, 2001, Belfast.
- ✧ Spar Europa Cup – Athletics, 2000, Gateshead.
- ✧ Flora London Marathon, 2000, London.
- ✧ Rugby World Cup, 1999, Wales
- ✧ World Indoor Climbing Championship, 1999, Birmingham.
- ✧ World Judo Championship, 1999, Birmingham.
- ✧ World Show Jumping Championship, 1999, Hickstead.
- ✧ European Short Course Swimming Championship, 1998, Sheffield.
- ✧ Network Q Rally of Great Britain, 1998.
- ✧ Women's British Open Golf, 1997, Sunningdale.
- ✧ European Junior Swimming Championship, 1997, Glasgow.
- ✧ IAAF Grand Prix Athletics, 1997, Sheffield.
- ✧ World Badminton Championship, 1997, Glasgow.
- ✧ Sudirman Cup, 1997, Glasgow.
- ✧ European Junior Boxing Championship, 1997, Birmingham.
- ✧ 1<sup>st</sup> Ashes Test Cricket, 1997, Birmingham

### **Appendix 3: References**

London Economics (2007). *The Economic Impact of Major Cricket Matches at Lord's*, Report for Marylebone Cricket Club.

SIRC (1997) for UK, English and Scottish Sports Councils, *Economic Impact of Six Major Sports Events That Took Place in England and Scotland in 1997*.

SIRC (2001). *The 2001 IAAF World Half Marathon Championships & BUPA Bristol Half Marathon: An Evaluation of the Economic Impact, Place Marketing Effects and People's Perceptions of Bristol*.

SIRC for UK Sport (2005) *Measuring Success 3: The Economic Impact of Major Sporting Events*, available from [www.uk sport.gov.uk](http://www.uk sport.gov.uk)



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## APPENDIX 4: FLOODLIGHT USAGE MANAGEMENT PLAN



---

**Floodlight Usage Management Plan**  
**Gloucester County Cricket Club Ground**  
**Application reference - 14/05030/F**

|              |          |             |       |
|--------------|----------|-------------|-------|
| Prepared by: |          |             |       |
| Author       | GT/WB/SF | Approved By | WB/SF |

Date of Issue: March 2015



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## 1 INTRODUCTION

- 1.1 This Floodlight Usage Management Plan ('the Plan') has been prepared to accompany an application for 6no. proposed 45m permanent floodlights at Gloucestershire County Cricket Club ('the Club') and comprises details of usage in terms of times, frequency and maintenance as well as procedures to ensure ongoing successful communication with local residents.
- 1.2 The Plan is based upon conditions recommended by Bristol City Council Officers in the Planning and Environmental Health Departments and feedback from consultation with local residents throughout the planning application process.

## 2 TIMES AND FREQUENCY OF USAGE

- 2.1 Apart from essential maintenance (see section 4 below), the floodlights shall only be used for competitive cricket matches and shall not be used more than 15 occasions per calendar year unless otherwise agreed in writing with the LPA.
- 2.2 The lights shall not be operated earlier than 10:00 hours on any day and shall be switched off as soon as practicable after a match, which shall be no later than 23:00 hours on any day unless otherwise agreed in writing with the LPA.
- 2.3 At the end of duration of play of competitive cricket, the level of light from the floodlights shall be reduced so that only 10% of the luminaires on each mast shall be used.
- 2.4 With the exception of televised matches, the lights shall be fully switched off within 30 minutes of the end of the duration of play of competitive cricket and by no later than 23:00.
- 2.5 Those matches that are televised will be subject to the same terms other than the 'reduced' lighting will be allowed through to 23.00 rather than 30 minutes from the end of play to allow for de-rigging of television equipment.
- 2.6 The floodlights will only be used for Domestic and International Twenty20 ('T20'), 50 over matches (including World Cup matches) and as a 'top-up' for completing 4 day matches prior to 7pm if required.

- 2.7 The floodlights will be used at ECB light level requirements for all domestic matches and ECB sanctioned International matches. The floodlights will only be used at full capacity to ICC light level requirements for ICC sanctioned International matches (including the World Cup). Please see **Appendix 1** for existing ECB and ICC specific lux level requirements).

#### Evening T20 Matches

- 2.8 For evening T20 domestic matches the start time would be 18.30 with a scheduled finish of 21:15, with a possible rain extension meaning all matches are concluded by 22:00. At this point the floodlights will be dimmed to either 10% of the luminaires on each mast for non-televised matches or 50% of the luminaires on each mast for televised matches to allow de-rigging in accordance with broadcaster requirements. The lights will be completely switched off by 23:00 or earlier.

#### Day / Night 50 Over Matches

- 2.9 For Day / Night (evening) 50 over matches (including domestic and World Cup matches), the start time would be 14:00 with a scheduled finish of 21:45 ensuring all matches will be concluded by 22:00. At this point the floodlights will be dimmed to either 10% of the luminaires on each mast for non-televised matches or 50% of the luminaires on each mast for televised matches to allow de-rigging in accordance with broadcaster requirements. The lights will be completely switched off by 23:00 or earlier.

#### 4 Day Matches

- 2.10 The floodlights will only be used in a top-up capacity for 4-day County Championship domestic matches that are close to a 'result' (i.e. not a draw) in their final day of play. The use of the floodlights in these circumstances is only able to be determined by the umpires on the pitch on the day, however in all of these matches the lights would be off by 19:00.
- 2.11 It is impossible to say exactly when a particular match will be played as this is determined at the start of each season. Notwithstanding this, the maximum scenario that is envisaged within the confines of the proposed conditions, would be for example in 2019 if all seven domestic T20 matches were to be played together with four scheduled domestic 50 over matches and four ICC World Cup matches, this would be fifteen. Currently two out of the seven T20 matches are held in

Cheltenham and at least one of the seven T20 matches is played as a 'family' afternoon fixture in Bristol. Accordingly, it is highly unlikely that all seven T20 matches would require the use of the floodlights.

- 2.12 For televised fixtures play will be concluded by 22:30 and for non-televvised fixtures play will be concluded by 22:00.

### **3 MAINTENANCE, TESTING AND CHECKING**

#### Maintenance

- 3.1 The floodlights are covered by a ten year warranty for maintenance and testing (including checking). Given the high standard of floodlight design it is envisaged that the only times maintenance would be required is to change a luminaire or a fix a wire. As such maintenance will be required only very occasionally and highly unlikely to be required annually.
- 3.2 In cases where maintenance is required, a small 'cherry picker' lift machine would be employed to enable a specialist light engineer to gain access to the head frame and luminaires. It is noted that this 'cherry picker' lift cannot be employed to remove the head frame as the size and weight of the head frame is too substantial to be supported by a machine such as this.

#### Initial Testing

- 3.3 The floodlights would be set and tuned in the factory prior to construction but initial testing of light levels would be required after construction. The initial testing would check every single lux level across the full pitch and ground up to and including on the boundary. Such testing is likely to take 3-4 hours on 2-3 consecutive days depending on the number of adjustments required. In the event that the testing could be undertaken for longer periods on one day, the number of days testing would be shorter. The Club will notify residents as to the likely testing days and times in advance as soon as this information becomes available.
- 3.4 Prior to the first use of the floodlights for competitive cricket the lux levels, for both vertical and horizontal illuminance, shall be checked against those on the Predicted Overspill Footprint Drawings (140615H 26 November 2014 Vertical & Horizontal lux). Lux levels shall be checked at the boundary of the Gloucestershire County



Cricket Club Ground and at any other reasonable location within 50 metres boundary of the Gloucestershire County Cricket Club Ground as requested by an authorised officer of Bristol City Council Pollution Control Team. For the avoidance of doubt, the floodlights shall only be checked between 10.00 hours and 23.00 hours.

- 3.5 If the lux levels are 5% above those on the Predicted Overspill Footprint Drawings then appropriate mitigation measures shall be carried out in agreement with an authorised officer of Bristol City Council Pollution Control Team.
- 3.6 The maximum light level on Kennington Avenue shall not exceed 323 Vertical Lux or 54 Horizontal Lux.

#### Checking

- 3.7 After the initial testing is completed it is envisaged that no further checking will be required prior to the use of the floodlights for competitive cricket matches. As such there are currently no plans to test the floodlights before any match. Notwithstanding this, in the event that checking is required this would be done on the day of the match prior to the start of the game. The only exception to this is where checking/testing is required as maintenance in the event of a genuine concern raised by a local resident.

## **4 CONSULTATION WITH LOCAL RESIDENTS**

- 4.1 On the advice of Bristol City Council officers, a small group of local residents who have expressed concerns have been directly consulted in the production of this Plan.

#### Notification

The Club will provide written information delivered to local residents properties prior to the end of March in any year indicating which matches will be played under floodlights and their start times. The Club will also include details as to whether the matches will be televised and whether such matches will be played to ECB level requirements or ICC level requirements.

- 
- 4.2 The Club will also supply the same information on the notice boards at either entrance to the ground and update the Club's website with the same information.
- 4.3 The only exception to this will be where the County Club makes the quarter finals / knockout stages of a tournament because the date of such matches is not fixed until closer to the event. For those matches that are not known at the beginning of the season (e.g. the knockout stages of a tournament) then the same rules as above will apply and be delivered no less than 48 hours in advance of the match.

#### Complaint Procedure

- 4.4 The Club are committed to ensure ongoing successful communication with local residents. In the event of any concerns being raised, the Club have an effective complaints procedure in place. As such the Club will publish (on all of the above literature) a contact number for the Club and the Council for the raising of any complaints with a suggestion that both parties are informed of any concerns.
- 4.5 In the event that any part of this Plan requires review or revision such revisions will be undertaken in consultation with residents and officers of the Council at the appropriate time.



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## APPENDIX 1: ECB AND ICC LIGHT REQUIREMENTS

### **ECB and ICC Lux Level Requirements**

In order to be able to host international cricket games, the Club have to achieve ECB requirements for technical design and simultaneously have to achieve the ICC requirements for lux levels as it is the ICC event (the World Cup) that GCCC is hosting.

Below is a comparison of the ICC and ECB performance requirements in lux levels as an overview:

| LIGHTING REQUIREMENT                              | ECB       | ICC       |
|---|-----------|-----------|
| Wicket Horizontal Lux Level                       | 2,200 Lux | 3,000 Lux |
| Wicket Vertical to Camera Lux Level               | 2,000 Lux | 2,500 Lux |
| Inner Field Horizontal Lux Level                  | 2,000 Lux | 2,500 Lux |
| Inner Field Vertical to Camera Lux Level          | 1,800 Lux | 2,000 Lux |
| Outer Field/Boundary Horizontal Lux Level         | 1,500 Lux | 2,000 Lux |
| Outer Field/Boundary Vertical to Camera Lux Level | 1,300 Lux | 1,500 Lux |

The following guidelines are required for ICC International cricket matches and these have to be achieved in order to host the ICC sanctioned international games.

