

OPEN SPACE AND PLAYING PITCHES ASSESSMENT ADDENDUM

THE FORMER STAG BREWERY, MORTLAKE ON BEHALF OF RESELTON PROPERTIES LIMITED

July 2020

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Open Space and Playing Pitches Assessment Addendum

The Former Stag Brewery, Mortlake
Reselton Properties Limited
July 2020

NTH/SJT/SKG/J7699

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Appendices

A Gillespies' Sketchbook 704 Rev18: Amenity Space and Green Space Calculation

B SLC Briefing Paper (including draft Community Use Agreement) as issued to Sport England in October 2019

C Latest Community Use Agreement

D Stag Brewery AGP & MUGA Briefing Note – Noise Emissions, prepared by Watermans, dated 17 December 2019.

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1 Background

1.1 This Open Space and Playing Pitches Assessment Addendum has been prepared by Gerald Eve LLP as an addendum to the Revised Open Spaces and Playing Pitches Assessment, dated May 2019 submitted under Applications A, B and C (refs. 18/0547/FUL, 18/0548/FUL and 18/0549/FUL) ('the Applications'), in respect of the former Stag Brewery Site in Mortlake ('the Site') within the London Borough of Richmond Upon Thames ('LBRuT'). The Applications are for the comprehensive redevelopment of the Site. This document has been prepared on behalf of Reselton Properties Limited ('the Applicant'). A summary of the Applications is set out below:

a) Application A – hybrid planning application for comprehensive mixed use redevelopment of the former Stag Brewery site consisting of:

   i. Land to the east of Ship Lane applied for in detail (referred to as 'Development Area 1' throughout); and

   ii. Land to the west of Ship Lane (excluding the school) applied for in outline (referred to as 'Development Area 2' throughout).

b) Application B – detailed planning application for the school (on land to the west of Ship Lane).

c) Application C – detailed planning application for highways and landscape works at Chalkers Corner.

1.2 This document should be read alongside the information and assessment contained within the Open Space and Playing Pitches Assessment submitted to LBRuT in May 2019.

1.3 The Applications were submitted in February 2018 to LBRuT. The Applications are related and were proposed to be linked via a Section 106 Agreement. In May 2019, a package of substitutions was submitted to LBRuT for consideration, which sought to address comments raised by consultees during determination. On 29 January 2020, the Applications were heard at LBRuT's Planning Committee with a recommendation for approval. This scheme is thereafter referred to as "the Original Scheme".

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1.4 The Committee resolved to grant Applications A and B, and refuse Application C. The granting of Applications A and B was subject to the following:

a) Conditions and informatives as set out in the officer's report, published addendum and agreed verbally at the meeting;

b) Amendments to the Heads of Terms and completion of a Section 106 Legal Agreement which was delegated to the Assistant Director to conclude;

c) No adverse direction from the Greater London Authority ('GLA'); and

d) No call in by the Secretary of State for Housing, Communities and Local Government.

1.5 The Applications have been referred to the GLA and the Mayor has given a direction that he will take over the determination of the Applications and act as local planning authority in relation to all three applications.

1.6 The Applicant has engaged with the GLA in respect of the proposed amendments to the scheme, referred to throughout this document as the 'Revised Scheme'. As a result of these discussions, a number of changes have been made to the scheme proposals which are summarised as follows:

a) Increase in residential unit provision from up to 813 units (this includes the up to 150 flexible assisted living and / or residential units) to up to 1,250 units;

b) Increase in affordable housing provision from up to 17% to up to 30%

c) Increase in height for some buildings, of up to three storeys compared to the Original Scheme;

d) Change to the layout of Buildings 18 and 19, conversion of Block 20 from a terrace row of housing to two four storey buildings;

e) Reduction in the size of the western basement, resulting in an overall reduction in car parking spaces of 186 spaces and introduction of an additional basement storey beneath Building 1 (the cinema);

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f) Other amendments to the masterplan including amendments to internal layouts, re-location and change to the quantum and mix of uses across the Site, including the removal of the nursing home and assisted living in Development Area 2;

g) Landscaping amendments, including canopy removal of four trees on the north west corner of the Site; and

h) Associated highways works may be carried out on adopted highways land.

1.7 The submission documents have tested an affordable housing provision of 30%. However, it should be noted that the final affordable housing level is subject to further viability testing and discussions with the GLA.

1.8 Minor amendments have also been made to the road and pedestrian layouts for the school (Application B). No other amendments are proposed to Application B. No amendments are proposed to the physical works proposed under Application C, although alternative options within the highway boundaries for mitigating the highway impact of the amended proposals have been assessed within the relevant substitution documents for Applications A and B and are the subject of ongoing discussions with the GLA and TfL.

1.9 The changes proposed within these substitutions do not affect the proposed playing pitches.

1.10 A more detailed summary is included within the Planning Statement Addendum and Design and Access Statement Addendum submitted with the Revised Scheme documents.

1.11 These changes are being brought forward as substitutions to Applications A,B and C (refs. 18/0547/FUL;18/0548/FUL and 18/0549/FUL), which are related applications (to be linked via a Section 106 Agreement).

1.12 It is important to note that no changes are proposed to the physical works proposed under Application C – the only change to this application is that the supporting documents (which include all documents submitted under Applications A and B) have been updated in the context of the proposed changes to the scheme as sought under Applications A and B. Application C was resolved to be refused by LBRuT at Committee on 29 January 2020. As a result, whilst the works proposed in

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Application C are still an available option, the Applicant has progressed alternative approaches for addressing and mitigating the impacts on surrounding highways, and these have been tested within the relevant substitution documents for Applications A and B. All of these options are subject to ongoing discussions and testing with TfL. They are all within the existing highway boundaries and if agreed would not, in themselves, require planning consent.

1.13 Accordingly, Application C remains ‘live’ within this substitution package.

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2 Updated Appendices

2.1 This section sets out what documents have been appended to this OSSPA Addendum and how they have changed.

2.2 Appendix A: The Sketchbook, prepared by Gillespies has been revised to reflect the proposed area and layouts of the landscape elements of the revised proposals. The Sketchbook continues to contain details on the: Landscape Masterplan, green space and publicly accessible green space, amenity space and publicly accessible amenity open space and existing and proposed OOLTI space.

2.3 Appendix B: Extensive consultation has been undertaken with Sport England throughout the determination period of the Original Scheme. The Briefing Note, prepared by SLC, dated October 2019 represents the final details issued to Sport England during the Applicant's consultation with them. In response to the provision of these details, Sport England formally withdrew their statutory objection to the scheme, subject to planning conditions. Some of the drawings and documents appended to SLC's Briefing Note have moved on since this consultation[1], however the principle of the Briefing Note remains unchanged.

2.4 Appendix C: the latest Community Use Agreement (CUA) has been appended to this OSPPA Addendum. The CUA has been updated to incorporate the track changes shown in the CUA appended at Appendix 1 of SLC's Briefing Note, dated October 2019. Therefore, the contents of the CUA are unchanged.

2.5 Appendix D: Extensive consultation has been held with LBRuT throughout the determination period of the Original Scheme in respect of the proposed playing pitches. Appendix D is an acoustic briefing note, prepared by Watermans, dated 17 December 2019 which demonstrates the position agreed with LBRuT and the Applicant in respect the proposed installation of a 2.5m acoustic fence to the northern and western perimeters of the proposed Artificial Grass Pitch.

[1] Appendix 4: The School Landscape DAS has been revised, Appendix 5: Drawings refs: P10736-00-001-130-05; P10736-00-001-131-05; P10736-00-001-132-07 and P10736-00-001-133-08 have been revised.

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3 Scheme Changes

3.1 The following changes to the scheme have resulted in alterations to the proposed open space and playspace at the development:

i. Increased provision in up to 1,250 residential units in total has led to an increase in the quantum of playspace required to be delivered at the site;

ii. Various open space configuration and landscape amendments have been made at the site, partly in connection to the changes in the playspace requirements and also in connection to the reconfiguration of Blocks 18 and 19 in Development Area 2; and

iii. Minor changes to the transport access layouts associated with Application B (the school).

3.2 The landscaping changes are set out in detail in the Revised Landscape Design and Access Statements for both Applications A and B, prepared by Gillespies which have been submitted in support of the scheme changes.

3.3 The following table sets out the types of open space proposed and the associated quantum and compares the provisions proposed between the Original Scheme and the 2020 Revised Scheme:

Type of Open Space	**Original Scheme (sqm)**	**Revised Scheme (sqm)**	**Net Change (+/-) (sqm)**
Public Green Space	8,499	9,314	+815
Public Space	17,474	22,210	+4,736
Courtyard Green Space	4,948	4,979	+31
Courtyard Space	7,325	7,650	+325

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Private Amenity Space	5,912	4,000	-1,912
Private Green Space	2,990	637	-2,353
School Open Space	14,144	13,827	-317
Overall Amenity Open Space	47,537	47,687	+150
Total Publicly Accessible Amenity Open Space	**38,943**	**43,687**	**+4,744**

3.4 The table shows that the Revised Scheme provides a substantially greater amount of publicly accessible amenity open space (+4,744sqm), in comparison to the Original Scheme.

3.5 No changes are proposed to Application C, therefore the assessment provided in the OSPPA and Revised OSPPA still stand in respect of Application C. Although Application C is not changing under these substitutions, alternative options are being progressed and discussed with the GLA and TfL. The alternative options do not result in any changes to the assessments pursuant to Application C provided in the OSPPA or the Revised OSPPA. Furthermore, the alternative options being progressed do not affect OOLTI land and therefore have not been assessed within this addendum.

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4 Planning Policy Update

4.1 Since the submission of the OSPPA to LBRuT in February 2018, the following planning policy changes have occurred:

i. July 2018 – London Borough of Richmond upon Thames Local Plan adopted;
ii. October 2019 - GLA Population Yield Calculator adopted; and
iii. December 2019 – Intend to Publish London Plan published.

4.2 The following paragraphs set out what changes the recently adopted planning policy has bought about at the site in terms of open space and playing pitches.

London Borough of Richmond upon Thames Local Plan Adoption

4.3 The adoption of the LBRuT's Local Plan superseded the previous planning policies included with the Development Management Plan.

4.4 The adoption of the Local Plan confirmed that the Site Allocation (SA 24) for the Site would include the requirement to provide a secondary school, as opposed to a primary school, as is set out in the Adopted Site Planning Brief. A full assessment of the requirement for a secondary school at the site was included within the OSSPA and Revised OSPPA and is therefore not repeated in this document.

4.5 A full assessment of the now adopted Local Plan Policies LP14, LP31 and LP12 was included within the OSPPA and Revised OSPPA. Although an update to these assessments is provided in this document to reflect the scheme revisions the conclusions remain the same.

GLA Population Yield Calculator (2019)

4.6 The GLA Population Yield Calculator is a tool for estimating population yield from new housing development. The calculator provides users with an indication of the possible number and age of children that could be expected to live in a new housing development of a given bedroom or tenure mix. The population yield feeds into a calculation to establish the required amount of playspace to be delivered at a development.

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4.7 The quantum of playspace proposed in the revised scheme has been calculated using the GLA's 2019 Population Yield calculator.

Intend to Publish London Plan (December 2019)

4.8 The Intend to Publish London Plan does not have any impacts on the previous assessment of the Draft London Plan policies included within the submitted OSPPA and Revised OSPPA documents regarding open space and provision of playing pitches and playspace included in the Revised OSPPA, dated May 2019.

Other Planning Policy and Guidance Assessments

4.9 The Planning Policy and Guidance Assessments included within the OSPPA and Revised OSPPA in respect of the Sport England Exception Tests in terms of playing pitches remain relevant and still stand.

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5 Assessment of Scheme Changes

5.1 The existing grass playing pitches and some adjacent land (non-playing fields) remain designated as OOLTI under LBRuT's adopted policies. As described in the OSPPA and Revised OSPPA documents, these policies seek to protect and, where possible, enhance the existing OOLTI. This section will consider the scheme changes proposed under Applications A and B against relevant planning policy.

5.2 Now adopted LBRuT Local Plan Policies LP14, LP31 and LP12 address:

i The redistribution of open space within comprehensive developments;

ii The need for proposals to provide public open and play space; and

iii The protection and enhancement of green infrastructure.

5.3 As such, this section will assess the scheme changes in respect of open space OOLTI land in the following categories, as per the OSPPA and Revised OSPPA:

i. Appropriateness of redistributing the space; and
ii. Is the new space equivalent or improved in terms of quantity, quality and openness?

5.4 This section will also address the proposed Play and Sports Provision.

Open Space

<u>Appropriateness of Redistributing the Open Space</u>

5.5 The Applications represent a major scheme and a regeneration proposal which includes community and social infrastructure including educational use. Consequently, the proposal remains clearly suitable for flexible consideration of how the existing OOLTI may be assessed and subsequently redistributed across the Site.

5.6 Therefore, the assessment provided in the OSPPA and Revised OSPPA documents on the appropriateness of redistributing the open space in line with Local Plan Policy LP14 still stands.

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5.7 The Revised Scheme continues to propose the distribution of open space throughout the masterplan and Application B sites. This is demonstrated on page 7 of Appendix A which shows the distribution of the total publicly accessible amenity open space (43,687sqm) across the scheme.

5.8 The acceptability of the principle of redistributing the open space at the site was confirmed in the LBRuT committee report (paragraph 9.4.3) which states that the scheme's approach to the redistribution of the OOLTI space **"is acceptable, and will exceed the existing quantum"**. The acceptability of this approach is also confirmed in paragraph 7.1.142 in relation to both Application A and B.