Full details of the need for both the ECB and ICC light level requirements are found in the main floodlight option review report.



# Lighting specification Cricket

International level

# Introduction

Cricket is defined by the CIE as a class C sport due to the potential fast speed of the ball. The ball can travel at up to 160 km/h and so careful attention needs to be paid to the lighting quality on the wicket. Sufficient vertical illuminance should be provided to enable the ball to be clearly seen in the air.

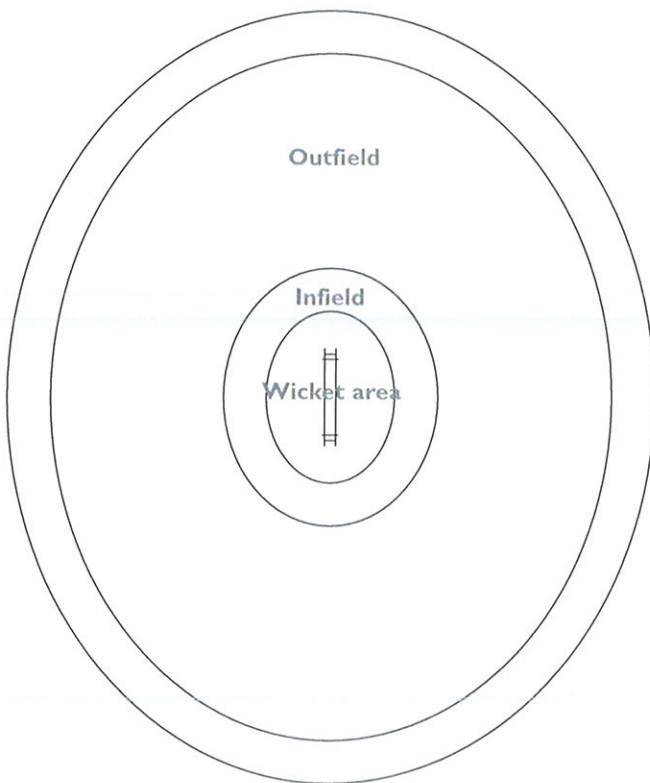
As the game is played in two directions, the lighting solution should be symmetrical and in order to prevent the batsman or bowler looking directly into a light source a zone should be provided behind the wickets without lighting.

As with all other sports where there is to be television coverage illuminance should be provided in the direction of cameras.

## Cricket pitch zones

The pitch should be divided into the following zones to enable a practical lighting solution to be provided:

- Wicket area
- Inner field
- Outfield and boundary



## Lighting requirements

The lighting should meet the needs of the users of the facility who can be defined as:

- players
- umpires
- spectators at the venue
- spectators on television

## Lighting parameters

The following factors should be considered:

### illuminance (E)

- E<sub>h</sub>. Horizontal illuminance
- E<sub>v</sub>. Vertical illuminance
- E<sub>cam</sub>. Illuminance in camera direction

### Uniformity

- Min/Ave. Ratio of minimum divided by average illuminance.
- Min/max. Ratio of minimum divided by maximum illuminance.

### Colour Temperature

This is colour appearance of a light source.

### Colour Rendering

This is the ability of a light source to make a surface colour appear natural. Daylight renders colours at 100Ra. A good colour rendering light source will be above 90Ra.

### Glare

In addition to the 'forbidden zone' luminaires aimed at shallow angles should be avoided. 70 degrees can be used as a rule of thumb for the maximum aiming angle, however Glare Rating calculations should also be undertaken.

# Lighting Specification

## Masts

Should be situated outside the 'forbidden zone' as shown in the diagram opposite. In defining this zone account should be taken of the space necessary to move the wicket.

A minimum of 6 masts should be used if a good lighting result is to be achieved. With less masts than this it will be difficult to achieve the specification on the outer field and there is a danger that harsh shadows will be created.

A daylight study should be undertaken to reduce and ideally prevent the time there is any shadow on the wicket

Eh at 0m. Ecam at 1.5m.

## Wicket

Ecam 2500 lx  
Eh 3000 lx  
Min/ave 0.7  
Min/max 0.6

## Inner Field

Ecam 2000 lx  
Eh 2500 lx  
Min/ave 0.6  
Min/max 0.5

## Outer Field and boundary

Ecam 1500 lx  
Eh 2000 lx  
Min/ave 0.5  
Min/max 0.4

## Glare Rating

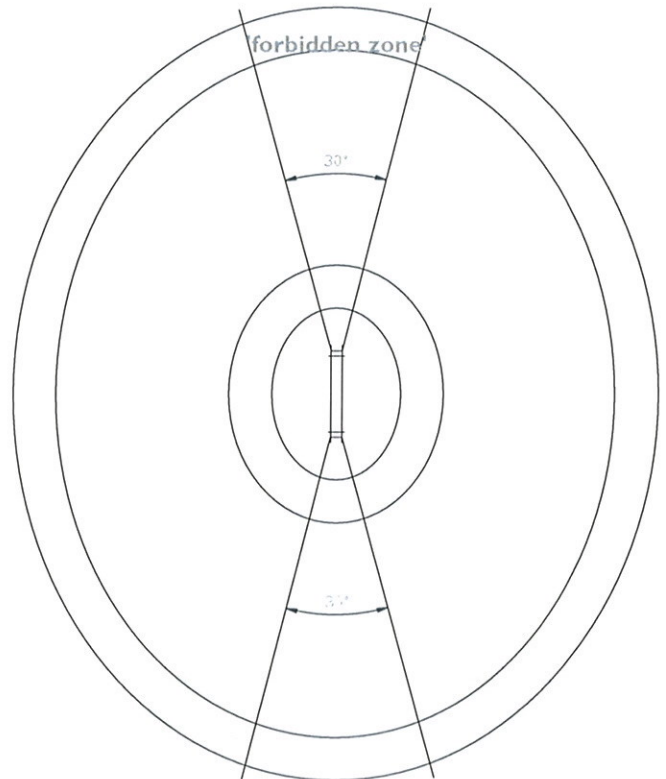
Glare Rating calculations should be carried out at key positions including for the batsman and for camera positions. <40 is recommended by the CIE for critical observer positions.

## Colour Rendering

Lamps with colour rendering properties of >90 should be installed.

## Colour Temperature

The same colour temperature lamps should be used throughout the sports lighting installation. >5500 is recommended.







**Lighting Design and  
Application Centre**

**Philips Lighting  
Centre Industriel de Miribel  
Rue des Brotteaux  
01708 Miribel  
France  
Tel +33(0)4 78 55 81 00  
Fax +33(0)4 78 55 82 45**

**Date: September 2006**

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from the proprietor







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## APPENDIX 5: FORMAL STATEMENT FROM ECB

The minimum number of masts stated in the ECB and ICC guidelines is 6 masts, (the optimum being 8 masts) and the decision to progress with less than 6 masts at other venues has been driven by physical site constraints and has resulted in the systems finding it difficult to achieve the ECB and ICC requirements. The Bristol County Ground has less physical obstructions than a lot of International venues and also one of the larger outfield in the country and therefore a 6 mast option is the option required.

A system with 4 masts when compared to 6 masts may initially appear similar on paper and when assessing the illuminance and uniformity values however this analysis will not consider other factors such as shadow control, glare, aiming and spill light and the actual performance will be inferior with less masts. Our recommendation would be to progress with the 6 mast solution as a minimum on the basis that they could be physically accommodated within the constraints of the site. The playing area lighting quality will be far superior to that of a 4 mast solution. Glare control should be better, uniformity should be better, masts can be shorter and spill light should be reduced and better controlled.

Each cricket venue is uniquely different based both on the facilities they have on-site and the physical constraints under which they operate. With specific regards to floodlights the presence of stands and buildings can significantly impact the number and positioning of the lights and the impact on the spread of light. Given this variation each ground has to be evaluated on an individual basis and it is impossible to practically compare infrastructure at one venue with another. It is worth noting that with the exception of Emirates Durham ICG, the Bristol County Ground is the only International venue in England and Wales that does not have permanent floodlights in place.

The Bristol County Ground has provisionally been awarded 4 ICC Cricket World Cup matches in 2019. The award of these matches is subject to the installation of permanent floodlights meeting the International Cricket Council (ICC) guidelines. Without these permanent floodlights in place then the "award" could be retracted and reallocated. It is clear that to have permanent floodlights is critical for all International Cricket Venues in the future. Furthermore, in bidding for other International Cricket Matches that are sanctioned by the England and Wales Cricket Board (ECB) those International venues without permanent floodlights in place will be subject to a lower facilities "score" as part of the bid process for these matches which would severely impact their ability to be awarded future International matches.

The England and Wales Cricket Board have been involved with Gloucestershire County Cricket Club and the Bristol County Ground in their planning for floodlights since the outset of the project and along with the ECB's independent lighting consultants, M-E Engineers, have reviewed and advised on several different options. We believe the club has performed a robust review of all the options alongside a public consultation and we believe that the 6-mast option they are proposing is the optimum one for the venue and indeed is the only one that the ECB would support at this time.