Quantity

5.9 Against the existing provision on site (2.06ha), the proposals would deliver an overall increase in OOLTI of 39%. Against the Original Scheme, the proposed revisions will deliver +4,774sqm more publicly accessible open space.

5.10 Overall, total public accessible amenity space proposed (which includes accessible OOLTI areas) within the masterplan amounts to 4.36ha (see page 7 of Gillespies Sketchbook at Appendix A). This compares with the current situation of no publicly accessible open space at all.

5.11 Therefore, it is considered that the Revised Scheme will deliver substantial public benefits at the site through the provision of a significant amount of publicly accessible amenity space.

Quality

5.12 The LBRuT acknowledge that the quality of the existing OOLI **"does not have significant quality, whereby it is grassland; with no specific landscape features, and the use as playing fields preclude significant biodiversity value"**

5.13 The quality of the proposed OOLTI space has been thoroughly considered.

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5.14 The quality of the proposed OOLTI space would be far superior to the quality of the existing grass pitches and the revised masterplan landscape approach continues to meet all relevant planning policies.

5.15 That the proposed spaces are of a different quality to the existing is acknowledged in paragraph 9.4.3 of the LBRuT committee report, dated 29 January 2020, which states: **"the proposed spaces are equivalent, albeit different, in quality, creating interesting and varied spaces with opportunities for visual interest, use and biodiversity, which are predominately open in character and accessible."**

Openness

5.16 Although a 2.5m acoustic fence is proposed to the Artificial Grass Pitch, it is considered that as this would be transparent and located at the edge of the site this would not prejudice the sense of openness across the site. The acoustic fence would also deliver acoustic benefits deemed as necessary to ensure that both existing and proposed residential amenity is maintained and delivered at and around the site, as set out at Appendix D.

5.17 There are no other changes within the Revised Scheme which would alter the degree of openness of the proposed open space compared to the Original Scheme.

5.18 In terms of Application A, paragraph 9.3.6 of the LBRuT Committee Report states that **"the community park, which forms part of Application A, preserves the openness and quality of the existing OOLTI in the southwest corner of the site"**. The Committee Report also acknowledges that the proposals will benefit OOLTI surrounding the site, notably at Mortlake Green **"whereby it opens up views into and out of the Green, and achieves a link between such spaces."**

5.19 In terms of Application B the committee report from LBRuT (paragraph 9.4.3) recognises that **"the school has been sited to retain the openness of this part of the Brewery Site".**

5.20 The Revised Scheme would continue to deliver a significantly greater degree of openness than is currently provided at the site, both in terms of openness from a visual perspective and also from an accessibility and usability perspective.

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5.21 The Revised Scheme would continue to deliver new OOLTI to replace existing of a greater quantum, quality and openness and therefore meets the requirements of LBRuT's adopted planning policies.

Green Infrastructure

5.22 The proposals continue to include substantial improvements to the green infrastructure and the site, including the provision of a 'green link'.

Play / Sports Provision

Play provision

5.23 The Revised Scheme includes an increase in number of residential units. The required areas of play space have been re-calculated against this revised residential provision and determined based on current GLA guidelines.

5.24 Based on the revised residential quantum / mix, the GLA Population Yield Calculator (2019) requirements stipulate a target of 6,461m2 of dedicated amenity play space is required within the Site as a whole (Development Areas 1 and 2), while LBRuT play standards require a target of 7,542 m2.

5.25 The proposed masterplan exceeds GLA required play space for Development Area 1and Development Area 2. Across the Application A site a total of 7,534 sqm of playspace will be provided (Development Area 1: 3,980sqm and Development Area 2: 3,554sqm).

5.26 Across Application A and Application B a total of 10,356 sqm of playspace will be provided. This total is far in excess of both GLA and LBRuT requirements.

5.27 The play areas have been distributed throughout the site (see page 53 of the Revised Landscape Design and Access Statement, prepared by Gillespies). The configuration and quantum of playspace by age group is provided at page 54 of the same document.

5.28 The housing mix for Development Area 2 has not been fixed and so the quantum (in terms of overall area as well as for different age groups) and location may change once the detailed design is considered at Reserved Matters stage.

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5.29 Therefore it is considered that the Applicant has demonstrated that it is possible to incorporate sufficient play space into the scheme in line with policy requirements.

Sports Provision

5.30 The sports provision proposed within Application B is unchanged as a result of the proposed scheme revisions.

5.31 The proposals will assist in meeting the identified need in LBRuT for playing pitches (see paragraph 7.1.11 of the LBRuT committee report). Paragraph 1.1.18 of the same committee report goes on to state that the loss of the existing sports facilities **"can be mitigated in accordance with the requirements of the Development Plan and the NPPF"** and that, in respect of the existing playing fields/OOLTI **"whilst having access on arrangement only, do not provide unlimited public access. In comparison, the scheme provides extensive publicly accessible open areas, a significant benefit of the proposal"** (paragraph 7.1.147)

5.32 Furthermore, Sport England has confirmed that the proposed sports provision would: meet an identified need (in particular for 3G sports pitches), broadly complies with Sport England design guidance (subject to conditions) and would provide sufficient sporting benefits to the local community to outweigh the loss of the existing pitches (paragraph 7.1.18 of committee report).

5.33 Therefore, the assessments included in the OSPPA and Revised OSPPA still stand.

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Conclusion

5.34 This OSSPA Addendum finds that the revised masterplan would provide significant benefits in terms of open space against the Original Scheme. The Revised Scheme will deliver a substantially greater quantum (+4,744sqm) of significantly high-quality open space.

5.35 In terms of sports benefits the Revised Scheme will continue to enable a much greater level of participation in a wider range of sports, for a wider range of groups more often at the site.

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Appendix A

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STAG BREWERY

GILLESPIES

704 SKETCHBOOK

Amenity Space and Green Space Calculation
Sketchbook 704 - Rev 18

APRIL 2020

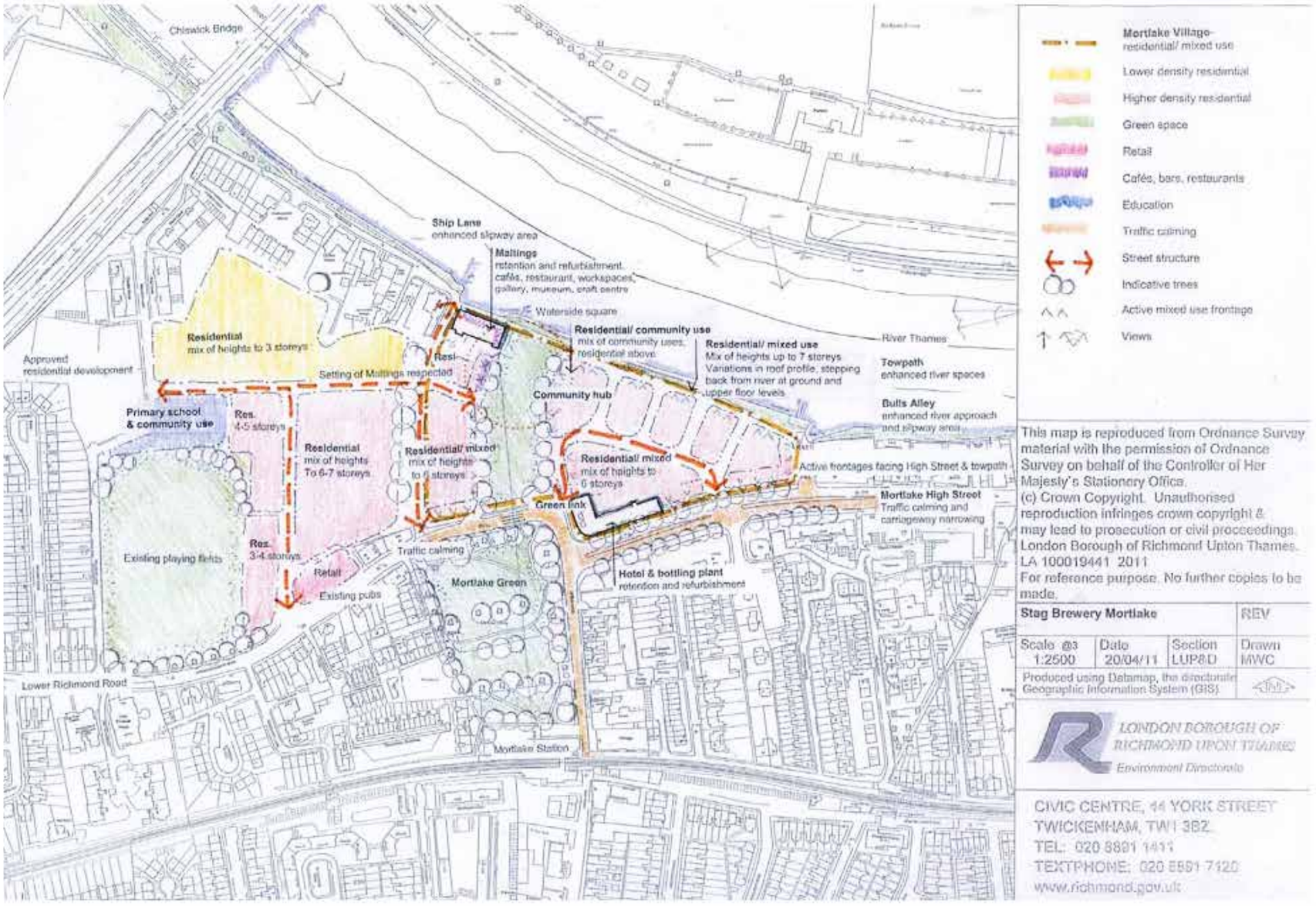
LANDSCAPE CONCEPT

Landscape Masterplan



LANDSCAPE CONCEPT

Council's Vision (From Supplementary Planning Document Stag Brewery, Mortlake, SW14 Planning Brief)



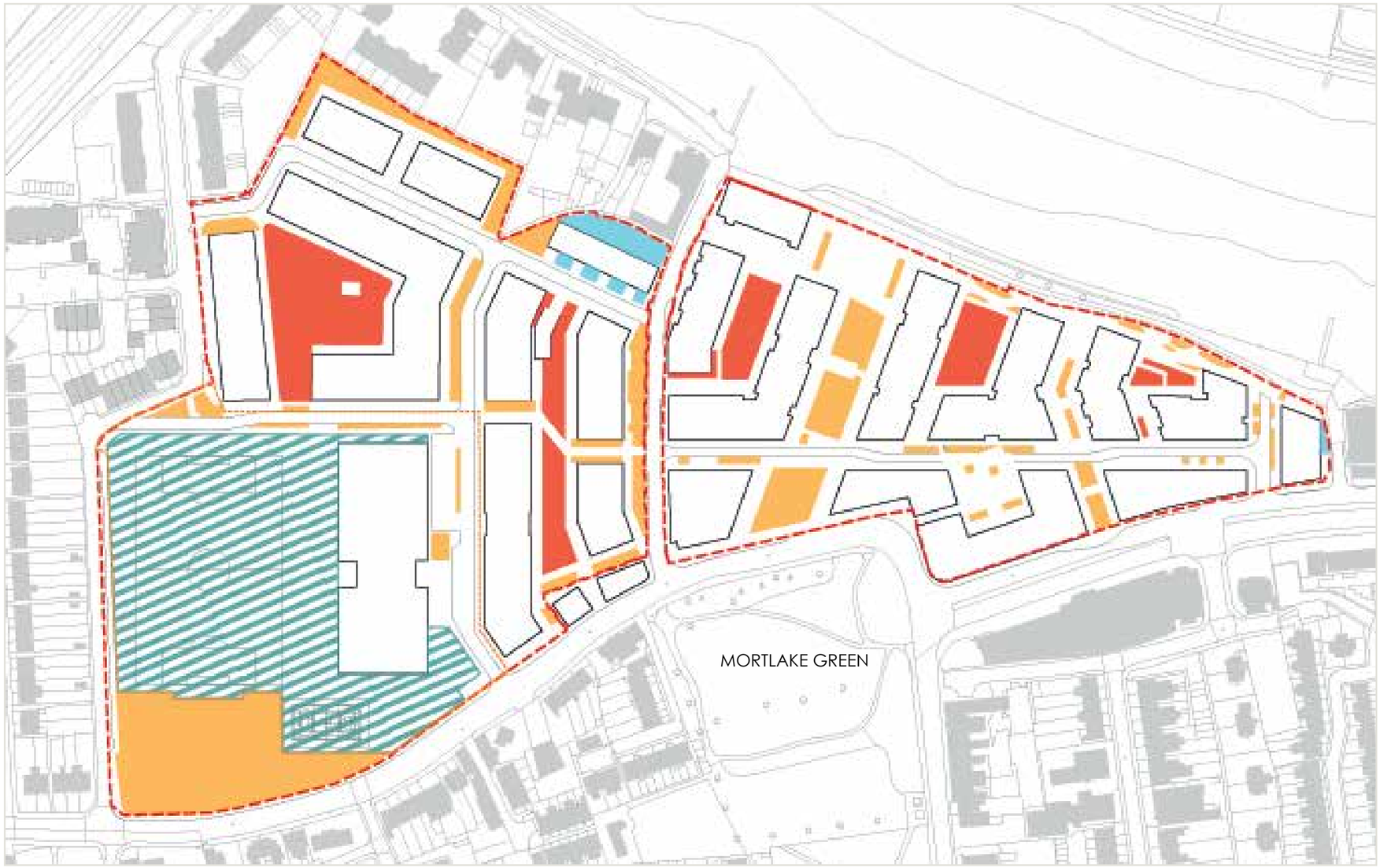
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Stag Brewery Mortlake			REV
Scale @3 1:2500	Date 20/04/11	Section LUP&D	Drawn MWC
Produced using Datamap, the directorate Geographic Information System (GIS)			