**Ben Green**

**ECB Broadcast Operations and Facilities Manager**

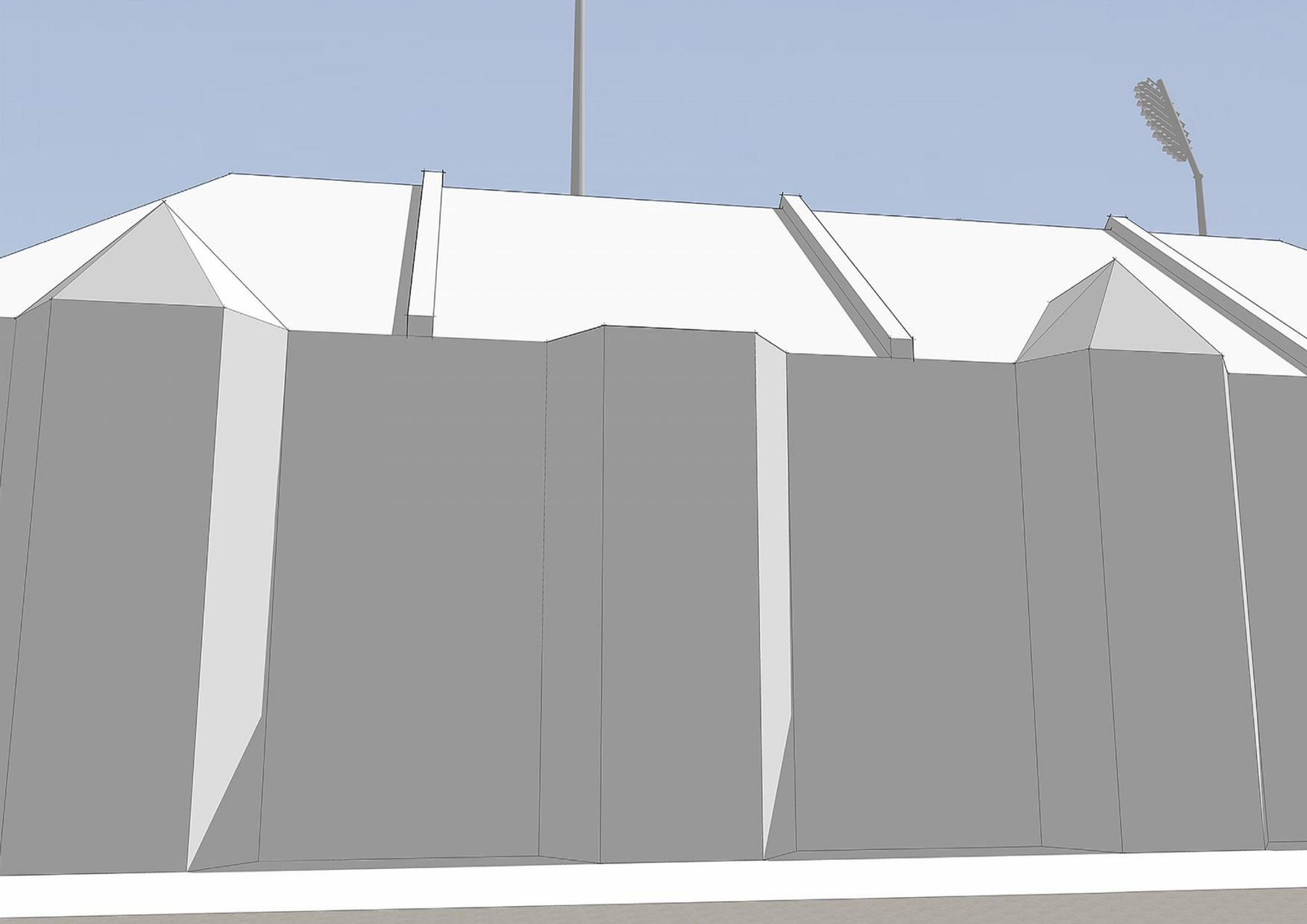
**23<sup>rd</sup> March 2015**



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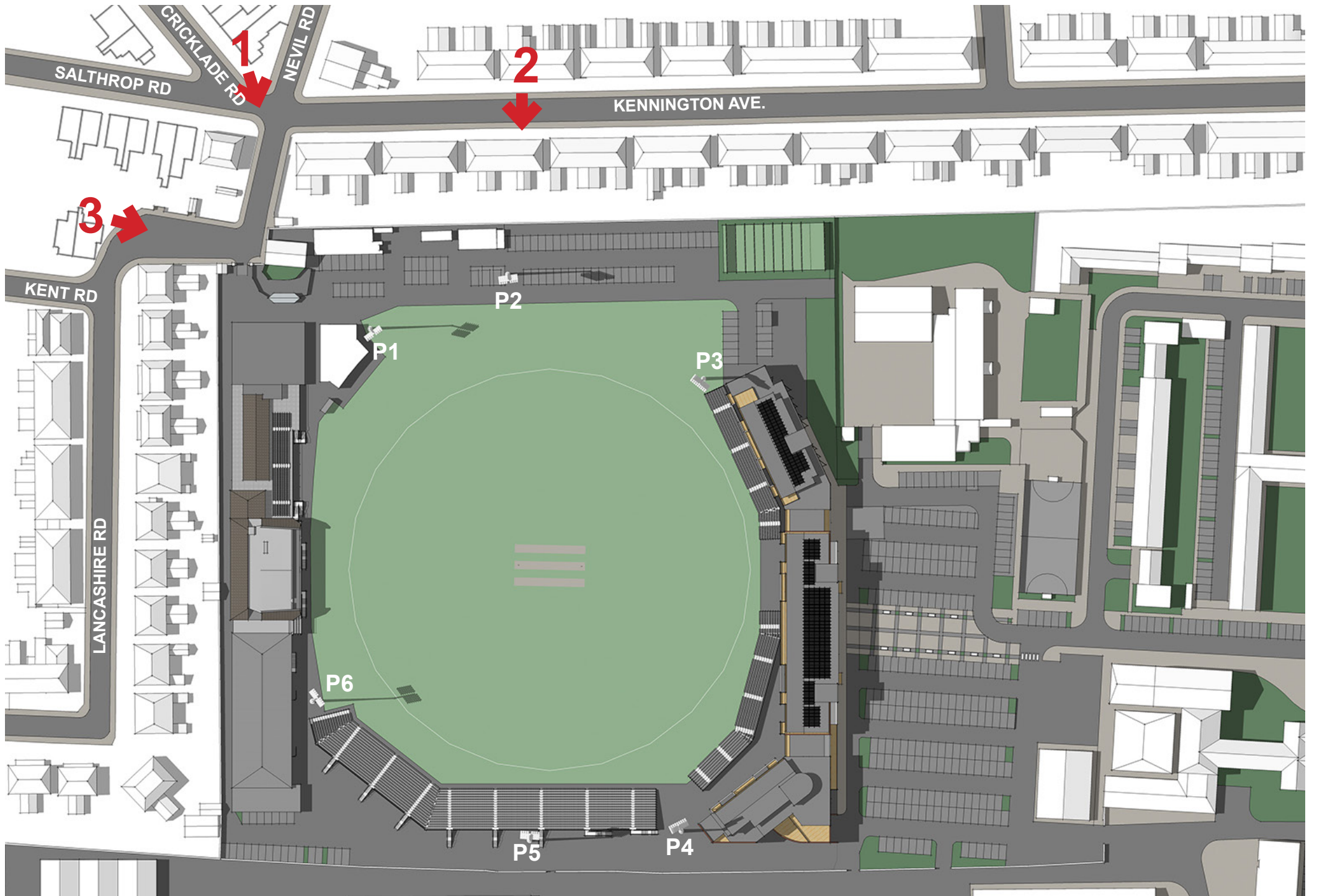
## APPENDIX 6: LOCAL VIEWS OF PROPOSED SOLUTION













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## APPENDIX 7: LETTER FROM LIGHTING ENGINEER





20 March 2015

Will Brown  
Gloucestershire County Cricket Club  
Bristol County Ground  
Nevil Road  
Bristol  
BS7 9EJ

Dear Mr. Brown,

As requested, we have submitted an alternate headframe design for the floodlight masts proposed at Gloucestershire County Cricket Club. This design incorporates a more rounded look to the headframes, instead of the original squared design.

The new design of the rounded headframes will not have an impact on the previously submitted lighting performance designs or spill calculations.

Please let me know if you need any additional information at this time.

Kind regards,

Chris Limpach  
Key Account Sales  
Musco Lighting Europe Ltd.






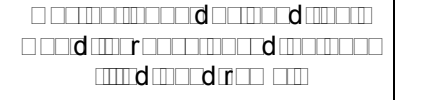

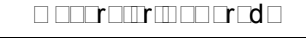




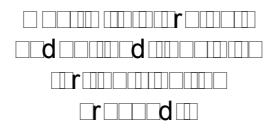
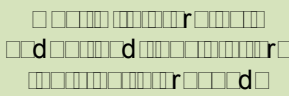
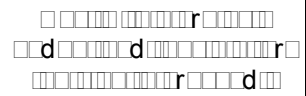

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## APPENDIX 8: SUMMARY TABLE OF ALTERNATIVE OPTIONS

Gloucestershire County Cricket Club  
Proposed Floodlights

|   | 4M                                      | M                                      | M  | r   | r   |
|---|---|--|--|---|---|
| <p>Diagram of 4M mast configuration</p> | <p>Diagram of 4M mast configuration</p> | <p>Diagram of M mast configuration</p> | <p>Diagram of M mast configuration</p>   | <p>ECB requires 25 degree angle from bottom of headframe to centre of playing field. Temporary would not comply.</p>                                | <p>A 2 section mast would collapse to half it's working height (around 23m in this case). More sections mean wider mast and larger foundation - and also increase cost significantly.</p>   |
| <p>Diagram of 4M mast configuration</p> | <p>Diagram of 4M mast configuration</p> | <p>Diagram of M mast configuration</p> | <p>Glare zones specified by the ECB limit the locations that masts can be placed. 8 masts not practical/feasible due to ground limitation.</p> | <p>Diagram of 4M mast configuration</p>   | <p>Mast locations would have to change for the retractable, as the head-frame would have to be given ample space to lower. Due to the other structures at the ground, it would be difficult to find adequate space for the headframes to lower.</p> |
| <p>Diagram of 4M mast configuration</p> | <p>Diagram of 4M mast configuration</p> | <p>Diagram of M mast configuration</p> | <p>Diagram of M mast configuration</p>   | <p>Temporary system does not meet ECB or ICC requirement for lux level, uniformity, glare control, or technical spec for broadcast requirements</p> | <p>Diagram of 4M mast configuration</p>   |
| <p>Diagram of 4M mast configuration</p> | <p>Diagram of 4M mast configuration</p> | <p>Diagram of M mast configuration</p> | <p>Diagram of M mast configuration</p>   | <p>Diagram of 4M mast configuration</p>   | <p>Diagram of 4M mast configuration</p>   |
| <p>Diagram of 4M mast configuration</p> | <p>Diagram of 4M mast configuration</p> | <p>External Visor and reflectors</p>   | <p>Diagram of 4M mast configuration</p>  | <p>Minimal – Directional aiming.</p>  | <p>Diagram of 4M mast configuration</p>   |

Gloucestershire County Cricket Club  
Proposed Floodlights

|   |   |  |   |   |  |
|---|---|--|---|---|--|
|    |    | <p>2.2 lux (100m radius)</p>   |    | <p>32.0 lux (100m radius)</p>   |   |
|    | <p>Negligible</p>   | <p>Negligible</p>  | <p>Negligible</p>   |    | <p>Negligible</p>  |
|    | <p>Fewest masts, largest headframe</p>  | <p>Proposed best option</p>  | <p>More masts, smallest headframe</p>   |    | <p>Will only collapse to a certain height, so from a close view, the collapsed headframe would be much closer to the ground and must be considered a much greater visual disturbance and cast a greater shadow. The headframe will not collapse completely out of view.</p>                              |
| <p>Maintained using an access lift.</p>   | <p>Floodlights on a fixed mast would be maintained using an access lift.</p>        | <p>Floodlights on a fixed mast would be maintained using an access lift.</p>         | <p>Floodlights on a fixed mast would be maintained using an access lift.</p>          |    | <p>Retractable masts reduce the height of the access lift, but still need a lift to maintain the floodlights.</p>  |
|  |  |  |  |  | <p>Significantly more expensive than a fixed mast. Increasing the number of sections (thus decreasing the collapsed height) will add more cost. The hydraulic unit and oil reservoir needed to actuate the retractable mast are also expensive and the full system would require annual maintenance.</p> |



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## APPENDIX 9: COSTS OF RETRACTABLE HEAD FRAMES



13 March 2015

Will Brown  
Gloucestershire County Cricket Club  
Bristol County Ground  
Nevil Road  
Bristol  
BS7 9EJ

Dear Mr. Brown,

With reference to your query regarding costs associated with retractable or telescopic masts for the proposed floodlighting at Gloucestershire CCC:

I can confirm that based on initial concept designs of 2 or 3 stage retractable masts, overall project costs would increase at least of 80-90%. This higher cost would be associated with equipment and design costs, civil installation works, mechanical installation works, and activation/maintenance equipment which would be required. The additional complexity of the masts (multiple telescopic stages to get the retracted position lower) would increase costs further.

In addition to the increase in initial project capital costs, ongoing maintenance would also increase with the costs associated with maintenance and insurance of the masts and activation equipment.

To date our concept analysis on retractable has been based on a 6 mast solution; however in the event that a 4 mast solution is preferred, I would expect that the project capital cost increase would remain in the region of 80-90%, as the physical size, headframe, foundation size would all increase to account for the additional floodlights distributed on a 4 mast solution compared to a 6 mast solution.

Please let me know if you need any additional information at this time.

Kind regards,

Chris Limpach  
Key Account Sales  
Musco Lighting Europe Ltd.



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## APPENDIX 10: GROUND VIEWS OF RETRACTABLE COMPARISONS



















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## APPENDIX 11: COSTS OF REMOVABLE HEADS

Musco Lighting  
Unit 1005 Great Bank Road  
Wingates Industrial Estate  
Westhoughton  
Bolton  
BL5 3XU

Date: 26/02/2015  
Job Ref: ST061985

Dear Chris

**RE: Gloucestershire County Cricket Club – Floodlight Assembly and Dismantlement Quotation**

Further to your request, we have pleasure submitting the following fixed cost for the floodlight works at the above development.

*Proposed Works*

Assemble 2xno. 72 fixture, 2xno. 56 fixture and 2xno. 90 fixture lighting racks prior each floodlit match.  
Dismantle 2xno. 72 fixture, 2xno. 56 fixture and 2xno. 90 fixture lighting racks after each floodlit match.

We assume at this stage the club will be providing a secure storage area in the vicinity of each column location. This would allow us to raise and lower the lighting racks as a whole each time minimising the labour resources building the racks each time.

The column manufacture would need to create us a 'blank plate' to fix at the top of each column to illuminate water ingress when the lighting racks are at ground level.

Each wiring harness will need to be removed and installed accordingly.

Our quotation covers all labour, mechanical & electrical works associated. Adequately sized crane and access platform.

Fixed Cost for Electrical & Mechanical - £38,693.25 + VAT

If you have any queries with the above, please do not hesitate to contact the undersigned. We do hope this meets your approval and look forward to hearing from you in due course.

Yours Sincerely

Shane Tugwell  
D&H Electrical Installations



INDUSTRIAL | COMMERCIAL | RESIDENTIAL

The Gate House | Basin Road South | Portslade | Brighton | BN41 1WF



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## APPENDIX 12: TECHNICAL NOTE ON REPOSITIONING FLOODLIGHTS





20 March 2015

Will Brown  
Gloucestershire County Cricket Club  
Bristol County Ground  
Nevil Road  
Bristol  
BS7 9EJ

Dear Mr. Brown,

As we have discussed, various queries have been raised regarding the proposed positioning of the floodlights for Gloucestershire CCC. For clarity, I thought it would be important to comment on the decision to position the masts as shown on our design.

1. The position of the P3 column was somewhat dictated to Musco's design engineers by the project architects, but rightly so, as the 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). Other proposed locations in the same vicinity would likely see the floodlight column foundation encroach or very nearly encroach on the foundation of the underground car park, which is obviously a significant structural concern.

2. While it may not be a concern to the residents, the lighting design is already compromised to being fully compliant of the ECB/ICC lighting requirements, specifically in the East Boundary Camera vertical levels and uniformity. This is due to the columns P3 and P4 being pushed too far forward than would be desirable, but obviously the apartments have required that this be the case. 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 design levels. The ECB and their engineers, ME Engineering, have already signed off on the compromised design as they understand the required column locations in relation to the apartments, but further negative changes, may not be deemed acceptable.

3. Pushing the column away from the pitch, particularly to the North as requested, will negatively impact the spill and skyglow calculations, which have already been submitted.

Please let me know if you need any additional information at this time.

Kind regards,

Chris Limpach  
Key Account Sales  
Musco Lighting Europe Ltd.

**Lighting . . . We Make It Happen.**



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## APPENDIX 13: INDEPENDENT STATEMENT FROM NEIL JOHNSON



# Gloucestershire County Cricket Club

## Lighting Design Statement

Project Ref : SP1057

Report By – Neil Johnson

20/3/2015



## 1.0 Introduction

Gloucester County Cricket Club (GCCC) has begun a process of ground improvements in accordance with England and Wales Cricket Board (ECB) requirements.

As part of the ground improvements, GCCC are pursuing the installation of permanent floodlights which would specifically allow for the playing of International and Domestic One Day and Twenty20 fixtures. This would result in the award of Day/Night One Day Internationals and exposure to International Cricket Council (ICC) regulated matches.

Neil Johnson Sports Lighting Consultants Ltd was appointed by GCCC to provide consultancy services to oversee the design of a permanent floodlighting scheme. This document along with the associated lighting design drawings has been produced to support the planning application.

## 2.0 ECB and ICC Lighting Specifications

The project brief from GCCC was to propose a design solution that meets the recommendation of both the England & Wales Cricket Board (ECB) and the International Cricket Council (ICC). These guidelines detail required average illuminance on the playing surface and illuminance perpendicular to any fixed camera in Lux (Lumen/m<sup>2</sup>) with recommended uniformity levels.

The following table is a summary as provided by the ECB illustrating the criteria to be considered for ECB events, it sets out recommendations regarding vertical & horizontal illuminance, uniformity and the colour properties of lamps.

The following table is a summary as provided by the ECB illustrating the criteria to be considered for ECB events, it sets out recommendations regarding vertical & horizontal illuminance, uniformity and the colour properties of lamps.

Figure 1.1: ECB Flood Lighting Standards

| Lighting Specifications for Cricket - Flood Lighting Standards |                                |                      |            |      |                        |            |     |                     |                  |
|--|--------------------------------|----------------------|------------|------|------------------------|------------|-----|---------------------|------------------|
| Class  | Calculation toward:            | VERTICAL ILLUMINANCE |            |      | HORIZONTAL ILLUMINANCE |            |     | PROPERTIES OF LAMPS |                  |
|  |                                | Ev cam Ave.          | Uniformity | U2   | Eh. Ave.               | Uniformity | U2  | Colour temperature  | Colour rendering |
|  |                                |                      |            |      |                        |            |     |                     |                  |
| Crease   | Fixed camera                   | 2000                 | 0.6        | 0.65 | 2200                   | 0.6        | 0.8 | Tk > 4000 K         | ≥ 65             |
|  | Field cameras (at pitch level) | 1500                 | 0.4        | 0.6  |                        |            |     |                     |                  |
| Midfield   | Fixed camera                   | 1800                 | 0.5        | 0.65 | 2000                   | 0.6        | 0.8 | Tk > 4000 K         | ≥ 65             |
|  | Field cameras (at pitch level) | 1200                 | 0.4        | 0.5  |                        |            |     |                     |                  |
| Boundary   | Fixed camera                   | 1300                 | 0.6        | 0.75 | 1500                   | 0.5        | 0.8 | Tk > 4000 K         | ≥ 65             |
|  | Field cameras (at pitch level) | 1000                 | 0.35       | 0.4  |                        |            |     |                     |                  |



The table shown below shows the equivalent criteria as published by the ICC reproduced in a similar format for comparison with ECB Standards.

Figure 2.2:ICC Lighting Standards

|                   | Illuminance | U1 (E <sub>min</sub> /E <sub>max</sub> ) | U2(E <sub>min</sub> /E <sub>ave</sub> ) |
|-------------------|-------------|--|---|
| <b>Horizontal</b> |             |  |   |
| Crease            | 3000        | 0.6                                      | 0.7                                     |
| Midfield          | 2500        | 0.5                                      | 0.6                                     |
| Boundary          | 2000        | 0.4                                      | 0.5                                     |
| <b>Vertical</b>   |             |  |   |
| Crease            | 2500        | 0.6                                      | 0.7                                     |
| Midfield          | 2000        | 0.5                                      | 0.6                                     |
| Boundary          | 1500        | 0.4                                      | 0.5                                     |

### 3.0 Design Outline

GCCC has approached two major lighting companies (Musco Lighting and Abacus Lighting) in order to obtain lighting competitive design proposals. Both companies have produced designs which are compliant with the ECB and ICC requirements for a minimum of six lighting masts.

#### 3.1 Mast Locations

The ECB and ICC recommendations state that a minimum of six masts should be installed to prevent harsh shadows & improve uniformity. There are constraints on the location of the masts, which state that no masts can be located within 15 degrees of the wicket.

Both lighting companies have used similar mast locations which are designed to avoid existing site obstructions such as the underground car park for the new apartment complex. Masts are located on each side of the Pavilion Complex, each side of the new apartment building and at mid-wicket.