LONDON BOROUGH OF RICHMOND UPON THAMES
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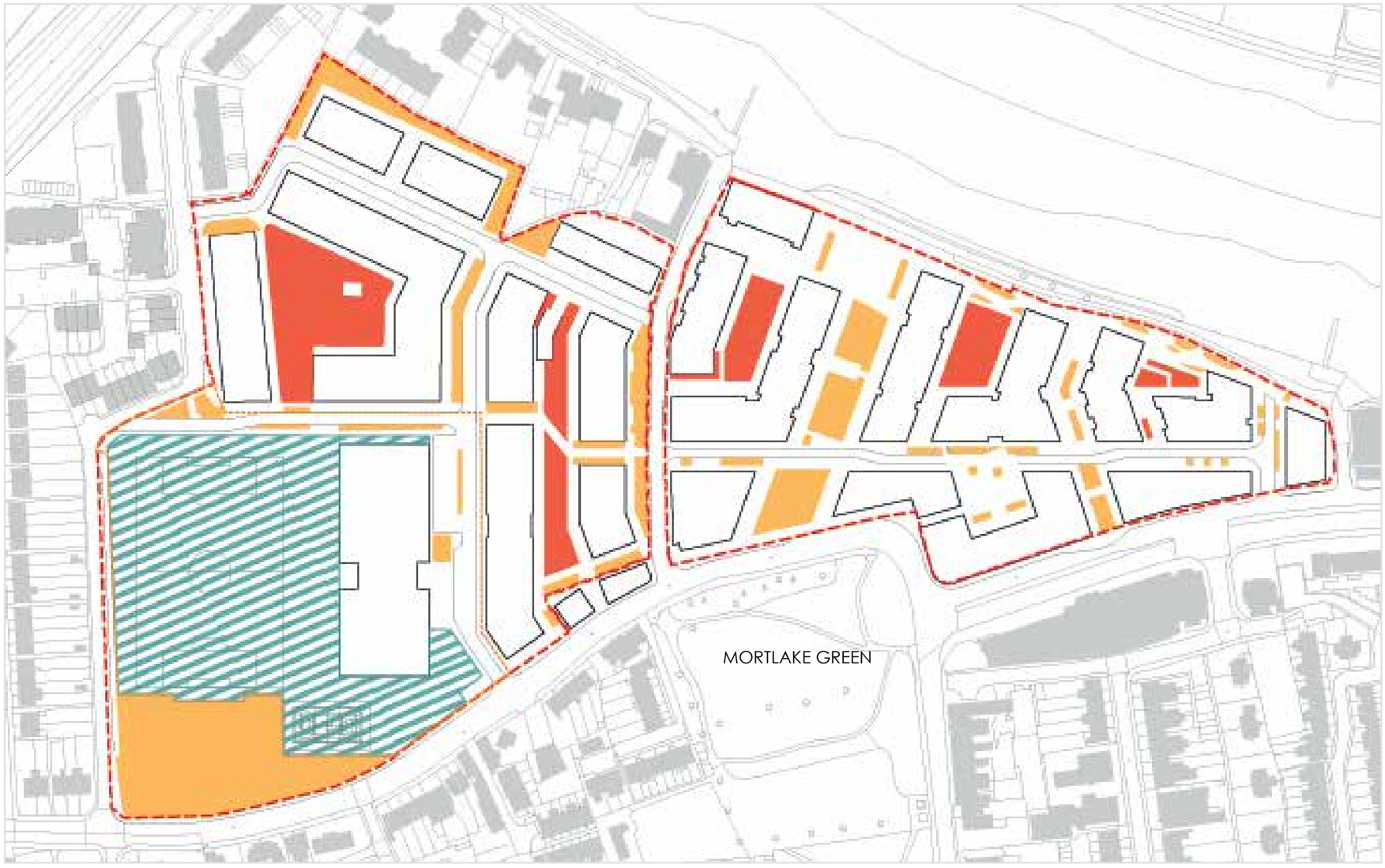
LANDSCAPE CONCEPT
Total Green Space 28,757m^2

Green Space - includes paths and intimate spaces for sitting and playing



LANDSCAPE CONCEPT

Total Publically Accessible Green Space 28,120m^2



Public Green Space (9,314m^2)

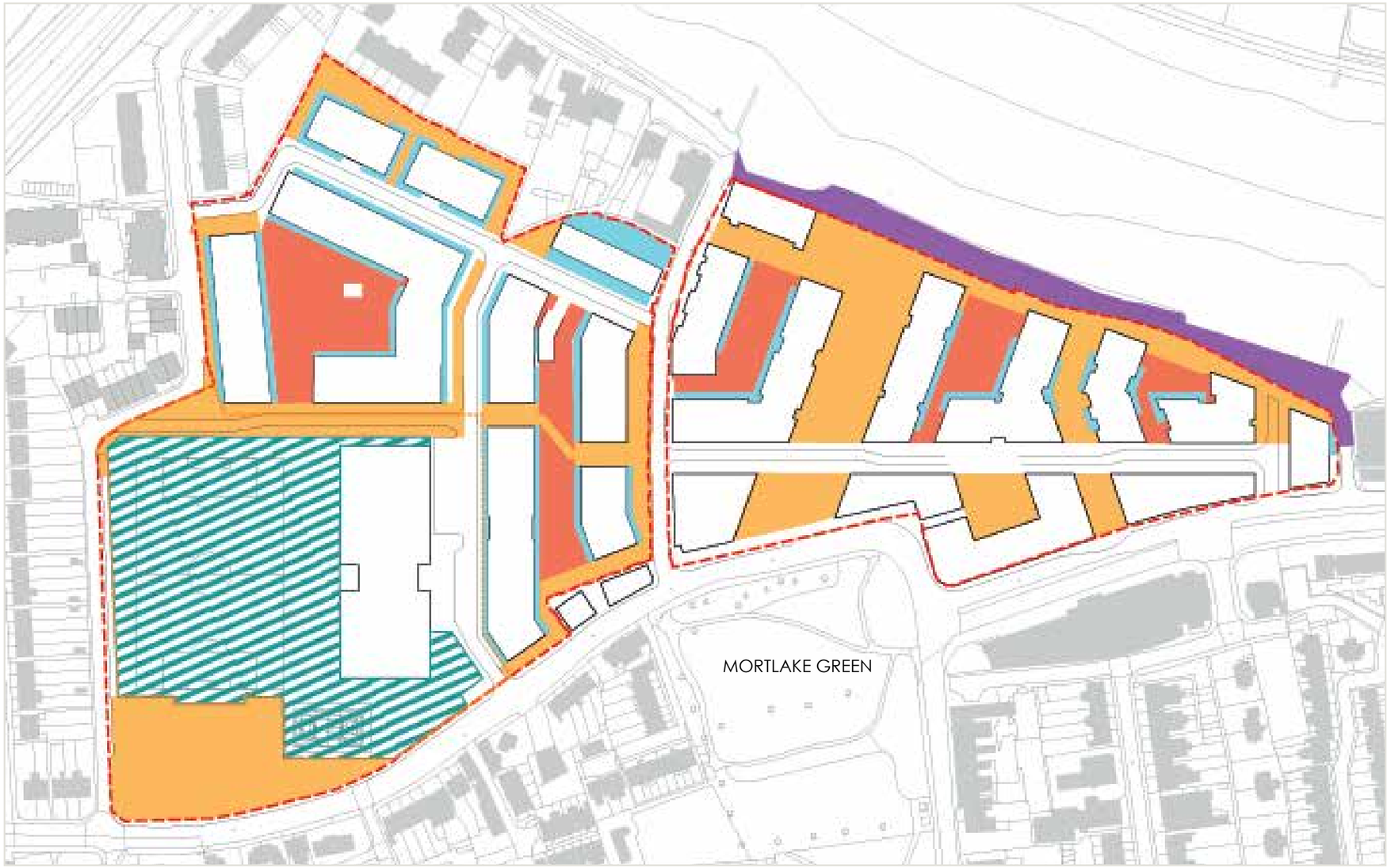
Courtyard Green Space (4,979m^2)

School Open Space (13,827m^2)
(community agreement)

Boundary

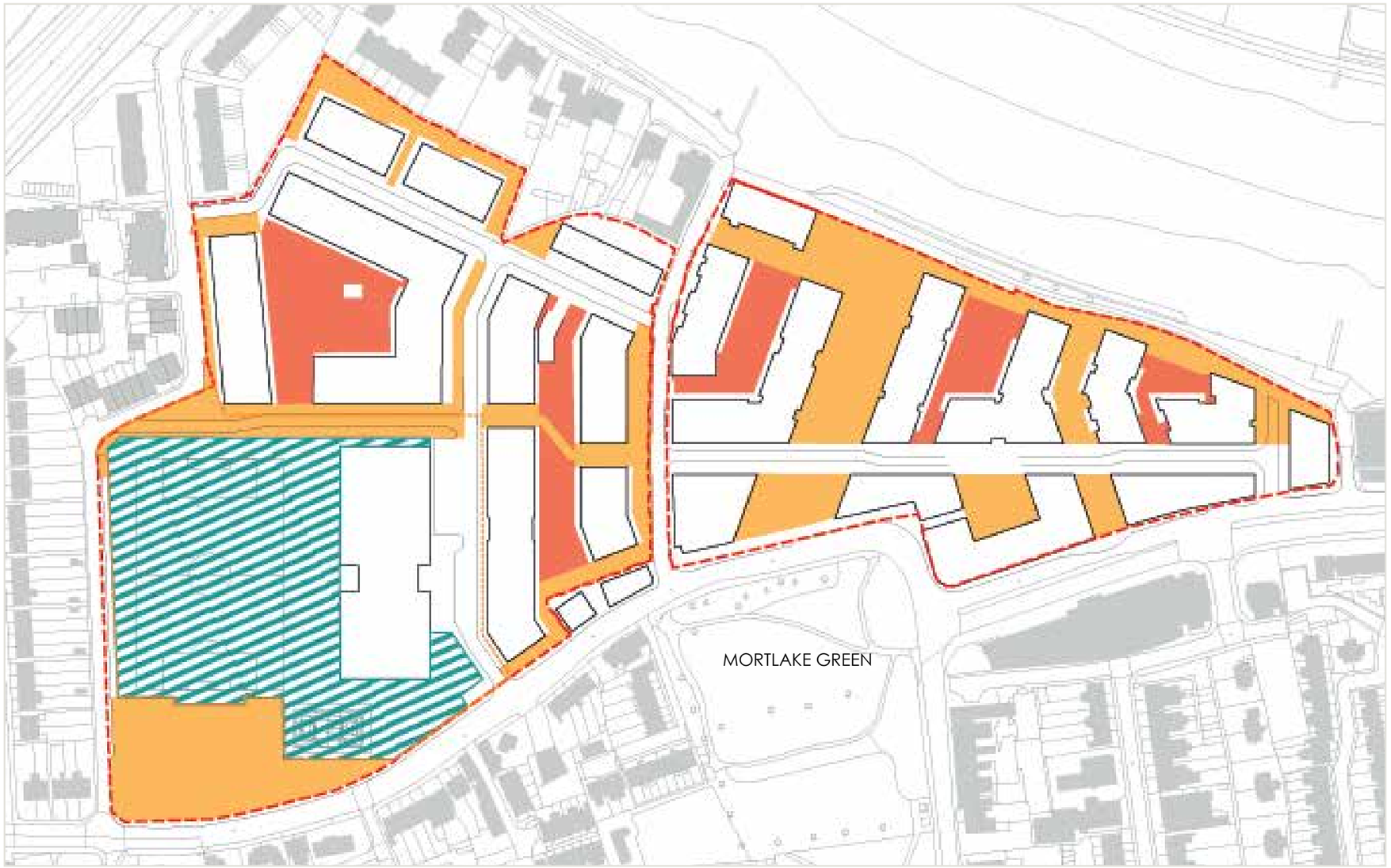
LANDSCAPE CONCEPT

Overall Amenity Open Space (Including Towpath) 50,369m^2
(Excluding Towpath) 47,687m^2



LANDSCAPE CONCEPT

Total Publically Accessible Amenity Open Space 43,687m^2



LANDSCAPE CONCEPT

OOLTI: Watney's Sports Ground 20,620m²



Local Plan Designation OOLTI (22,000m²)

Watney's Sports Ground (20,620m²)

Boundary

LANDSCAPE CONCEPT

Watney's Sports Ground (Existing) and on-site New Public Accessible Amenity Open Space Proposal Comparison



Public Space Near OOLTI (5,957m²)

School Open Space (13,827m²)
(community agreement)

= Total New Amenity Space Proposal (19,784m²)

OOLTI Watney's Sports Ground (20,620m²)

Boundary

LANDSCAPE CONCEPT
Space Calculations

Green Space Calculations

Total Green Space = 28,757m²

Public Green Space = 9,314m²

Courtyard Green Space = 4,979m²

School Open Space =13,827m²

Private Green Space = 637m²

Amenity Open Space Calculations

Total Open Space = 47,687m²

Public Space = 22,210m²

Courtyard Space = 7,650m²

School Open Space = 13,827m²

Private Space = 4,000m²

Total Open Space Including Towpath = 50,369m²

Towpath = 2,682m²

Watney's Sports Ground Calculations

Watney's Sports Ground = 20,620m²

Local Plan Designation OOLTI Calculations

Local Plan Designation OOLTI = 22,000m²

Revision No.	Issue Date:	Prepared by:	Approved by:
00 - Draft Issue	16/11/2016	RJ	RC
01 - Draft Issue	17/11/2016	RJ	RC
02 - Draft Issue	05/12/2016	RJ	RC
03 - Draft Issue	14/12/2016	RJ	RC
04 - Draft Issue	20/12/2016	RJ	RC
05 - Revised Issue	31/01/2017	RJ	RC
06 - Revised Issue	13/02/2017	RJ	RC
07 - Revised Issue	17/02/2017	RJ	RC
08 - Revised Issue	16/03/2017	RJ	RC
09 - Revised Issue	10/05/2017	RJ	RC
10 - Revised Issue	14/06/2017	RJ	RC
11 - Revised Issue	27/06/2017	RJ	RC
11 - Revised Issue	27/06/2017	RJ	RC
12 - Revised Issue	12/07/2017	RJ	RC
13 - Revised Issue	17/08/2017	RJ	RC
14 - Revised Issue	22/08/2017	RJ	RC
15 - Revised Issue	14/09/2017	RJ	RC
16 - Revised Issue	17/01/2018	RJ	RC
17 - Revised Issue	25/01/2018	RJ	RC
18 - Revised Issue	24/04/2020	RM	CL

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GILLESPIES

Appendix B

BRIEFING PAPER – CONFIDENTIAL

PROJECT:	**Reselton Properties Limited – The Stag Brewery**
SUBJECT:	**Response to Sport England regarding planning applications 18/0547/FUL and 18/0548/FUL – The Stag Brewery (SE Ref: PA/18/L/RT/48632 and PA/18/L/RT/48635)**
DATE:	**October 2019**

1. Introduction

1.1 Reselton Properties Limited ('the Applicant') has submitted three linked planning applications for the comprehensive redevelopment of the former Stag Brewery Site in Mortlake ('the Site') within the London Borough of Richmond Upon Thames ('LBRuT').