#### 3.2 Mast Height

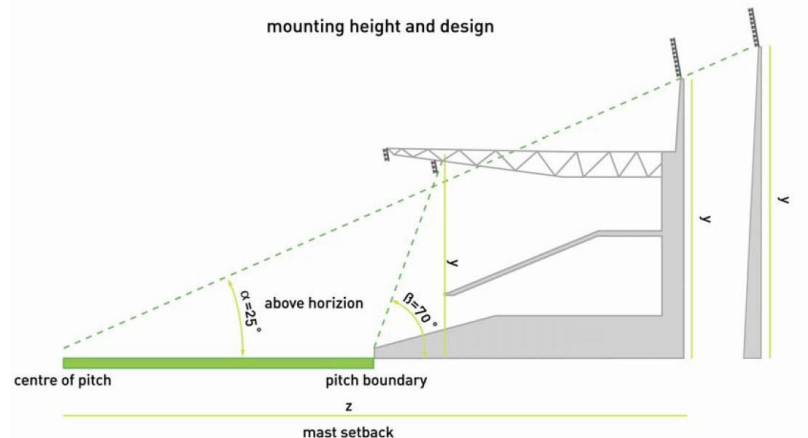
The ECB guidelines for flood lighting of cricket pitches specify that the height to the underside of the headframe should be greater than or equal to 25 degrees above the horizon when measured from the centre of the pitch to minimise glare for the players. Refer to figure 3.1.

In order to achieve this requirement, the Musco Lighting have designed a mast at 45m to the top of the headframe and Abacus Lighting 45m to the centre of the headframe. Both are compliant with the ECB and ICC recommendations.

The mast height has also been chosen to provide the optimum balance between efficient pitch lighting and control of spill light and glare. Lower masts would result in greater spill light due to shallower luminaire aiming angles, higher angles would require more floodlights to achieve the vertical illuminance levels required for HDTV coverage.



Figure 3.1 Mounting Height



### 3.3 Mast Headframe

There is a trend amongst some county cricket grounds to produce headframes which are unique to that ground, making each site instantly recognisable. Although this has been discussed briefly with the GCCC no definitive design has been produced, however, it is the clubs intention to produce an attractive design in keeping with the surroundings.

## 4.0 Floodlights and Masts.

### 4.1 Floodlights

By approaching two lighting companies GCCC have two floodlighting proposals which reflect the differing approaches to luminaire design and operation.

Musco Lighting use their Light Structure Green system which is a projector floodlight fitted with a 1.5KW Metal Halide Lamp and a Hood to reduce spill and upward waste light(See Appendix A for floodlight details).

Abacus Lighting use their Challenger 3 floodlight which uses a 2KW Metal Halide Lamp and has either Concentric or Bladed Louvres to control spill and upward waste light(See Appendix B for floodlight details).

Musco and Abacus also have different approaches to maintaining light levels, Musco use a light control system which produces Constant Illuminance. This is achieved by increasing power to the lamps as the lamps age producing the consistent illuminance level throughout the life of the installation. Abacus use the conventional method of applying a maintenance factor to take into account light losses due to lamp depreciation and dirt accumulation.

### 4.2 Masts

The floodlight masts have been designed as permanent static masts. The mast structure will be formed of steel construction with a galvanised finish. The mast foundations will be formed of reinforced concrete construction of a sufficient depth to resist the applied dead and wind loading. Before installation it is recommended that bore hole samples are taken to ensure that the foundations are designed for the exact ground conditions at each mast location.



## 5.0 Spill Light

To reduce obtrusive light, the floodlighting design follows the recommendations suggested in:

- Institute of Lighting Professionals (ILP) - Guidance Notes for the Reduction of Obtrusive Light
- ECB – Guidance for Floodlighting at Cricket Grounds

The design has applied the following principles to minimise the impact of light spill:

- Designing a lighting scheme that does not exceed light levels to satisfactorily undertake the task involved
- Reducing many of the negative effects of lighting through proper design and planning.
- Precise aiming of the light fittings to direct the light to where it is required. Light will be directed downwards to illuminate its target, not upwards. In most cases lowering the angle of the beam will stop light projecting to the sky.
- Minimising glare by aiming the main beam of all floodlights lights directed towards the pitch and not exceeding a tilt angle of 70°. It should be noted that the higher the mounting height, the lower the tilt of the main beam angle will be.
- The use of shields, reflectors and baffles to help reduce light spill to a minimum. Lighting will be specifically designed so that once installed will minimise the spread of light above the horizontal.

However, due to the high light levels required for the cricket pitch, some of the target obtrusive levels suggested in these documents may not be achieved. Based on the calculations undertaken to date, contours have been produced for horizontal and vertical lights levels at 1.0m above ground level.

Light Spill Vertical and Horizontal drawings illustrate the level of light spill predicted during normal operation. It should be noted that the matches played would occur in the summer when ambient lighting levels would exceed the amount of spill light for all but the last one to two hours of play.

## 6.0 Summary

The use of permanent floodlighting at GCCC will allow the cricket Club to continue to operate as an international cricket venue.

The use of temporary lights at cricket grounds is no longer deemed acceptable by the ECB due to the superior performance of permanent floodlights. A permanent floodlighting scheme provides improved lighting levels, whilst reducing light spill due to the precise aiming techniques employed.

The mast locations and heights have been selected following a rigorous investigation of the constraints presented by the Club, the ECB and ICC. The heights especially have been selected to provide optimum performance for the players whilst minimising impact on light spill.

Telescopic masts have also been considered, but discounted due to the disproportionate additional cost and the detrimental visual impact at street level.



The light spill drawings show predicted horizontal and vertical illuminance contours in the areas immediately surrounding the ground. The developed design has included several measures such as hooded/louvered luminaires and aiming strategies to minimise spill light to surrounding areas.

The lighting proposals use a six mast design which satisfies the requirements detailed in the lighting guides issued by the ECB and ICC. The proposals will allow GCCC to bid competitively with other venues for ICC regulated international matches.

The design proposals have been assessed by Neil Johnson, a Lighting Consultant with 30 years of experience as a sports lighting engineer, and can be confirmed as using the design principals acknowledged as best practice by the lighting industry.

For and on behalf of

Neil Johnson Sports Lighting Consultants Ltd

*Neil Johnson*

Neil Johnson  
Director

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**Appendix A**



Musco Lighting ... We Make It Happen.

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- [Indoor Lighting](#)
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**Light-Structure Green™ – choice of HID or LED light source**

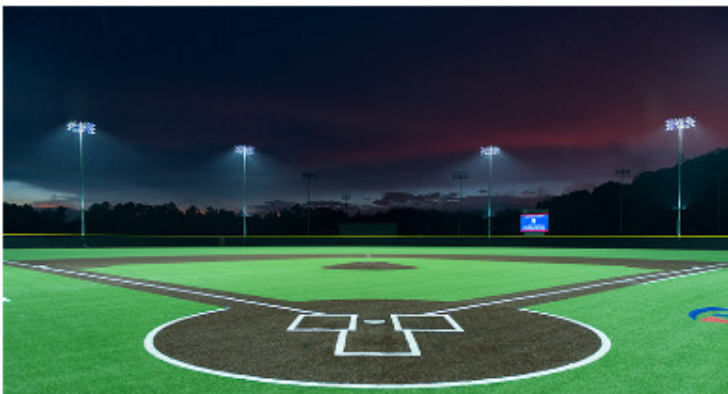
A complete sports-lighting system designed and manufactured from foundation to poletop in 5 Easy Pieces™.

**Unequaled performance . . . for your budget, for the environment.**

- Cuts operating costs
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**5 Easy Pieces™**

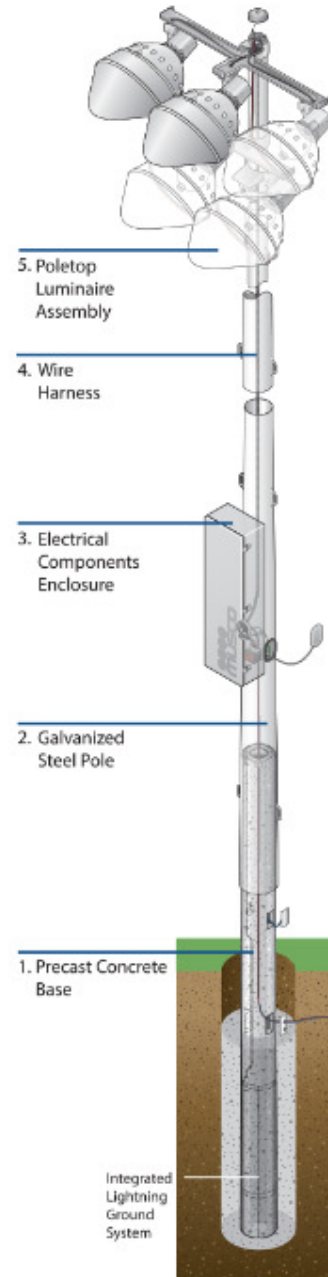
- Complete system from foundation-to-poletop
- Factory wired, aimed and tested
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Light-Structure Green™ - LED Light Source  
LakePoint Sporting Community, Emerson, GA, USA



Light-Structure Green™ - HID Light Source  
Patricia H. Birdeall Park, Temecula, CA, USA





**Appendix B**

FLOODLIGHTING

# CHALLENGER<sup>®</sup> 3 AL5900

IP66



**Benefits**

- The Challenger 3 delivers an optically precise symmetrical beam specifically designed and suited to stadium floodlighting requirements

**Technical Features**

- Body of high pressure die cast aluminium, finished in light grey (RAL7035), polyester powder coating
- Reflector system of high purity, polished and anodised aluminium. Incorporating an internal baffle to improve efficiency and reduce glare
- Toughened front glass, secured by cast aluminium front frame
- Galvanised steel stirrup, with additional elevation locking screws
- Electrical connection box (IP66) housing ignitor, located on side of stirrup, fitted with 2 x Gore™ membrane breathers

- Designed to accept double ended, short arc 2kW or 1kW metal halide lamps
- Dual provision on side of floodlight body to attach gun sight aiming device to allow accurate beam alignment (AL5931)
- Easy access for re-lamping via opening of the rear cover. Positive closure via large stainless steel catch

**Options**

Half concentric louvre (AL5921) or single blade visor (AL5922) to reduce light pollution. Gun sight aiming kit, incorporating gun sight and bracket (AL5931)