1.2 The former Stag Brewery Site is bounded by Lower Richmond Road to the south, the river Thames and the Thames Bank to the north, Williams Lane to the east and Bulls Alley (off Mortlake High Street) to the west. The Site is bisected by Ship Lane. The Site currently comprises a mixture of large scale industrial brewing structures, large areas of hardstanding and playing fields.

1.3 The redevelopment will provide homes (including affordable homes), a Care Village for an older population, complementary commercial uses, community facilities, a new secondary school alongside new open and green spaces throughout. Associated highway improvements are also proposed, which include works at Chalkers Corner junction.

1.4 The three planning applications are as follows:

- Application A – hybrid planning application for comprehensive mixed use redevelopment of the former Stag Brewery site consisting of:
    i. Land to the east of Ship Lane applied for in detail (referred to as 'Development Area 1' throughout); and
    ii. Land to the west of Ship Lane (excluding the school) applied for in outline detail (referred to as 'Development Area 2' throughout).
- Application B – detailed planning application for the school (on land to the west of Ship Lane).
- Application C – detailed planning application for highways and landscape works at Chalkers Corner.

1.5 Full details and scope of all three planning applications are described in the submitted Planning Statement, prepared by Gerald Eve LLP.

1.6 Sport England issued a response on 30 April 2018 to the application in their role as a statutory consultee. Sport England objected to the application, with specific reference to Application B, on the basis of requiring further assurances with regard to the design of the sports facilities and a Section 106 to assist the relocation of the current site users.

1.7 Subsequently, following a review of the Substitution Pack issued by LBRuT in May 2019, Sport England responded further on 16 July 2019 the points of which are incorporated into this briefing paper.

1.8 It stated that "*Sport England considers that our statutory objection to Application B should be satisfactorily addressed before we remove our objection to this application*".

1.9 This briefing note summarises the main issues raised by Sport England's responses previously and in July 2019 and how they have been addressed by the Applicant.

2. Issues raised by Sport England and Applicant Response

2.1 Sport England would wish for the current user of the site, Barnes Eagles, to be identified as a user group within the Community Use Agreement and have the benefit of a preferential rate for using the new pitch.

- *Barnes Eagles has been identified in the Community Use Agreement as a Partner Club, which ensures their preferential rate and access arrangements. This reflects the Section 106 under which a licence will be granted to Barnes Eagles FC securing their use of the new pitch for two nights a week between 7pm and 9pm and between 9am to 3.30pm on Sundays, August to May inclusive in exchange for payment of £6,000 per annum.* – See **Stag Brewery – Community Use Agreement 13.9.19 to LPA(66862382_2) – Stag Brewery – Community Use Agreement(66862382_3)(67309210_1)** and **Section 106 Clean 5.9.19 to LPA(66860569_1)(67284128_1) – Section 106 Stag Brewery as of 24.9.19(67149566_1)(67284705_1)**.
- *The agreed cost of £6,000 per season for the use of the pitch as set out in the Barnes Eagles FC licence and Draft Community Use Agreement compares with a cost of £41,409.00 per season for the same hours of use at the costs specified in the draft Community Use Agreement – a discount of £35,409 (85.5%) per season for Barnes Eagles FC.*
- *The Section 106 agreement specifies that "The Owner covenants with the Council so as to bind its interest in the School Land as follows:….(b) not to Occupy the School prior to entering into the Community Use Agreement."* – See **Section 106 Clean 5.9.19 to LPA(66860569_1)(67284128_1) – Section 106 Stag Brewery as of 24.9.19(67149566_1)(67284705_1)**.

2.2 Sport England requires that planning conditions and a Section 106 agreement ensure that the youth teams have access to a pitch during the construction period and access to another site on a permanent basis.

- *The Section 106 agreement includes Head of Terms for a Barnes Eagles licence which will ensure:*
    a. *Barnes Eagles FC is granted a Temporary Licence permitting the use of the Football Pitch and the Sports Pavilion by Barnes Eagles until the redevelopment of the School Land*
    b. *Development on the Football Pitch and demolition of the Sports Pavilion will not commence until the Temporary Licence has been terminated and a contribution of £90,750 towards either the provision of temporary football pitches for use by Barnes Eagles whilst the Development is being constructed or for the future costs of Barnes Eagles associated with the Development has been paid to the Council*
    c. *A further Barnes Eagles Contribution would be paid to the Council in the event that the new facilities were not ready for use before the 1 July of the third year following termination of the Temporary Licence.* – See **Section 106 Clean 5.9.19 to LPA(66860569_1)(67284128_1) – Section 106 Stag Brewery as of 24.9.19(67149566_1)(67284705_1)**.

- *Barnes Eagles FC have agreed in principle to these Heads of Terms and have identified a number of potential alternative sites which have confirmed that they have capacity to accommodate their use during a construction period. The Applicant understands that the Club has not yet finalised any arrangements for alternative pitch provision during the construction period as they do not at this stage know when that will commence. The Club has confirmed agreement with the Heads of Terms in a letter enclosed.* – See **Letter of Comfort Stag Brewery 17 07 19**.

2.3 Sport England will require a Community Use Agreement for all school sports facilities.

- *The Section 1.06 agreement specifies that "The Owner covenants with the Council so as to bind its interest in the School Land as follows:….(b) not to Occupy the School prior to entering into the Community Use Agreement."*– See **Section 106 Clean 5.9.19 to LPA(66860569_1)(67284128_1) – Section 106 Stag Brewery as of 24.9.19(67149566_1)(67284705_1)** and **Stag Brewery – Community Use Agreement 13.9.19 to LPA(66862382_2) – Stag Brewery – Community Use Agreement(66862382_3)(67309210_1)**.

2.4 Sport England requires all sports facilities to meet guidance for Sports Halls (2012), Artificial Surfaces for Outdoor Sports (2013) & FA Guide to 3G Football Turf Pitches.

- *See drawings listed below for indoor facilities and* ***Landscape DAS Section 5.10, 5.11 and Drawing No's P10736-00-001-130-05, P10736-00-001-131-05, P10736-00-001-132-07, P10736-00-001-133-08*** *for outdoor facilities.*

Z3 School - Proposed Site Plan	C645_Z3_P_AL_001 Rev A
Z3 School - Proposed Ground Floor Plan	C645_Z3_P_00_001 Rev A
Z3 School - Proposed First Floor Plan	C645_Z3_P_01_001
Z3 School - Proposed Second Floor Plan	C645_Z3_P_02_001
Z3 School - Proposed Roof Plan	C645_Z3_P_RF_001 Rev A
Z3 School - Proposed Elevations	C645_Z3_E_AL_001 Rev A
Z3 School - Proposed Sections	C645_Z3_S_AL_001
Z3 School - Proposed Bay Study Elevation	C645_Z3_E_01_001

2.5 All sports facilities must meet design guidance, but SE requires more detailed plans for ATP and MUGA to include court dimensions, and the same applies to the design of the Sports Hall (including the internal height). The Artificial Pitch should also have goal recesses and details of fencing should be provided. The plans should include written dimensions.

2.6 Sport England highlighted in 16 July that to meet exception 5, Sport England requires all sports facilities to meet its design guidance so that they are fit for purpose and meet the needs of the school and the community.

2.7 Sport England requires a more detailed plan of the artificial pitch and the MUGA to include pitch and court dimensions, for example, to check that safe run-off has been included and the same applies to the design of the sports hall (including the internal height).

2.8 The artificial pitch should also have goal recesses (for goal storage) and details of the fencing should also be provided (the FA recommend 4.5m high fencing for artificial pitches and at least 3m run-off around the pitches). The plans should include written dimensions.

- *As above (2.4). Updated designs were provided to Vicky Aston and discussed in a teleconference on 20th September 2019 in which it was confirmed that the designs appeared to meet the specifications of the guidance from a Sport England perspective.*

2.9 Sport England have requested that the School's MUGA is designed so that it can be accessed by the community at weekends and potentially form part of the park, although this will require further consideration of how the MUGA will be managed.

- *The MUGA has been designed in accordance with Sport England Design Guidance - See drawings listed in 2.4.*
- *The community use agreement enables community us of the MUGA at evenings and weekends as specified.*
- *Community use management will be the responsibility of the School and they will be required to put a solution in place that complies with the Planning Conditions. Given the School is not yet an entity – this will need to be confirmed at a later date. Sport England are requested to acknowledge that this will be addressed and evidence provided post planning.*

2.10 Sport England would object to the proposal if the facility is not floodlit or if the opening hours are unreasonably restricted. Sport England's preference for evening use is up to 10PM.

- *Floodlighting is proposed for the artificial grass pitch. In accordance with LBRuT's preferences, evening use is proposed up to 9PM (Monday to Saturday) and up to 8PM on Sundays and Public Holidays (not 11pm as mistakenly set out by the Applicant on 2nd September in response to their request for further information on lighting and noise impacts). This still ensures significant additional capacity compared with the current facilities and balances community needs with the impact on neighbouring residential properties* – See **Stag Brewery – Community Use Agreement 13.9.19 to LPA(66862382_2) – Stag Brewery – Community Use Agreement(66862382_3)(67309210_1)**and **SLC Briefing Paper 5.0 5Apr19**.

2.11 A further condition could be included to secure ducting for power cables on the MUGA to ensure sports lighting could be retrofitted at a later date.

- *Ducting for power cables on the MUGA to allow for the retrofitting of sports lighting at a later date if required can be included as part of a consent condition.*

2.12 Sport England have highlighted on 16 July 2019 that the Football Association / Football Foundation remain concerned regarding the proposed lux levels for the artificial pitch.

2.13 In addition to this, LBRUT have identified their requirements relating to Floodlighting on 22 August 2019:

"Sports Lighting Control Scheme

2.14 Artificial lighting shall not be installed until full and precise details have been submitted to and approved by the Local Planning Authority. The approved scheme shall be constructed and installed in full accordance with the approved details and shall thereafter be maintained in full accordance with the approved details.

2.15 To enable the scheme to be assessed the following information must be supplied to the LPA.

- A statement setting out why a lighting scheme is required, and the frequency and length of use in terms of hours of illumination during the summer and winter.
- Demonstration that recommended illuminance (the quantity of light falling on the court surface) and uniformity (minimum lighting level/average lighting level) and environmental lighting impact complies with the Sport England Design Guidance Note- Artificial Sports Lighting Updated guidance for 2012

- A site survey showing the area to be lit relative to the surrounding area, the existing landscape features together with proposed landscaping features to mitigate the impacts of the proposed lighting.
- Details of the make and catalogue number of any luminaires/floodlights.
- Size, type and number of lamps fitted within any luminaire or floodlight.
- The mounting height of the luminaires/floodlights specified.
- The location and orientation of the luminaires/floodlights.
- A technical report prepared by a qualified Lighting Engineer or the lighting company setting out the type of lights, performance, height and spacing of lighting columns. The light levels to be achieved over the intended area, at the site boundary and for 25 metres outside it."

- *The Applicant has responded to LBRuT's queries with regard to lighting by email on 2nd September 2019. Details of this response have been provided to Sport England for information. It should be noted that the proposed floodlighting hours are as set out in 2.10, not until 11pm as mistakenly set out in the email of 2nd September to LBRUT. Floodlighting of the Artificial Grass Pitch is currently proposed at 120 lux as advised by the Football Association / Football Foundation* – See **547-(010)-RP-EX-LA Sports Pitch Lighting Assessment**.

2.16 Sport England suggested that additional acoustic measure to mitigate any impact on nearby properties may be required.