Lord's, London



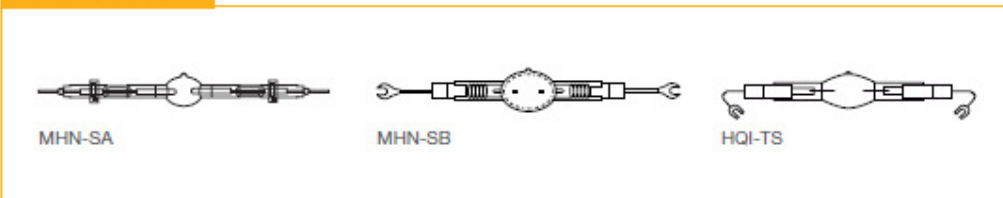
**Technical Specifications**

|        | Beam Type    | Lamp: Manufacturer Product Code | Lamp Manufacturer | Lamp: Abacus Product Code | Lampholder Type |
|--------|--------------|---------------------------------|-------------------|---------------------------|-----------------|
| AL5901 | Narrow       | 2kW: HQI-TS 2000WDS             | Osram             | LPW2000M/D                | K12s-7 cable    |
| AL5902 | Medium       | 2kW: HQI-TS 2000WDS             | Osram             | LPW2000M/D                | K12s-7 cable    |
| AL5903 | Wide         | 2kW: HQI-TS 2000WDS             | Osram             | LPW2000M/D                | K12s-7 cable    |
| AL5904 | Narrow       | 1kW: HQI-TS 1000WDS             | Osram             | LPW1000MB/L               | K12s-7 cable    |
| AL5905 | Medium       | 1kW: HQI-TS 1000WDS             | Osram             | LPW1000MB/L               | K12s-7 cable    |
| AL5906 | Wide         | 1kW: HQI-TS 1000WDS             | Osram             | LPW1000MB/L               | K12s-7 cable    |
| AL5907 | Narrow       | MHN-SA 2KW 400V /956            | Philips           | LPP2000MHN-SA             | XW UNP          |
| AL5908 | Medium       | MHN-SA 2KW 400V /956            | Philips           | LPP2000MHN-SA             | XW UNP          |
| AL5909 | Wide         | MHN-SA 2KW 400V /956            | Philips           | LPP2000MHN-SA             | XW UNP          |
| AL5910 | Extra Narrow | MHN-SA 2KW 400V /956            | Philips           | LPP2000MHN-SA             | XW UNP          |
| AL5911 | Narrow       | MHN-SB/HO 2KW 400V /956         | Philips           | LPP2000MHN-SB             | K12s-7 WH UNP   |
| AL5912 | Medium       | MHN-SB/HO 2KW 400V /956         | Philips           | LPP2000MHN-SB             | K12s-7 WH UNP   |
| AL5913 | Wide         | MHN-SB/HO 2KW 400V /956         | Philips           | LPP2000MHN-SB             | K12s-7 WH UNP   |
| AL5914 | Extra Narrow | MHN-SB/HO 2KW 400V /956         | Philips           | LPP2000MHN-SB             | K12s-7 WH UNP   |

**ELECTRONIC CONTROL GEAR AVAILABLE**

Please request when quoting and ordering.

**Lamp references**



| Lamp Manufacturer & Lamp Ref. | Lamp Wattage | Colour Temp | RA: | Lamp Lumen Output: (initial lm) | Lamp Current: | Supply Voltage | Total Circuit Power: |
|-------------------------------|--------------|-------------|-----|---------------------------------|---------------|----------------|----------------------|
| Philips MHN-SB 2000W/956      | 2kW          | 5600K       | 90  | 200,000 l.lm                    | 11.5A         | 380/400/415V   | 2136W                |
| Philips MHN-SB/HO 2000W/956   | 2kW          | 5600K       | 90  | 220,000 l.lm                    | 11.5A         | 380/400/415V   | 2136W                |
| MHN-SA 2000W/956              | 2kW          | 5600K       | 90  | 200,000 l.lm                    | 11.3A         | 380/400/415V   | 2136W                |
| Osram HQI-TS2000/D/S          | 2kW          | 5900K       | 93  | 200,000 l.lm                    | 11.5A*        | 380/400/415V   | 2105W                |
| HQI-TS1000/D/S                | 1kW          | 5900K       | 90  | 90,000 l.lm                     | 9.4A          | 380/400/415V   | 1040W                |

\*Measured on a 10.3A ballast.

Technical information may alter dependent on control gear used





FLOODLIGHTING

**Dimensions**

Dimensions in mm

**Mounting:**  
Stirrup mounted using M20 fixing  
Stirrup adjustment +/- 140°  
No baffle in extra narrow version

**Weight:** 15kg. **Front wind area:** 0.196m<sup>2</sup> at 70° elevation

**Maintenance**

**Easy Maintenance:**  
Access to the lamp by means of opening the rear door

**Accessories**

**Single blade louvre – AL5922**  
This accessory for the Challenger 2 & 3 minimises upward light while maintaining good vertical lighting levels on the playing field

**Aiming tool kit – AL5931**  
Set of equipment and instructions to enable the Challenger 2 & 3 to be aimed with pinpoint accuracy to a specific point on the design area. Allows the highest level of control over the aiming and commissioning part of a floodlighting project

**Half concentric louvre – AL5921**  
This accessory for the Challenger 3 provides the highest level of upward light and overspill control

Challenger 3 with louvres

**Key features**

**1. AL5911**  
MHN-SA Pro 2kW  
Narrow beam

**2. AL5912**  
MHN-SB Pro 2kW  
Medium beam

**3. AL5913**  
MHN-SB Pro 2kW  
Wide beam

**4. AL5914**  
MHN-SB Pro 2kW  
Extra narrow beam



## **Glossary**

### **Lumen**

The standard unit of light (luminous flux) used in describing light emitted by a source or received by a surface.

### **Illuminance and Maintained Illuminance(lumens/m<sup>2</sup> or lux)**

Illuminance is the term used to describe the level of light on a surface in lumens/square metre or lux. Maintained illuminance is the term used to describe the average illuminance on a reference surface e.g. desktop, at the time maintenance has to be carried out.

### **Horizontal Illuminance**

The level of light falling on to a horizontal plane(ie The Ground).

### **Vertical Illuminance**

The level of light falling on to a vertical plane(ie The walls of a house).

### **Light Output Ratio (LOR)**

This is the ratio of the total light output of a luminaire, relative to the total light output of the lamp/s under reference conditions. Total LOR can be divided into downward(DLOR) and upward(ULOR) light output ratios if appropriate.

### **Light Intrusion (Light trespass, Overspill, Light into windows).**

The flow of light spilling outside the location boundary. With inadequate control Intrusive light may be sufficiently great as to provide a serious nuisance and disturbance to adjacent areas.

### **Glare.**

Glare may be divided into 2 types known as disability and discomfort glare. In a Sports Lighting context it relates primarily to direct viewing of the floodlights. Only in severe situations would disability glare be experienced. In most instances it is discomfort glare that may result, causing annoyance to the viewer if inadequate screening of floodlights is not provided.

### **Sky Glow**

The general term for the Halo-effect caused by upwardly directed light, forming a glow in the night sky. It can cause diminished contrast of stars against their dark background making astronomical observations difficult and often impossible. The upwardly directed light can be caused by direct waste light from floodlights or indirect redirected light from the sports surface.

### **ILP**

The Institution of Lighting Professionals.

### **ILP 'Guidance notes for the reduction of light pollution'**

A booklet produced by the ILP providing advice on reducing the impact of exterior lighting installations on the environment. The degree of permissible overspill & ULOR varies depending on the environmental zone as categorized in the guidance notes. Due to the higher ambient lighting levels in built up areas the restrictions are not as stringent in city centres, where as dark landscapes & rural areas require tighter control






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## APPENDIX 14: EXAMPLES OF SOLUTIONS AT OTHER GROUNDS








England and Wales Cricket Board

Floodlit International Grounds

|   | Ground       | Operational since | Type of mast                                 | No of masts | Height (m) | Design of headframe  | ECB/ICC compliant?   | Design Notes   |
|---|--------------|-------------------|--|-------------|------------|--|--|--|
| 1 | Lord's       | 2009              | Permanent Telescopic                         | 4           | 47.5       | Oval<br>       | ECB - Yes<br>ICC - Yes   | <p><b>Design:</b> Approx 400 2KW Floodlights fitted with louvres to control spill light and glare. Bespoke extended shields utilised to reduce sideways spill light. Telescopic masts used to reduce daytime impact, headframes removed in winter months. Four mast design used due to site constraints and the rectangular shape of Lord's was ideal for that design. Extremely tight obtrusive light control was required.</p> <p><b>Siting:</b> Masts located in corner positions.</p> <p><b>Styling:</b> Bespoke headframe designed to match the shape of the Lord's Media Centre.</p> |
| 2 | Oval         | 2009              | Permanent Telescopic                         | 4           | 48         | Square<br>     | ECB - Yes<br>ICC - No  | <p><b>Design:</b> Approx 400 2KW Floodlights fitted with louvres to control spill light and glare. Bespoke extended shields utilised to reduce sideways spill light. Telescopic masts used to reduce daytime impact .Originally designed as a five mast installation but adapted due to delays in completing hotel complex. Will be increased to five masts in the future.</p> <p><b>Siting:</b> Masts located to fit around the OCS stand and then equally spaced.</p> <p><b>Styling:</b> Rectangular headframe with 'O' in the centre.</p>   |
| 3 | Trent Bridge | 2007              | Permanent Fixed with man rider access system | 6           | 40         | Circular<br> | ECB - Yes<br>ICC – Yes<br>Design has provision to meet higher requirements | <p><b>Design:</b> Designed to meet ECB standards but due to ideal mast locations complied with ICC standards too. Uses 360 Floodlights fitted with louvres. Masts have the capacity to carry and additional 10% of floodlights for future proofing.</p> <p><b>Siting:</b> 6 masts located at approximately 60 degree intervals as per ECB Guide.</p> <p><b>Styling:</b> Unique circular design was incorporated as an architectural feature and set the trend for more attractive headframe designs.</p>   |



|   | Ground       | Operational since | Type of mast        | No of masts | Height (m) | Design of headframe  | ECB/ICC compliant?        | Design Notes  |
|---|--------------|-------------------|---------------------|-------------|------------|--|---------------------------|---|
| 4 | Edgbaston    | 2011              | Permanent (cranked) | 5           | 48         | 'e' shape<br>    | ECB - Yes<br>ICC - No     | <b>Design</b> Approx 400 2KW Floodlights fitted with louvres to control spill light and glare. 5 masts used with varying numbers of floodlights on each. The masts were cranked in order to reduce the overall height to below 50m. This was deemed essential by the planning authority.<br><b>Siting:</b> Masts located either side if main grandstand, a sixth mast could not be utilised due to the existing river.<br><b>Styling:</b> The cranked design and 'e' headframe make this a very distinctive design. |
| 5 | Old Trafford | 2011              | Permanent Fixed     | 4           | 58         | Rectangular<br> | ECB - Yes<br>ICC - Unsure | <b>Design:</b> Approx 520 1.5KW Floodlights fitted with hoods to control spill light and glare. Overall mast high set at 58m to comply with the recommended angles as set out in ECB Guide. The highest masts currently used at UK cricket grounds.<br><b>Siting:</b> Masts located to fit with existing and future ground developments.<br><b>Styling:</b> Rectangular headframe with no distinctive architectural design  |
| 6 | Rose Bowl    | 2006              | Permanent Fixed     | 6           | 35         | Square<br>     | ECB - Yes<br>ICC - No     | <b>Design:</b> This purpose built stadium was the first site designed with the current ECB guide. Approximately 360 1.5KW floodlights were used with only limited glare control. The sunken bowl allowed shorter 35m masts to be utilised but the height above the playing surface is 40m.<br><b>Siting:</b> The circular bowl was ideally suited to a 6 mast design and the masts are located 60 degrees apart.<br><b>Styling:</b> Rectangular headframe with no distinctive architectural design.                 |

|   | Ground     | Operational since              | Type of mast    | No of masts | Height (m) | Design of headframe   | ECB/ICC compliant?     | Design Notes   |
|---|------------|--------------------------------|-----------------|-------------|------------|---|------------------------|--|
| 7 | Cardiff    | 2005                           | Permanent Fixed | 4           | 40         | Square<br>      | ECB - No<br>ICC - No   | <p><b>Design:</b> Designed prior to the introduction of the ECB Guide and as a consequence does not comply with that standard.</p> <p><b>Siting:</b> Mast are not ideally located, glare and patchy light distribution are a problem.</p> <p><b>Styling:</b> Rectangular headframe with no distinctive architectural design.</p>   |
| 8 | Headingley | Not Complete until 2015 season | Permanent Fixed | 4           | 55         | White Rose<br> | ECB - Yes<br>ICC - Yes | <p><b>Design:</b> Approx 408 2KW Floodlights fitted with louvres to control spill light and glare. Bespoke extended shields utilised to reduce sideways spill light. Four mast design used due to site constraints and land ownership. Extremely tight light control required due to the site being located in a conservation area. The floodlights will be operational in May 2015.</p> <p><b>Siting:</b> Masts located in corner positions.</p> <p><b>Styling:</b> Bespoke headframe designed in the shape of the 'White Rose' of Yorkshire.</p> |

**Development Control Committee B – 4 February 2015****Application No. 14/05030/F: Gloucestershire County Cricket Club Nevil Road Bristol BS7 9EJ**

## 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.

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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.

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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 (40m<sup>2</sup>) 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.

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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 COMMUNITY 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.

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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.'



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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

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- 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<br>(worst affected properties) | Kennington Avenue<br>(north side) | Leeds Headingley<br>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 Headingley 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'.

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**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'.

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## 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 Headingley) 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).

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- 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 non-specialist.
- Would the planning committee approve a similar application if it was a private radio broadcaster wishing to erect six 45 metre permanent radio masts (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.

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- 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

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- 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 is 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 need 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



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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

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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".

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- 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 Northampton 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).

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- 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 anti-social 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.

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- 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+.

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- 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.

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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



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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

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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 either 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

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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 one-day 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

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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 anti-development 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.

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- 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.

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**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.

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## 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         |
| BCS10 | Transport and Access Improvements         |
| 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'.



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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.

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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

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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 of 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.

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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'.

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## 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.

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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 can 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

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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.

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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.



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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 CO<sub>2</sub> comparisons based on the above figures and it is estimated that a reduction of around 2 tons of CO<sub>2</sub> 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 there 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 5.30pm, 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

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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.

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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.

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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)**

2. 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.

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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

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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](mailto: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

**From:** Richard Holden

**Sent:** 14 April 2015 22:14

**To:** Development Management; Katy Dryden; Paul Chick

**Cc:** orton alison; Lewis Shobbrook; sarah keen

**Subject:** Re: 14/05030/F - Gloucestershire County Cricket Club Nevil Road Bristol BS7 9EJ

Dear Katy,

I have submitted a comment on the 'options report' that has emerged following further engagement with the residents group Howzat GCCC. Whilst residents welcomed the opportunity to discuss a range of options and usage parameters with the club, the outcome is disappointing. Very little change is proposed other than a slight change to the shape of the head frames. I have attached my comment for your information together with a more balanced version of the applicants 'options table' from Appendix 8 of their statement, and a plan showing how an alternative solution discounted by the applicants could be accommodated.

Could you please make this available to the Committee with the further information.

Thanks

Regards

Richard

As a local resident involved with residents group Howzat GCCC, I welcomed the more determined engagement by the cricket club, albeit forced upon them by the deferral. The club has commissioned advice from an independent lighting contractor – referred to them by a member of the Howzat group. The club have had discussions about options with the other main lighting contractor in the field, Abacus, also at the instigation of a Howzat member.

Howzat have made it clear to the club that they understand the need for floodlighting that complies with ECB and ICC requirements and that their efforts have been directed at seeking solutions that minimise the impact of the installation.

Although there has been some progress towards clarity over the usage and operation of the floodlights in the production of the Floodlight Usage Management Plan (FLUMP), with some minor concessions over hours of operation, the investigation of options for mitigating the permanent daytime impact of the lighting masts and floodlight arrays has fallen well short of expectations.

The resulting planning statement accompanying the further submission is disappointing. It doesn't start well:

Para 1.3 - The agents claim that the deferral cost the club £40,000 in lost revenues and additional consultants fees. This is as specious and unsubstantiated as it is provocative. The club had already admitted prior to the Committee that they were no longer intending to implement their proposals for the 2015 season. Any 'additional fees' they have been charged will have been for work that should have been done for the original submission, which might have avoided the deferral.

Para 2.1 - Much emphasis is placed on the economic benefits to the City of the club hosting floodlit international or T20 matches. Whilst there may well be an economic benefit, the extent of that benefit is not proven. The UWE economic impact study qualifies its findings - being based on a standard modelling template and data provided by the club, rather than by survey of actual spectator spending behaviours.

Para 2.8 - It is perhaps unsurprising that the club is able to garner support from its extensive membership – including cricket fans from around the country, thus outweighing in numerical terms at least, the number of objectors. The majority of expressions of support seemed to be from outside the city. Taken as a percentage of the numbers of people likely to be directly affected by the proposal, objectors represent a much more significant proportion of that population.

Moving on to the investigation of options in Section 7 of the planning statement; there was much space devoted to considering options that had already been discussed and accepted as undesirable by local residents, and options that would not satisfy ECB or ICC requirements. A table was prepared to compare all these 'non-options' with the club's original 6-mast option, albeit with a modified headframe configuration (rounded instead of rectangular) – a minor improvement.

Notable by its absence from the table was the solution suggested by Howzat, based on a mast which hinges near its base to lie flat out of season. Such masts are part of the Abacus range of products. They are mainly used in port installations so that masts can be lowered for maintenance of the lamps, but one installation at a cricket ground in Antigua lowers them during the hurricane season. I have corrected this omission and submitted my own version of the options table separately.

This option was mentioned briefly in the statement as Option 9, and discounted. The reason given was that the masts were 'not designed' to be lowered for an extended period and that there was no space for



them to be accommodated at ground level. Of course previously, floodlight masts were 'not designed' to be lowered at all, until an application came along which required them to be. There is no engineering reason why the masts could not be left in the horizontal position, provided they were supported at intervals along their length. The lighting arrays could then be covered to protect them during the winter.

Turning to the question of space, whilst it may be that some masts would be easier to accommodate than others, with some minimal relocation, all could theoretically be lowered to lie in directions that still permit circulation and don't cover the playing surface. Probably the most straightforward are the ones along the northern edge of the ground, nearest to Kennington Ave – masts P1, P2 and P3. P1 would lie along the northern edge of the pitch, with P3 lying towards P1. Both these would lie where the temporary stands are shown. Mast P2 is the closest to houses on Kennington and this would lie along what is currently shown as 17 parking spaces. With minor adjustments to its location and some reconfiguration of parking spaces, the actual loss of parking could be minimised. Of course, once lowered, maintenance would be much simpler and, without recourse to 'working at height' specialists, much cheaper.

I have shown how this might be arranged on a plan submitted separately along with the options table.

This solution would at least provide some respite for local people, during the cricket closed season, from the constant looming presence of the floodlight structures in the skies over their streets, houses and gardens.

If this option had been properly investigated a way would have been found – but the club don't seem to want to have to consider it. It would cost more and be an inconvenience. Various blandishments and standard threats have been issued – the club would have to move or go under, the site would become a supermarket etc, all heard from developers many times before and seldom challenged.

**If** the Committee were minded to say “..*actually – this might be ok for Leeds or Northants but it just isn't good enough for Bristol*” and turn down the current proposal, the club wouldn't just give in and move or shut down – they would look at more innovative solutions. This is exactly what forced Lords Cricket Ground to install their retractable masts with removeable headframes. Westminster Council planners put their foot down and a solution was found.