- *The impact of noise from the sports facilities has been discussed between Waterman Infrastructure & Environment Limited and London Borough of Richmond environmental health (noise) officers. It is noted that the predicted noise levels have been assessed by Waterman and the Environmental Statement does not specify a specific requirement for any engineered solutions to manage noise. Notwithstanding this, measures could be implemented and these have been set out to LBRuT. It was noted that noise impacts would be controlled through careful management of the use of sports facilities together with restriction in operational hours. The Environmental Health officer has agreed that physical and managerial mitigation would be implemented as part of the MUGA scheme and that this can form part of a consent condition.*

2.17 Sport England have in their response to LBRUT on 16 July stated that "*The relationship between some of the new flats within this proposed development and the proposed new artificial pitch may also require further consideration*".

2.18 Sport England considers it would be appropriate for information on acoustic measures to be provided before the planning application goes in front of the planning committee, given the proximity of the site to existing and new local residents.

2.19 For example, the drawings indicate that a new residential block will be placed opposite the artificial pitch. Measures to reduce impact on these residents could include ventilation within the block so that windows can be closed and no balconies on the face of buildings closest to the new artificial pitch. Sport England is unable to withdraw our objection to this application until this matter is resolved.

- *In respect of noise, a briefing note has been developed by the Applicant's noise consultants Waterman which sets out*
    a. *The noise impacts arising from the proposed sports facilities (which are considered to be acceptable*

b. *Notwithstanding that Waterman consider the noise levels to be acceptable the note sets out a commitment to providing acoustic mitigation measures*

c. *The note goes on to demonstrate how these mitigation measures would help to reduce noise for existing and new residents.*

- *On point (b), the mitigation measure proposed is for the 4.5m school fence to be provided as a rebound fence which would have acoustic benefits. The relevant plans have been updated to reflected this commitment.* – See **Waterman Note_Acoustics** and Revised plans:

  P10736-00-001-130-05

  P10736-00-001-131-05

  P10736-00-001-132-07

  P10736-00-001-133-08

2.20 Sport England will require a section 106 agreement to cover the following conditions:

(1) The sports hall including changing rooms, artificial pitch and multi-use games area hereby permitted shall not be constructed other than in accordance with the design and layout details set out in the planning application, Section * and Drawing No's * TO BE COMPLETED UPON AMENDMENTS TO THE PLANS TO ENSURE COMPLIANCE WITH SPORT ENGLAND DESIGN GUIDANCE STANDARDS]

(2) Use of the development shall not commence until:

(a) certification that the Artificial Grass Pitch hereby permitted has met FIFA Quality Concept for Football Turf – FIFA Quality or equivalent International Artificial Turf Standard (IMS) and

(b) confirmation that the facility has been registered on the Football Association's Register of Football Turf Pitches have been submitted to and approved in writing by the Local Planning Authority.

(3) No development shall commence until a community use agreement prepared in consultation with Sport England has been submitted to and approved in writing by the Local Planning Authority, and a copy of the completed approved agreement has been provided to the Local Planning Authority. The agreement shall apply to the sports hall, changing provision, activity studio, artificial pitch, multi-use games area and parking and include details of pricing policy, hours of use, access by non-educational establishment users, management responsibilities and a mechanism for review. The development shall not be used otherwise than in strict compliance with the approved agreement."

(4) The artificial pitch and its associated sports lighting shall not be used outside the hours of:

a) [8 a.m.] and [10 p.m.] Monday to Friday;

b) [8 a.m.] and [10 p.m.] on Saturday; and

c) [8 a.m.] and [8 p.m.] on Sunday [and public holidays].

(5) Before the artificial pitch, multi-use games area and sports hall are brought into use, a Management and Maintenance Scheme for the facility including management responsibilities, a maintenance schedule and a mechanism for review shall be submitted to and approved in writing by the Local Planning Authority after consultation with Sport England. For the artificial pitch this should include measures to ensure the replacement of

the artificial pitch surface when it comes to the end of its life. The measures set out in the approved scheme shall be complied with in full, with effect from commencement of use of the artificial pitch.

- *The Applicant agrees to these conditions without amendment with the exception of the amendment of the hours of sports lighting to:*
    a. *5pm -9pm Monday to Friday during Term Time*
    b. *9am – 9pm Monday to Friday outside of Term Time*
    c. *9am – 9pm Saturdays*
    d. *9am to 8pm Sundays and public holidays.*

2.21 Sport England wishes to ensure that the sports facilities promised will come forward for the new community. Sport England therefore recommends that clauses are contained within the Section 1.06 for this site that ensure the school sports facilities will be delivered ahead of or alongside housing.

- *The Applicant cannot agree to this condition. Application A (the main masterplan) and Application B (the school and sports facilities) will likely be delivered by separate bodies. The Section 106 agreement will secure the transfer of land to the ESFA/another body early in the development process which will enable the school and sports facilities to be delivered thereafter. However, assuming Application B is brought forward separately, the Applicant would have no control over build programme and therefore the occupation of the main masterplan (Application A) could be significantly protracted due to this suggested condition and matters outside of the Applicant's control.*

  A significant amount of open space will be delivered under Application A (13,970 sqm, which excludes the sport facilities provided under Application B). In addition, almost all residential units will be provided with amenity space. The Applicant will also be making a substantial CIL payment.

3. Summary

3.1 The Applicant has made amendments to the scheme and supporting documents which demonstrate that the issues and concerns raised by Sport England have been addressed.

Appendix B

Appendix 1

Date:

[***Amend as appropriate***]

The [ ] School

London Borough of Richmond Upon Thames Local Authority

Barnes Eagles Football Club

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Draft Agreement in relation to arrangements for
community use of sports facilities at [ ] School

In connection with Planning Permissions
18/0547/FUL; 18/0548/FUL and 18/0549/FUL

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DATE [ ]

[**Amend Parties as appropriate**]

(1) **THE [ ] SCHOOL** of [*insert address*] ("the **School**")

(2) London Borough of Richmond Upon Thames **LOCAL AUTHORITY** of [Civic Centre, 44 York Street, Twickenham, TW1 3BZ] ("the **Council**")

(3) Barnes Eagles Football Club acting by [First Name of Trustee] of [Address] and [Name of Second Trustee] of [Address] ("Barnes Eagles")

1. Recitals

1.1 Planning Permissions were granted by the Council for the Development subject to conditions and planning obligations. The Planning Agreement [and Condition [*insert number*]] to the Planning Permissions requires that an agreement shall be entered into between the School and Council that sets out the rights of Barnes Eagles and the general public to use the Sports Facilities within the Development and/or the wider school site.

1.2 The parties wish to enter into this Agreement in order to make the indoor and outdoor Sports Facilities at the Development and/or the wider school site, available (when their use is not required by the School) for use by the local community in compliance with the terms of this Agreement and the Planning Agreement [Condition [*insert no.*]].

1.3 The School is the owner of the School Premises and is responsible for their use.

1.4 The Council has responsibility for the provision of sports facilities in the Richmond area for use by and for the benefit of the community and is desirous of entering into this Agreement in furtherance of that responsibility and as the local planning authority in respect of the Development.

2. Definitions and Interpretation

In this Agreement the following words or phrases have the corresponding meanings ascribed to them unless the context otherwise requires:

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Barnes Eagles means the football club for boys and girls of all ages in Barnes, South West London, which has secured rights of access to the Artificial Grass Pitch and ~~ancillary~~changing room facilities at the time and rates under its Preferential Access Arrangements

Casual Hire means availability for any individual(s) or groups to book the Sports Facilities up to [*insert number*] days in advance for use on a pay-as-you-play basis, where space is available

Community Use means use of the Sports Facilities by the local community including organised sports clubs, organisations and for Casual Hire.

Development means the development granted by the Planning Permissions incorporating an Artificial Grass Pitch, MUGA, Sports Hall, Activity Hall and community use facilities

Management Committee[1] means the management committee as defined in clause [6.1] of this Agreement

Parties means the parties to this Agreement

Planning Agreement means the section 106 Agreement dated [ ] between Reselton Properties Limited, The London Borough of Richmond upon Thames and the Port of London Authority under the Planning Permissions

Planning Permissions means together planning permissions (references 18/0547/FUL, 18/0548/FUL and 18/0549/FUL

[1] Delete definition if no Management Committee.

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granted by the London Borough of Richmond Upon Thames on [ ] or any amendment thereof

Preferential Access Arrangements means the Barnes Eagles' use of the Artificial Grass Pitch exclusively and ~~ancillary~~changing room facilities for two nights a week [between 19.00 and 21.00] and between 09.00 to 15.30 on Sundays during the Football Association football season [August to May] fixed at £6,000 per annum subject to the increases in Schedule 2 paragraph 3.4 and Preferential Access shall be construed accordingly, but excluding the use of the MUGA, Sports Hall and Activity Hall.

Review Committee means representatives of each of the Parties to this Agreement or their nominees

School Core Times means 8am to 4pm Mondays to Fridays during term time as defined in Schedule 2 to this Agreement

School Premises means the land and buildings comprising [ ] School

Sports Facilities means the sports facilities identified in Schedule 1 to this Agreement forming part of the School Premises

3. Aims

The Parties agree to pursue the following aims:

- Providing opportunities for the local community and sports organisations to participate in sport and physical activity for health improvement and development of their skills, particularly amongst low participant groups;

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- Operating in line with the national agenda for sport taking into account nationally adopted strategies;

- Generating positive attitudes in sport and physical activity by young people and reducing the drop out rate in sports participation with age;

- Increasing the number of people of all ages and abilities participating in sport and physical activity including people with disabilities;

- Using the facilities to encourage the range, quality and number of school sports club links and to stimulate competition that is inclusive of young people and adults;

- To provide affordable access to the facilities and to be self financing in terms of Community Use;

- To provide a football development hub for the community and strong school / club links.

4. Arrangements for Community Use

The School agrees to make the Sports Facilities available for Community Use in accordance with the provisions of Schedule 2 to this Agreement.

5. Targets for Community Use

The School shall use reasonable endeavours to support the achievement of making a contribution to local participation targets for sporting and physical activity. The School shall work with London Borough of Richmond Upon Thames and London Sport to provide a range of opportunities and pathways for the community. These may include existing initiatives and will also include new and local activities.

6. Marketing and Promotion

6.1 The ~~School~~Management Committee will be responsible for marketing and promoting the Sports Facilities in accordance with the agreed aims and targets.

6.2 A marketing strategy will be prepared by the School and submitted in writing for approval by the Management Committee (not to be unreasonably delayed or withheld).

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6.3 ~~6.2~~ The ~~School~~Review Committee will implement and review the approved marketing strategy on an annual basis.

7. Management[2]

7.1 A Management Committee will be established within 3 months of the date of this Agreement to develop Community Use of the Sports Facilities in accordance with the terms of reference and constitution of Schedule 3 to this Agreement.

7.2 Membership shall include representative(s) (or their nominee) from each of the following:-

(a) The School[3]

(b) The Council

(c) Barnes Eagles ~~[TBC]~~

7.3 Under these terms of reference, the Management Committee will, in accordance with this Agreement, seek to establish a practical policy framework for the day to day management and operation of the Sports Facilities ~~during agreed periods of Community Use.~~in accordance with Schedule 2. This framework should seek to enable:

(a) a policy of affordable pricing to assist in the achievement of the aims of this Agreement. The policy will ensure that prices shall be no greater than similar local authority run facilities in the area;

(b) the promotion and forward planning of development activities, at times which best suit the target groups;

(c) equal opportunities of access;

(d) an easy and accessible booking arrangement for Community Use and block booking, this system to be reviewed on an annual basis;

(e) an appropriate marketing strategy for the marketing of the Sports Facilities for Community Use.

7.4 The School will be solely responsible for the Sports Facilities and shall:-

[2] Delete clauses 7.1-7.3 if a Management Committee is not required.
[3] To be the most appropriate person(s), such as Governor, Head Teacher, Head of PE.

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(a) resource, control and routinely ensure the maintenance of the Sports Facilities in a manner that will allow achievement of the agreed aims;

(b) make the Sports Facilities available on the occasions and times specified in Schedule 2~~:~~;

(c) ensure provision of heat, light and water and such other amenities as required for the Sports Facilities and their intended use;

(d) ensure that the Sports Facilities comply with all legislation and guidance in force at the time of this Agreement relating to access for disabled users; and

(e) cover the cost of gas, fuel, oil, electricity, water, rates and taxes that may be attributable to the use of the Sports Facilities and ~~recover this through~~shall be entitled to deduct the reasonable costs from the hire charges and income received from ~~community use~~Community Use.

8. Financial Matters

8.1 The School endeavours to ensure that the costs of operating Community Use at the Sports Facilities will be fully covered by income from such use and any surplus will be utilised to:

8.1.1 Agree to contribute to an agreed contingency or sinking fund for major maintenance, repairs and ultimately renewal of fixed life elements of the Sports Facilities.

8.1.2 Maintain a reasonable stock of sports equipment for use in connection with the Sports Facilities.

8.1.3 Enhance the quality and amenity of the Sports Facilities.

9. Monitoring and Review

9.1 2 months prior to the date on which the Review Committee produces its annual report the School shall make available to the Review Committee details of all usage, bookings, maintenance and financial matters relating to the Community Use of the Sports Facilities to assist with the development and improvement of community access.

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9.2 The Review Committee shall undertake an assessment of the adequacy of the implementation of this Agreement in relation to:

- hours of use of the Sports Facilities;
- pricing policy;
- compliance with targets and aims of this Agreement;
- marketing;
- financial performance of the Sports Facilities during the previous year; and
- maintenance.

9.3 The Review Committee shall prepare a report based on the above assessment and prepare recommendations as to how Community Use of the Sports Facilities can be further developed and improved.

9.4 The School shall implement all reasonable recommendations of the Review Committee as soon as reasonably practicable.

9.5 In the event any significant changes are required to this Agreement as a consequence of each or any annual review prior written approval of each of the Parties to this Agreement shall be required.