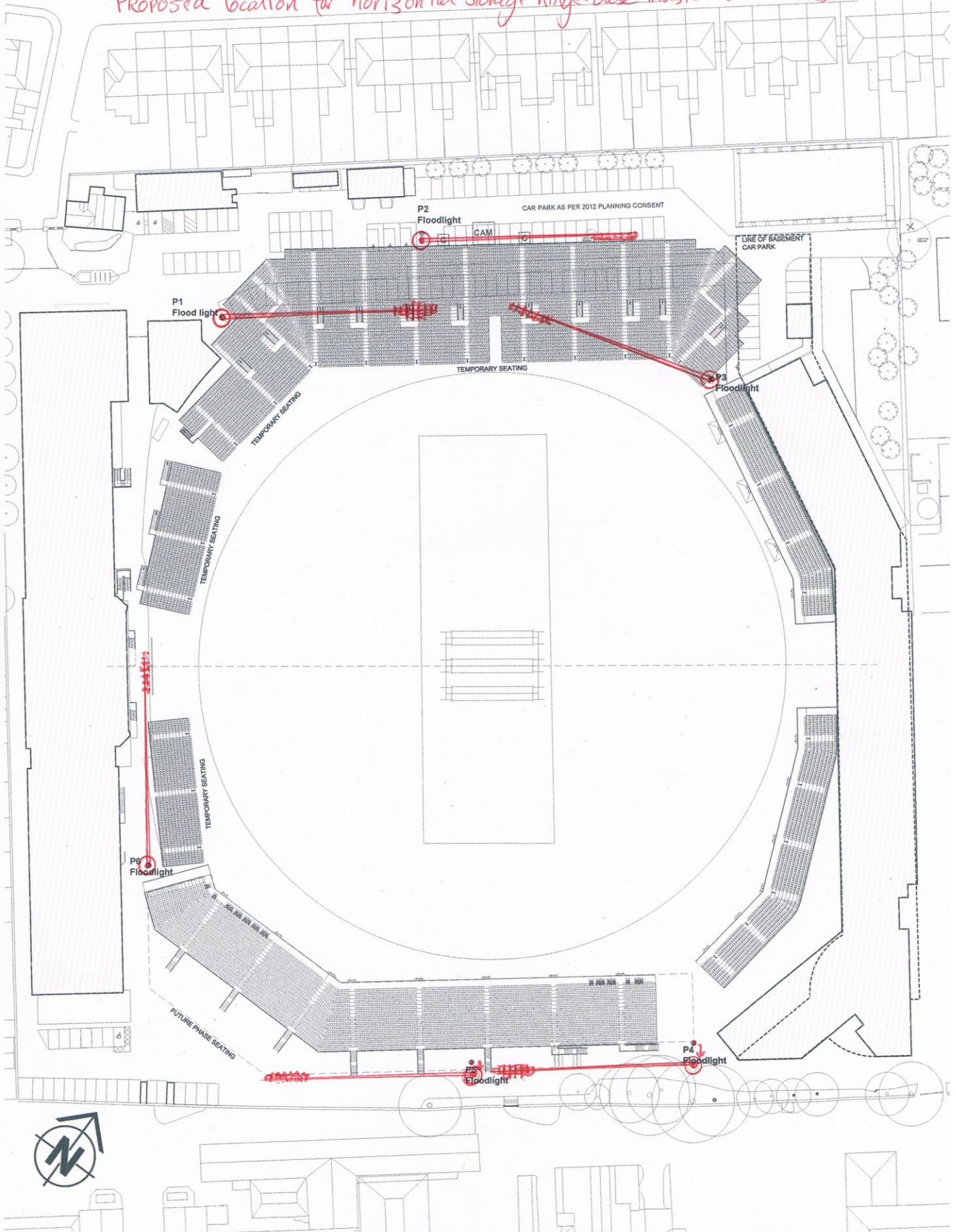
The club may be pleading poverty but have not submitted any evidence of that other than the statement that they will be borrowing £400k to add to the £700k grant from the ECB. They haven't given any projections of the increased revenues they will bring in from floodlit matches. I am sure these projections will have been disclosed to their lenders and the ECB. How do we know that they cannot 'afford' to fund any more costly solutions?

Richard Holden

| <b>Options Table – Local residents version</b> (additions/amendments to GCCC version in blue – residents optimal solution green column) |  |   |   |   |   |
|---|--|---|---|---|---|
|   | <b>4 Masts</b>   | <b>6 Masts</b>  | <b>8 Masts</b>  | <b>Hinged-base (6 mast)</b>   | <b>Retractable</b>  |
| <b>Height of masts</b>  | 50-55m   | 45m   | 40-45m  | 45m   | A 2 section mast would collapse to half working height (around 23m in this case). More sections mean wider mast and larger foundation   |
| <b>Physical Location</b>  | NE, SE, SW, NW   | NW, N, NE, SE, S, SW  | NW, N, N, NE, SE, S, S, SW<br>Glare zones specified by the ECB limit the locations that masts can be placed. 8 masts not practical/feasible due to ground limitation. | NW, N, NE, SE, S, SW<br>Minor alterations to location of masts P2 (optional) for better parking configuration; P4 and P5 to clear new southern stands | NW, N, NE, SE, S, SW<br>Mast locations would have to change for the retractable, as the head-frame would have to be given space to lower.<br>Above statement <b>not</b> the case.<br>Headframes still above all obstructions when retracted |
| <b>Number of Luminaires</b>   | 436 x 1500w  | 436 x 1500w   | 436 x 1500w   | 436 x 1500w   | 436 x 1500w   |
| <b>Meets ECB/ICC Requirements</b>   | No   | Yes   | Yes   | Yes   | Yes   |
| <b>Meets neighbour expectations</b>   | No   | No  | No  | Yes   | No  |
| <b>Spill/Glare Control</b>  | External Visor and reflectors  | External Visor and reflectors   | External Visor and reflectors   | External Visor and reflectors   | Non-tilted headframe would have potential to increase spill and glare, unless column height was increased.  |
| <b>Sky Glow (average)</b>   | .62 lux (100m radius)  | 2.2 lux (100m radius)   |   | 2.2 lux (100m radius)   | Has not been designed, but would increase based on non tilted headframe.  |
| <b>Noise Evaluation</b>   | Negligible   | Negligible  | Negligible  | Negligible  | Negligible  |
| <b>Visual Evaluation</b>  | Fewest masts, largest headframe .<br>Taller masts would have significant | “Proposed best option” according to cricket club.<br>Still unacceptable daytime visual impact on immediate locality | More masts, smallest headframe<br>Visual impact slightly less on long distance views; even more unacceptable for  | Proposed optimal solution for local residents, whilst still allowing floodlit matches. Will be as standard 6 mast                                     | Will only collapse to a certain height, so from a close view, the collapsed headframe would be much closer to the ground and must be considered a much greater  |

|                        |   |   |   |  |  |
|------------------------|---|---|---|--|--|
|                        | daytime visual impact, although fewer masts, especially for longer views and impact on Conservation Area. |   | immediate vicinity - almost a 'forest of masts'                       | installation during cricket season. Will not be visible from outside the ground during the close season. Masts will be horizontal resting on two or three crutch supports, with covers over heads. | visual disturbance and cast a greater shadow. The headframe will not collapse completely out of view.  |
| <b>Maintenance</b>     | Floodlights on a fixed mast would be maintained using an access lift.                                     | Floodlights on a fixed mast would be maintained using an access lift. | Floodlights on a fixed mast would be maintained using an access lift. | Floodlights can be maintained without recourse to working at height specialists, out of season or, in emergency by lowering during season. Reducing maintenance costs                              | Retractable masts reduce the height of the access lift, but still need a lift to maintain the floodlights  |
| <b>Cost Evaluation</b> | Cost within project budget and feasible for the club to proceed.  | Cost within project budget and feasible for the club to proceed       | Cost within project budget and feasible for the club to proceed.      | If 8 masts can still be within project budget, there is clearly some headroom over budget. Is increased revenue from floodlit matches factored into affordability?                                 | Significantly more expensive than a fixed mast<br>The hydraulic unit and oil reservoir needed to actuate the retractable mast are also expensive and the full system would require annual maintenance. |

*Proposed location for horizontal storage hinge-base masts - out of season*



P1 ⊕ Proposed Flood light location

*Note: P1, P2 & P3 only lowered once temporary seating gone  
 P4 & P5 relocated few metres to clear future phase seating  
 P6 lowered in front of pavilion - may be an issue.*

The County Ground, Bristol  
 Flood lights  
 Gloucestershire County Cricket Club

Site Plan  
 Temporary Seating Layout

3814 (08)101 1:250 @ A0

Date: 11/06/14 Sheet: 05 of 05



**From:** Genevieve Tuffnell  
**Sent:** 16 April 2015 11:27  
**To:** Paul Chick  
**Cc:** Will Brown; Simon Fitton; Matthew Thompson  
**Subject:** RE: 14/05030/F - Gloucestershire County Cricket Club Nevil Road Bristol BS7 9EJ

Hi Paul

Thank you for the email. We would make the following comments.

The Club have lost £40,000 in revenue from matches that would have used the floodlights because of the deferral because they were unable to install them in time for the start of the 2015 season. It is an estimation of the lost revenue resulting from the increased ticket sales and expenditure that the Club would generate by later start times. The fact that there would be significant economic benefits to the locality and the city as a whole is accepted by the Committee (see previous Committee meeting minutes) and do not need to be reiterated.

There is a similar number of people supporting the application who live within a 5 minute walk from the ground as there are those objecting to it but a much greater number (the majority of local residents) have not felt the need to comment. There is city wide support and nationwide support for these floodlights. To ignore the citywide and nationwide support would be to ignore Bristol as a City and would prevent appropriate consideration of the benefits of tourism to the locality and City that would arise from the floodlit games.

It is noted that the preferred option in the local residents' revised version of the applicant's option review table is a hinged base mast system.

Abacus Lighting, the designer of the hinged base masts confirm that the masts are not designed to be laid flat for any period of time and are only designed to be lowered for maintenance purposes. They are not sufficiently structurally safe to enable frequent lowering and raising. The masts are not designed to be rested 'side-on'. At 7-8m in width they would have a bigger visual impact on local residents on their side at this height. They cannot lay flat as this would damage the lights and would give rise to issues of security, safety and practicalities. Costwise, each mast would be at least an additional £50,000 not including the bespoke equipment required to lower and raise them.

The above issues render the option as impossible to achieve but in addition, the following issues would arise from each proposed hinged base mast if they were to be fixed in the area as shown on Richard Holden's proposed plan:

- P1 without temporary seating would cut across the first aid area, the marquee and restrict car parking. With temporary seating, P1 would restrict temporary seating and spectators;
- P2 without temporary seating would significantly remove car parking in this area in winter months (out of cricket season) when the Club gets their revenue from conferences and would also impact on the popular school walking bus route; With temporary seating, P2 would restrict temporary seating and spectators;
- P3 would restrict the car parking and maintenance at the ground; With temporary seating, P3 would restrict temporary seating and spectators;
- P4 and P5 in the positions indicated on Richard's plan would obstruct the normal and emergency access and egress resulting in a severe impact on health and safety. It would also prevent the Club delivering additional facilities such as toilets as required in the s.106 agreement associated with the redevelopment of the Ground as this is the location for these additional facilities. Furthermore, as Richard notes P4 and P5 would need relocating. However relocation of the lights has already been discounted for reasons given in section 7.12 of the additional report.
- P6 would restrict vehicle and emergency access. In this position it would block the front of the pavilion and prevent the flow of people in and out of and past the pavilion. P6 cannot fit here with the head frames without crashing into the pavilion. To remove the head frames is not an option. For further information please see section 7.4 in the additional report.

The applicant's lighting designers, the independent floodlighting specialist and Abacus Lighting (the designers of the mast) have all agreed that the use of these masts in the Ground is unrealistic and unachievable; this is why this option was discounted.



The consequences of the application being refused have been made clear and do not need to be reiterated. The financial projections for the Club over the next 5 years with and without the floodlit matches have been clearly set out in the additional report at section 4.4 and do not need to be reiterated.

The ECB, independent light consultant and the applicant's lighting specialist will be available at the briefing session to answer further questions as to technical design. I trust that this is sufficient information.

Regards  
Gen

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