9.6 The School shall not materially reduce the level of community access to the Sports Facilities required by the Planning Agreement [and Condition [insert number]] of the Planning Permissions without the prior written approval of the Council following consultation with Sport England.

10. Disputes

The Review Committee and Management Committee shall use reasonable endeavours and act in good faith in the resolution of any disputes that may arise in connection with the carrying out of their duties pursuant to this Agreement.

11. Duration of Agreement

This Agreement shall operate for so long as the School Facilities are provided in accordance with the Planning Permissions. In the event the School should cease to

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operate the Parties agree to make every effort to secure the continued operation of the Sports Facilities for Community Use.

12. Authority

The Parties warrant that they have the full right and authority to enter into this Agreement.

13. No Variations

This Agreement may only be varied in writing by a document executed by all the Parties hereto.

14. No Agency

Nothing in this Agreement shall be construed as creating a partnership, a joint venture, a contract of employment or a relationship of principal and agent between the parties hereto.

15. Severability

If any term condition or provision contained in this Agreement shall be held to be invalid unlawful or unenforceable to any extent such term condition or provision shall (save where it goes to the root of this Agreement) not affect the validity legality or enforceability of the remaining parts of this Agreement.

16. Waiver

No term or provision of this Agreement shall be considered as waived by any party to this Agreement unless a waiver is given in writing by that party.

17. Non-Assignability

This Agreement is personal to the parties and none of them shall assign sub-contract or otherwise deal with their rights or obligations without the prior written consent of the others.

18. Governing Law and Jurisdiction

This Agreement shall be governed by the laws of England and Wales and the parties submit to the exclusive jurisdiction of the courts of England and Wales.

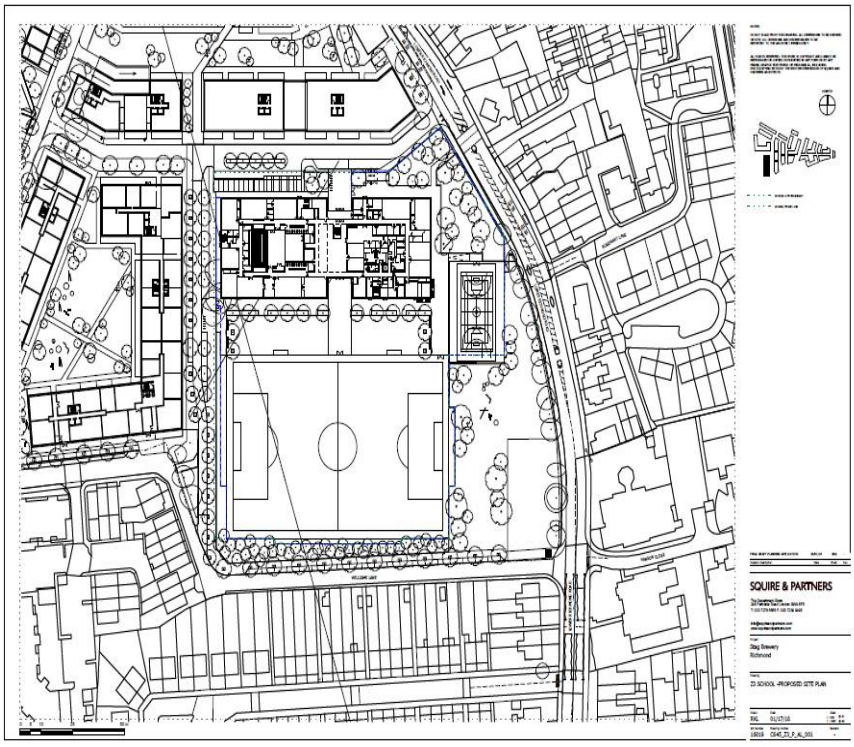
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Schedule 1

1. The outdoor sports areas and facilities to be made available for Community Use shall comprise the following as shown on the attached plan(s)):-

Artificial Grass Pitch (64m x 100m)

MUGA (26.5m x 36.3m)



The indoor sports areas and facilities (together with any ancillary facilities [*toilets, changing rooms etc*]) to be made available for Community Use shall comprise the following as shown on the attached plan(s)):-

Sports Hall (34.5m x 20m)

Activity Hall (10m x 15m)

Changing rooms





Schedule 2

Arrangements for Community Use

1. Users

1.1 The Sports Facilities shall be made available for Community Use.

1.2 The School shall allow Barnes Eagles' Preferential Access Arrangements to the Artificial Grass Pitch and ~~ancillary~~changing room facilities in this Agreement.

1.3 Barnes Eagles will have Preferential Access to the Artificial Grass Pitch and ~~ancillary~~changing room facilities. This will entitle them to secure their preferred sessions for hire prior to any other users before the commencement of each school year over a minimum term of 25 years from [insert date]. They will forego their right to Preferential Access Arrangements for the season in the event that confirmation of their bookings is not received for the forthcoming football season by 31 July each year. They will still be entitled to the prevailing rates charged by the Council for any bookings made that season.

1.4 Barnes Eagles' Preferential Access Arrangements may only be terminated with their written consent.

1.5 Barnes Eagles may use the MUGA, Sports Hall and Activity Hall by confirming bookings at the prevailing rates charged by the Council.

1.6 ~~1.5~~ The ~~Management Committee~~School may enter into a similar arrangement with other local groups for the use of the Sports Facilities for Community Use similar to Barnes Eagles provided that the Preferential Access Arrangements ~~of Barnes Eagles is~~are not ~~restricted~~affected. The Management Committee will review the status of any arrangements with other local groups (excluding Barnes Eagles' Preferential Access Arrangements) on an annual basis.

1.7 ~~1.6~~ The Management Committee may enter into a similar arrangement to Barnes Eagles with more than one club for the use of the same facility type that does not affect Barnes Eagles' Preferential Access Arrangements, but in this event initial preference is given to the club with the longest-standing arrangement status.

2. Hours of Access for Community Use (excluding Barnes Eagles)

TERM-TIME

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Community Use	Mon - Fri :	4pm - 9pm
	Sat :	9am – 9pm
	Sun* :	9am – 8pm.

SCHOOL HOLIDAYS

Community Use	Mon - Fri :	9am – 9pm
	Sat :	9am – 9pm
	Sun* :	9am – 8pm.

*Including Public Holidays and Bank Holidays

3. Pricing

3.1 A policy of affordable and sustainable pricing shall apply to maximise Community Use and in accordance with the aims of this Agreement. Initial suggested pricing has been included below (excluding Barnes Eagles pricing).

3.2 Initial pricing (excluding Barnes Eagles pricing) will be subject to review and approval by the Management Committee and will be reviewed and set on an annual basis by the Management Committee thereafter.

3.3 The Management Committee will seek to maintain an affordable pricing policy which ensures the sustainability of the facilities.

3.4 Barnes Eagles' fees will be fixed at £6,000 per annum for the Preferential Access Arrangements and subject to a 1% increase per annum from years ~~1~~2-10 of this agreement and 3% increase per annum from years 11-25. Additional hours will be subject to the facility hire charges below unless a discount rate is negotiated by separate agreement.

3.5 If the Artificial Grass Pitch and changing rooms are not available at any time during the Barnes Eagles Preferential Access Arrangements then the Management Committee will use all reasonable endeavours to provide an alternative facility. In the absence of a suitable alternative, the School shall refund part of the Barnes Eagles' fee referred to in paragraph 3.4 above proportionate to the length of time that the facilities are unavailable.

Facility Hire per hour:

DRAFT

Artificial Grass Pitch
Whole pitch hire - £118.00
Third pitch hire - £60.00
Block booking (10 sessions or more) - £98.33
Weekend match hire (whole pitch ~~-~~ = 2 hours) - £118

MUGA
Casual Hire - £20
Block booking (10 sessions or more) - £16.67

Sports hall
Casual Hire - £68
Block booking (10 sessions or more) - £56.67

Activity hall
Casual Hire - £43
Block booking (10 sessions or more) - £35.83

4. Booking arrangements

4.1 An easy and accessible advance booking arrangement for Casual Hire and block bookings shall be established for hire of the Sports Facilities using a standard booking form.

4.2 The agreed booking arrangements shall operate as follows:-

[*Describe intended booking arrangements for the Sports Facilities. Management Committee to determine booking arrangements after the first management meeting]*

The School to inform Barnes Eagles when booking is available for the next season (depending on the booking arrangements agreed).

5. Parking Arrangements

5.1 The school has 15 car parking spaces which shall be available to park for ~~community users~~Community Users on a first come first served basis with other users of the site.

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Schedule 3

Management Committee

Terms of Reference and Constitution

1. Purpose

(a) To monitor progress against agreed aims and targets: programming, usage and financial and to provide regular reports for the stakeholders of the school on those topics.

(b) To decide on policy issues e.g. pricing, the framework of sports programmes and staffing.

(c) To ensure effective partnership working between the organisations involved in school community use.

(d) To determine strategies for future developments at the School and timetables for their implementation.

2. Officers

The Chair shall have the following roles;

- Role of Chair:
    - To direct and control the meetings of the committee.
    - To cast a further vote if necessary to resolve any tied decision(s).
    - To represent the committee at other meetings and functions as necessary.

A Secretary will be elected by the full committee at the first meeting of each financial year (April to March) and will serve for one full year.

- Role of Secretary:
    - To compile and maintain minutes of all meetings.
    - To compile and issue agendas for meetings in timely fashion.

DRAFT

- To take care of all communications to and from the committee.

3. Operation

(a) The full committee will convene at least twice per annum and four times per annum in the first year of operation. Additional meetings will be held as considered necessary by a simple majority of members.

(b) The School will resolve day to day issues. ~~Whilst the School has full authority for any decisions they must adhere to the policy framework established by the full committee.~~

(c) The School will not make any decisions unilaterally affecting the use and availability of the Sports Facilities that impact on the Preferred Access Arrangements without consulting with Barnes Eagles.

(d) ~~(c)~~ Day to day operation will be the responsibility of the School.

(e) ~~(d)~~ Sub-groups/committees may be formed by the Management Committee if considered necessary or desirable.

4. Reporting

(a) Minutes of committee meetings will be maintained.

(b) A formal annual short briefing report, as set out in paragraph 9 of this agreement, will be issued to cover policy, financial and sports development matters.

(c) Other specific reports requested by other committee members when possible.

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IN WITNESS whereof the hands of the parties or their duly authorised representatives the day and year first above written.

[*Amend as appropriate*]

Signed by .....

Duly authorised by the School

Signed by .....

Duly authorised by the Council

DRAFT

[*Insert execution clause for the School]*

[*Insert execution clause for the Council*]

DRAFT

Document comparison by Workshare 9.5 on 02 October 2019 14:31:01

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Format changed	0
Total changes	81

Appendix B

Appendix 2

大成DENTONS

~~5 September~~1 October 2019

~~MZZC/67284128.1~~JMK/SJA/035353.00001/67149566.1

Deed of Planning Obligation under Section 106 of the Town and Country Planning Act 1990 and Section 16 of the Greater London Council (General Powers) Act 1974

Former Stag Brewery, Lower Richmond Road, Mortlake, London

Dated

Reselton Properties Limited
(the Owner)

The London Borough of Richmond upon Thames

(the Council)

Port of London Authority

(the PLA)

Dentons UK and Middle East LLP
One Fleet Place
London EC4M 7WS
United Kingdom
DX 242

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Deed of Planning Obligation

Dated

Between

(1) **Reselton Properties Limited** (incorporated in Jersey), 28-20 The Parade, St Helier, Jersey JE1 1EQ (the **Owner** which expression where the context admits shall include its successors in title);

(2) **The London Borough of Richmond upon Thames** of Civic Centre, 44 York Street, Twickenham TW1 3BZ (the **Council** which expression shall include any successor local planning authority exercising planning powers under the Act).

(3) **Port of London Authority** whose principal office is at London River House Royal Pier Road Gravesend Kent DA12 2BG (the **PLA**)

Recitals

A The Owner is registered with freehold title absolute as the freehold owner of the Land under Title Number TGL306471.

B The Council is the local planning authority for the purposes of the 1990 Act for the area in which the Land is situated.

C The Owner submitted the Planning Applications to the Council on 19 February 2018.

D The Council resolved at a meeting of the planning committee on [ ] to grant the Planning Permissions subject to conditions and the Owner entering into planning obligations as hereinafter provided.

E The PLA is the proprietor of the unregistered part of the Land still colloquially known as a towpath but which by a resolution of the PLA Board under section 203 of the Port of London (Consolidation) Act 1920 was discontinued as a towpath on the 8 April 1968 as shown coloured brown on Plan [ ].

F The PLA has agreed to enter into this Deed to consent to the Owner giving and satisfying the said planning obligations to the Council in respect of the PLA Land.

It is agreed:

1 Definitions

1990 Act shall mean The Town and Country Planning Act 1990.

2008 Act shall mean the Housing and Regeneration Act 2008.

All-In Tender Price Index means the all-in tender price index published by the Building Costs Information Service or, if that index ceases for any reason to be published in the United Kingdom, such other index issued or caused to be issued from time to time by the Building Costs Information Service, Royal Institution of Chartered Surveyors, or other appropriate body and as may commonly be used in place of that index.

Chalker's Corner Works means the works authorised under Planning Permission 3.

Chalker's Corner Works Contribution means the following contributions for the purposes of delivering the Chalker's Corner Works:

(a) £xx payable in relation to the development of the School Land;

(b) £yy payable in relation to the Land other than the School Land.

Commercial Floorspace means the area(s) coloured yellow on Plan [ ]

Development means the development authorised by the Planning Permissions.

Dwelling means a dwelling (including a flat or maisonette) to be constructed pursuant to the Planning Permissions.

Expert shall mean an expert to be appointed under Clause 8 who shall be:

~~(a)~~ an independent person of at least 10 years' standing in the area of expertise relevant to the dispute; and

~~(b)~~ appointed either

~~(i)~~ by agreement between the parties and on agreed terms; or

~~(ii)~~ failing agreement within 28 days of a notice under Clause 8.1 , nominated on request by either party (at the parties' joint expense) by or on behalf of the President for the time being of the Law Society and on terms directed by the President.

Greater London Authority and GLA shall mean the body for the time being having or being responsible for providing financial assistance to bodies including Registered Providers of social housing for the purpose of improving the supply and quality of housing in England now conferred on such body under the Housing and Regeneration Act 2008 or any legislation replacing or amending the same.

Implementation Dates shall mean the date on which each of Planning Permission 1, Planning Permission 2 and Planning Permission 3 are Implemented save where expressed otherwise in this agreement.

Implement, Implemented and **Implementation** shall save where expressed otherwise in this agreement mean the carrying out of a material operation as defined in section 56(4) of the 1990 Act save for operations consisting of site clearance, demolition work, archaeological investigations, investigations for the purpose of assessing ground conditions, remedial work in respect of any contamination or other adverse ground conditions, diversion and laying of services, erection of any temporary means of enclosure, the temporary display of site notices or advertisements.

Indexed shall mean increased by reference to the relevant index pursuant to the provisions of Clause 10 of this Deed.

Land shall mean together the Phase1(a) Land, the Phase 1(b) Land, the Phase 1(c) Land, and the Phase 2 Land and the School Land and the Community Park against which this Deed may be enforced and is more particularly delineated edged red on Plan [ ].

Monitoring Contribution shall mean [£TBC] to be applied towards monitoring compliance with this Deed.

Occupation, Occupied and **Occupy** shall mean occupation for the purposes permitted by the Planning Permissions but not including occupation by personnel engaged in construction, fitting out or decoration or occupation for marketing or display or occupation in relation to security operations and **Occupier** shall be construed accordingly

Phase 1 Land means together Phase 1(a) Land, Phase 1(b) Land and Phase 1(c) Land.

Phase 1(a) Land means the land coloured yellow on Plan [ ]upon which the detailed element of Planning Permission 1 will be delivered.

Phase 1(b) Land means the land coloured purple on Plan [ ] upon which the detailed element of Planning Permission 1 will be delivered.

Phase 1(c) Land means the land coloured pink on Plan [ ] upon which the detailed element of Planning Permission 1 will be delivered.

Phase 2 Land means the land coloured blue on Plan [ ] upon which the outline element of Planning Permission 1 will be delivered.

PLA Land means the part of the land shown coloured brown on Plan [ ], which includes the public footpath and national trail as shown on the Council's definitive map

Plan [ ] means the plan annexed to this Deed showing the extent of the PLA Land;

Plans mean the plans attached to this Deed at Schedule 1.

Planning Applications means together Planning Application 1, Planning Application 2 and Planning Application 3 submitted to the Council for the Development.

Planning Application 1 means the hybrid planning application (reference 18/0547/FUL) for the comprehensive mixed-use redevelopment of the former Stag Brewery site consisting of:

~~(a)~~ land to the east of Ship Lane applied for in detail; and

~~(b)~~ land to the west of Ship Lane applied for in outline.

Planning Application 2 means the detailed planning application (reference 18/0548/FUL) for:

~~(a)~~ the erection of a three storey building to provide a new secondary school with sixth form;

~~(b)~~ sports pitch with floodlighting, external MUGA and play space; and

~~(c)~~ associated external works including, landscaping, car and cycle parking, new access routes and associated works (given Council reference number)

Planning Application 3 means the detailed planning application (reference 18/0549/FUL) for highways and landscape works at Chalker's Corner.

Planning Permissions means together Planning Permission 1, Planning Permission 2 and Planning Permission 3 granted pursuant to the Planning Applications in substantially the same form as at Schedule 2.

Planning Permission 1 means the planning permission granted in respect of Planning Application 1.

Planning Permission 2 means the planning permission granted in respect of Planning Application 2.

Planning Permission 3 means the planning permission granted in respect of Planning Application 3.

Practical Completion means issue of a certificate by the Owner's architect, civil engineer or chartered surveyor as appropriate certifying that the Development or a relevant part thereof (depending on the context of the Deed) is for all practical purposes sufficiently complete to be put into use and **Practically Completed** shall be construed accordingly

Reserved Matters Application means a reserved matters application submitted pursuant to the outline elements of Planning Permission 1.

School means the school to be developed on the School Land under Planning Permission 2.

School Land means that part of the Land coloured orange on plan [ ] which is to provide the School.

2 Construction of this Deed

2.1 Where in this Deed reference is made to clause, paragraph or schedule or recital such reference (unless the context otherwise requires) is a reference to a clause, paragraph or schedule or recital in this Deed.

2.2 Words importing the singular meaning where the context so admits include the plural meaning and vice versa.

2.3 Words of the masculine gender include the feminine and neuter genders and words denoting actual persons include companies, corporations and firms and all such words shall be construed interchangeable in that manner.

2.4 Words denoting an obligation on a party to do any act, matter or thing include an obligation to procure that it is done and words placing a party under a restriction include an obligation not to cause permit or suffer any infringement of the restriction.

2.5 Headings contained in this Deed are for reference purposes only and are not incorporated into the Deed and shall not be deemed to be an indication of the meaning of the parts of this Deed to which they relate.

2.6 Wherever there is more than one person named as a party and where more than one party undertakes an obligation all their obligations can be enforced against all of them jointly and against each individually unless there is an express provision otherwise.

2.7 Any reference to an Act of Parliament shall include any modification, extension or re enactment of that Act for the time being in force and shall include all instruments, orders, plans regulations, permissions and directions for the time being made, issued or given under that Act or deriving validity from it.

2.8 References to any party to this Deed shall include the successors in title to that party and to any deriving title through or under that party and in the case of the Council and the successors to their respective statutory functions.

3 Legal basis

3.1 This Deed is made pursuant to Section 106 of the Act, Section 111 of the Local Government Act 1972, Section 16 of the Greater London Council (General Powers) Act 1974 and all other powers so enabling.

3.2 The covenants, restrictions and requirements imposed upon the Owner under this Deed create planning obligations pursuant to Section 106 of the 1990 Act and shall be binding on the Land or identified parts of the Land and are enforceable by the Council as local planning authority not only against the Owner but also against any person deriving title from the Owner in respect of the Land or identified parts of the Land as provided by Section 106 of the 1990 Act and any persons claiming through or under it.

3.3 Nothing contained or implied in this Deed shall prejudice or affect the rights, powers, duties and obligations of the Council in the exercise of its functions as local planning authority and its rights powers duties and obligations under all public and private statutes, bylaws and regulations may be fully and entirely exercised as if the Council were not a party to this Deed.

4 Conditionality

4.1 The obligations in Clause 5 are conditional upon:

(a) the grant of the Planning Permissions; and

(b) the Implementation of Planning Permission 1

save for paragraph 1 of Part 2 of Schedule 3 (Monitoring Contribution and reasonable legal costs) which shall come into effect immediately upon completion of this Deed provided that nothing shall absolve the Owner from complying with the obligations made under this Deed in relation to the Development or part of it which need to be complied with prior to the Implementation of the same.

5 Covenants

5.1 The Owner covenants with the Council as set out Schedule 3, 4, 5 and 6.

5.2 The Council covenants with the Owner as set out in Schedule 7.

6 Miscellaneous

6.1 No provisions of this Deed shall be enforceable under the Contracts (Rights of Third Parties) Act ~~1999.~~1999 save for Schedule 6 Part 1

6.2 This Deed shall be registerable as a local land charge by the Council.

6.3 Where the agreement, approval, consent or expression of satisfaction is required by the Owner from the Council under the terms of this Deed such agreement, approval or consent or expression of satisfaction shall not be unreasonably withheld or delayed and any such agreement, consent, approval or expression of satisfaction shall be given on behalf of the Council by the Director; and any notices shall be deemed to have been properly served if sent by recorded delivery to the principal address or registered office (as appropriate) of the relevant party.

6.4 Following the performance and satisfaction of all the obligations contained in this Deed the Council shall forthwith effect the cancellation of all entries made in the Register of Local Land Charges in respect of this Deed.

6.5 Insofar as any clause or clauses of this Deed are found (for whatever reason) to be invalid or unenforceable then such invalidity or unenforceability shall not affect the validity or enforceability of the remaining provisions of this Deed.

6.6 This Deed shall cease to have effect (insofar only as it has not already been complied with) if the Planning Permission shall be quashed, revoked or otherwise withdrawn or (without the consent of the Owner) it is modified by any statutory procedure or expires prior to the Implementation of the Development. This Clause shall not apply if the Planning Permission is subsequently re-instated.

6.7 No person shall be liable for any breach of any of the planning obligations or other provisions of this Deed after it shall have parted with its entire interest in the Land or that part of the Land in relation to which such breach occurs but without prejudice to liability for any subsisting breach arising prior to parting with such interest.

6.8 This Deed shall not be enforceable against owner-occupiers or tenants of Dwellings constructed pursuant to the Planning Permission nor against those deriving title from them, except in relation to Paragraphs 2.3 and 2.4 of Part 8 of Schedule 3.

6.9 Nothing in this Deed shall prohibit or limit the right to develop any part of the Land in accordance with a planning permission (other than the Planning Permission) granted (whether or not on appeal) after the date of this Deed.

7 Jurisdiction

7.1 This Deed including its construction, validity, performance and enforcement and any dispute arising or claim arising out of or in connection with it or its subject matter or formation (including non-contractual disputes and claims) shall be governed by and interpreted in accordance with English law.

7.2 The parties to this Deed irrecoverably agree that the English courts shall have exclusive jurisdiction to settle any disputes or claims arising out of or in connection with this Deed or its subject matter or formation (including non-contractual disputes and claims).

8 Appointment of Expert

8.1 Either party may notify the other that any dispute arising between the parties in respect of any matter contained in this Deed (including any matter to be agreed or approved under this Deed) should be referred to an Expert.

8.2 The Expert shall act as an expert and not as an arbitrator and his decision shall be final and binding on the parties and whose costs shall be in his award.

8.3 The Expert shall be appointed subject to an express requirement that he reaches his decision and communicates it to the parties to the dispute within the minimum practical timescale allowing for the nature and complexity of the dispute and in any event not more than twenty eight days from the date of his appointment to act.

8.4 The Expert shall be required to give notice to each of the parties to the dispute inviting each of them to submit to him within 10 working days written submissions and supporting material and shall afford to the said parties an opportunity to make counter submissions within a further 7 working days in respect of any such submission, or in either case such other direction as to time periods as the parties may agree.

8.5 The Expert's costs will be borne in such proportions as he or she may direct failing which each party will bear its own costs of the reference and determination and one half each of the Expert's costs.

8.6 The Expert will give his or her decision in writing within two (2) months of his or her appointment, which must include full detailed reasons to explain the findings and justify the decision.

8.7 The Expert's determination will be final and binding on the parties save in the case of fraud or manifest error by the Expert.

8.8 The provisions of this clause shall not affect the ability of the Council or the Owner to apply for and be granted any of the following: declaratory relief, injunction, specific performance, payment of any sum, damages, any other means of enforcing this Deed and consequential and interim orders and relief.

9 Waiver

No waiver (whether expressed or implied) by the Council of any breach or default in performing or observing any of the covenants terms or conditions of this Deed shall constitute a continuing waiver and no such waiver shall prevent the Council from enforcing any of the relevant terms or conditions or for acting upon any subsequent breach or default.

10 Indexation

All contributions shall be increased by an amount equivalent to the All-In Tender Price Index from the date of this Deed until the date that the sum becomes payable.

11 Late payment

If any payment due to the Council under this Deed is paid late, interest will be payable at 2% above the base lending rate of TSB Bank (calculated from time to time) to be calculated from the date payment is due to the date of payment is made.

12 Notification

12.1 The Owner covenants with the Council that it shall give notice to the Council of:-

(a) Implementation Date

(b) Occupation of the first Dwelling

(c) Any other dates the Owner is required to notify the Council of as referred to in this Deed.

13 Section 73 Permissions and Variations of Planning Obligations

13.1 Unless an application under Section 73 or Section 96A of the Act to any variation or release of any condition contained in the Planning Permissions (including any variation or release of any condition in the Planning Permissions as previously varied) the obligations in this Deed shall continue to apply without variation to that new or amended consent without the need for any further deed of confirmation.

13.2 Where this Deed is varied, for whatever reason, then unless the planning obligation being varied directly touches and concerns the PLA Land or affects the carrying out of the Towpath Works then the obligations in this Deed relating to the Towpath Works shall continue to apply without the need for any further confirmation and without the need for the PLA to be a party to any document varying this Deed.

IN WITNESS whereof this deed has been executed by the parties hereto as a Deed and delivered on the day and year first before written

Schedule 1 – Plans

Schedule 2 – Draft Planning Permissions

Schedule 3 – Owner's site-wide covenants

Part 1 – Affordable Housing

The following Definitions apply in this Part:

Definitions

Additional Amount means the sum calculated using the following calculation:

A - (B+C) = Additional Amount

A = the Gross Development Value; and

B = the Development Costs; and

C = an assumed profit amounting to 20% of the Gross Development Value calculated on an IRR basis.

Agreed Mix means the following tenure and house type mix

Unit type /size			**Total**
1-bed			
2-bed			
3-bed			
Total (%)			

Affordable Housing means Affordable Housing Units provided to eligible households whose needs are not met by the market.

Affordable Housing Agreed Supplement Rate means that for every square metre of "in use" floorspace that is accepted as an offset to the community infrastructure levy (CIL) liability for the Permissions the number of Affordable Housing Units shall increase by yy

Affordable Housing Distribution Plan means the plan detailing the location of the Affordable Housing Units coloured in green that will form part of the Affordable Housing Scheme.

Affordable Housing Scheme means the scheme in respect of the Affordable Housing Units to be submitted to the Council for approval and which will set out

(a) the proposed location of the Affordable Housing Units;

(b) the tenure of each Affordable Housing Unit;

(c) the proposed rental levels;

(d) the proposed service charge levels;

(e) the proposed terms of the transfer of land to the Registered Provider...

Affordable Housing Supplement Event means the issue by the Council as charging authority of a CIL liability notice that reduces the gross CIL liability by reference to the level of "in-use" floorspace on the Land.

Affordable Housing Units means the following:

[TBC]

subject to any increase provided agreed or determined to satisfy Paragraph 6 of this part 1 of Schedule 3.

Basement Works means those works carried out under ground floor level of the Development for the purposes of constructing the basement which shall not constitute Implementation.

Development Costs means the actual costs committed or incurred at the point of review associated with the Development including but not limited to: construction costs (by reference to All-In Tender Price Index cost inflation forecasting); enabling costs; professional and management fees; contingencies; financial contributions payable pursuant to any planning obligations; land acquisition cost and associated costs; any payment pursuant to the Community Infrastructure Levy Regulations 2010; marketing and disposal costs; and finance and bank fees, all subject to independent review but excluding any costs incurred by ESFA (or their nominee) in constructing the School.

Extra Care Units means the [up to] 80 units to be delivered on the Phase 2 Land as shown coloured purple on Plan [ ]

Gross Development Value means the Sales Values for the Development including capitalised amounts for all rented products, ground rents and car park related income.

Market Housing shall mean Dwellings within the Development which are general market housing for sale on the open market and which are not Affordable Housing Units.

Methodology means the appraisal procured by the Owner using the HCA Development Appraisal Tool financial model (or such other financial model as shall be agreed between the parties) and in addition, any revised toolkit available at the time, to demonstrate whether any Additional Amount exists at the date of review taking into account:

(a) all, if any, changes to Sales Values and Development Costs have been incorporated;

(b) any variations in basic toolkit defaults are identified including profit margin; and

(c) a full justification of actual Sales Values achieved and actual Development Costs incurred at the time(s) of review, is provided, together with third party supporting material from a professional organisation(s)

Nominations Agreement means an agreement substantially in form annexed at [TBC]

Practical Completion means issue of a certificate by the Owner's architect, civil engineer or chartered surveyor as appropriate certifying that the Development or a relevant part thereof

(depending on the context of the Deed) is for all practical purposes sufficiently complete to be put into use and Practically Completed shall be construed accordingly

Provided means:

~~(a)~~ Practically Completed;

~~(b)~~ ready for first Occupation;

~~(c)~~ in a Serviced Condition; and

~~(d)~~ a binding contract has been entered into with a Registered Provider in relation to the acquisition of no less than a 125 year leasehold interest in those Affordable Housing Units,

and **Provide** and **Provision** shall be construed accordingly.

Registered Provider means a provider of social housing:

~~(a)~~ as defined in section 80(2) of the 2008 Act (or any other body defined by subsequent legislation as having a similar role) registered by the Greater London Authority pursuant to section 80(2) and chapter 3 of the 2008 Act; and

~~(b)~~ nominated as a registered provider for the purpose of this Deed by the Council from the list of Registered Providers at Appendix [ ] of this Deed or such other registered provider meeting the criteria of (a) above and given prior written approval by the Council.

Sales Values means the value actually achieved of all Dwellings and Commercial Floorspace in the Development that has been sold at the point of review, as evidenced in the Land Registry. For any Dwellings or Commercial Floorspace unsold at the point of review, actual sales values achieved for residential units sold on the open market in reasonably comparable developments, shall be used as the basis for calculating value.

Serviced Condition means in relation to the land to be used for the Affordable Housing Units, the remediation of the land to a standard fit for its end use and the provision of roads, sewers, gas, water, electricity and telecommunications to the boundary in accordance with for the approved Affordable Housing Scheme.

Updated Appraisal means an independent financial appraisal to be prepared in accordance with the Methodology and to be submitted to the Council pursuant to paragraph 6 of this Part.

Affordable Housing Scheme

The Owner covenants with the Council so as to bind its interest in the Land other than the School Land as follows:

1.1 Not to Implement the Development on the Phase 1(a) Land save for the Basement Works until the Affordable Housing Scheme submitted has been approved by the Council.

1.2 To resubmit the Affordable Housing Scheme if an Updated Appraisal requires the provision of further Affordable Housing or if a change to the terms of Provision is required.

1.3 Not to Implement the Development on the Phase 1(b) Land save for the Basement Works until the Reserved Matters Application has been submitted to the Council providing for the Affordable Housing Units in accordance with the Affordable Housing Scheme

1.4 Not to Occupy more than [80]% of the Market Units on the Phase 1 Land until all the Affordable Housing has been Provided in accordance with the Affordable Housing Scheme.

2 Affordable Housing Provision

2.1 Subject to paragraph 2.2, the Affordable Housing Scheme shall provide for no less than [ ]% of the Dwellings permitted by Planning Permission to be Affordable Housing Units.

2.2 If the Affordable Housing Supplement Event occurs then additional Affordable Housing Units shall be Provided at the Affordable Housing Agreed Supplement Rate.

2.3 Subject to paragraph 6 of this Part 1, no less than the % defined in the approved Affordable Housing Scheme of the Dwellings permitted by Planning Permission 1 shall be Provided as Affordable Housing Units.

3 Affordable Housing Nominations

3.1 To enter into the Nominations Agreement.

4 Affordable Housing Units Service Charges

4.1 To ensure that the service charge in respect of each Affordable Housing Units is set at a rate that together with any rents and other charges means that the Affordable Housing Unit remains Affordable such rate to be set as part of the Affordable Housing Scheme.

5 Affordable Housing Transfer

5.1 Any interest in land to be let or transferred for Affordable Housing Units to the Registered Provider shall be with vacant possession; and such transfer shall include:

(a) an agreement that the grant of rights of access and passage of services and other rights reasonably necessary for the beneficial enjoyment of the Affordable Housing Units are provided by the Registered Provider; and

(b) a restrictive covenant that the Affordable Housing Units shall not be Occupied for any purpose other than as Affordable Housing and shall contain provisos in the manner set out in paragraph 5.2(a), (b) and (c) below.

5.2 To ensure that the Affordable Housing Units shall not be Occupied other than as Affordable Housing provided that this covenant shall not be binding or enforceable against:

(a) any person who shall at any time acquire any legal interest in any Affordable Housing Unit pursuant to any statutory right of acquisition from time to time in force and any successors or other persons deriving title from him;

(b) any person who has acquired any Affordable Housing Unit as grantee or assignee of a shared ownership lease and who has purchased a 100% share in the value of that

Affordable Housing Unit and any successors or other persons deriving title from him; and

(c) any mortgagee, chargee or receiver which shall have the benefit of a legal mortgage or charge secured against all or any of the Affordable Housing Units and any person who shall derive title directly or indirectly from such mortgagee or chargee (other than a Registered Provider) provided always that the mortgagee or chargee or receiver appointed by the mortgagee or chargee shall first have notified the Council that it wishes to exercise its statutory power of sale and within 90 days of such notification the mortgagee or chargee or receiver, having used all reasonable endeavours, shall have been unable to enter into a contract for sale of the Affordable Housing Units to a Registered Provider on terms that on completion thereof the mortgagee or chargee or receiver will be repaid the full market value of the relevant land and buildings containing or comprising the Affordable Housing Units.

6 Affordable Housing Review

Early Stage Review

6.1 The Owner covenants with the Council that in the event that the Planning Permission 1 has not been Implemented before the expiry of 18 months from the date of Planning Permission 1:

(a) it will submit an Updated Appraisal to the Council for its written approval not more than three (3) months prior to Implementation of the Development and will not Implement or cause or permit Implementation of the Development until the Updated Appraisal has been submitted to the Council.

(b) where an Updated Appraisal submitted under Paragraph 6.1 is determined by either an expert determined by the Council or by an Expert under Clause 8 as generating an Additional Amount the Owner will not Implement or cause or permit Implementation of the Development until a an updated Affordable Housing Scheme incorporating the Additional Amount shall have been submitted to and approved in writing by the Council

Mid Stage Review[1]

6.2 The Owner covenants with the Council that prior to the submission of the Reserved Matters Application for the Extra Care Units:

(a) it will submit an Updated Appraisal to the Council for its written approval and will not submit the Reserved Matters Application for the Extra Care Units until the Updated Appraisal has been submitted to the Council.

(b) where an Updated Appraisal submitted under Paragraph 6.2 is determined by either an expert determined by the Council or by an Expert under Clause 8 as generating an Additional Amount the Owner will not submit the Reserved Matters Application for the Extra Care Units until an updated Affordable Housing Scheme securing the use of 60% of the Additional Amount for Affordable Housing shall have been submitted to and approved in writing by the Council

Late Stage Review

[1] The wording for a Mid Stage Review has been added. The Applicant does not accept such a review is either necessary or appropriate.

6.3 The Owner covenants that no more than [80%] of the Market Housing Units shall be Occupied until an Updated Appraisal has been submitted to and approved in writing by the Council

6.4 Where the Updated Appraisal submitted under paragraph 6.3 is agreed or determined by an Expert appointed by the Council as generating an Additional Amount then such sum shall be divided between the Owner (40%) and the Council (60%) and paid to the Council within 10 Working Days of the date of the approval of the Updated Appraisal.

6.5 Where an Updated Appraisal submitted under either paragraphs 6.1, 6.2 or 6.3 is not agreed after 40 Working Days of submission to the Council, either party may treat it as in dispute.

Affordable Housing Cap

6.6 At no stage shall the operation of paragraphs 2.2 and 6.1, 6.2 and 6.3 lead to the provision or funding at more than the equivalent of 50% on site Affordable Housing.

Part 2 **– Phasing Plan**

The following Definitions apply in this Part:

Phasing Plan means the plan to be submitted approved and implemented showing the intended phasing of the Development (or such other plan as may be agreed with the Council in writing)

The Owner covenants with the Council so as to bind its interest in the Land other than the School Land as follows:

1 On or before Implementation of the Development the Owner shall submit to the Council for approval the Phasing Plan showing the proposed Phases of the Development and shall not Implement the Development unless and until the Council has approved in writing the Phasing Plan.

2 The Owner shall implement each Phase in accordance with the approved Phasing Plan, unless otherwise agreed in writing by the Council.

Part 3 **– Financial Contributions**

The following Definitions apply in this Part:

Community Liaison Officer Contribution means the sum of [£TBC] to be applied towards [TBC]

relevant Chalker's Corner Works Contribution means the contribution attributable to the Land other than the School Land

Travel Plan Monitoring Contribution means the sum of [£TBC] for the purposes of monitoring compliance with the Commercial Travel Plan and the Residential Travel Plan [and the School Travel Plan]

The Owner covenants with the Council so as to bind its interest in the Land other than the School Land as follows:

1 To pay the Council the Monitoring Contribution and its reasonable legal costs of [TBC] on completion of this Deed;

2 To pay the Council the Community Liaison Officer Contribution prior to Implementation;

3. To pay the Council the Travel Plan Monitoring Contribution prior to first Occupation of any Dwelling

4. Not to Occupy more than [%] Dwellings until either:

(a) the completion of the Chalker's Corner Works; or

(b) if the Chalker's Corner Works are undertaken by Transport for London or a developer who is not the Owner to pay the relevant Chalker's Corner Contribution to the Council.

Part 4 **– Employment and Skills Plan**

The Owner covenants with the Council so as to bind its interest in the Land other than the School Land as follows:

1 TBC – to cover the provision of[2]:

- apprenticeships,
- training,
- local procurement and
- local recruitment

[2] To be divided by construction and operation and only reasonable endeavours on operation. Council to provide further details of obligations

Part 5 **– Demolition and Construction Management Plan**

The Owner covenants with the Council so as to bind its interest in the Land other than the School Land as follows:

[Requirements TBC by Council and standard wording to be provided by Council][3]

[Monitoring fee to be confirmed/split between main site and School Land]

[3] Reasonable endeavours to remove waste from basement and demolition material via the river

Part 6 **– Public Realm**[4]

The following Definitions apply in this Part:

Basement Works means those works carried out under ground floor level of the Development for the purposes of constructing the basement which shall not constitute Implementation.

Public Realm means the areas to be provided following completion of the Public Realm Works as shown coloured blue on plan [ ][5]

Public Realm Works means those works shown on plan [ ] and as set out in Appendix [ ] such works to be undertaken in accordance with the requirements of this part 6 of Schedule 3[6]

The Owner covenants with the Council so as to bind its interest in the Land other than the School Land as follows:

1 To submit to the Council for its written approval prior to Implementation of Phase 1(a) save for the Basement Works detailed plans, specifications and a management and maintenance plan (which shall include design, layout, pedestrian and cycle access routes and their standard, landscaping materials, draining, lighting and street furniture such as benches and bins and details on cleaning and repair) in relation to the Public Realm Works within Phase 1;

2 To submit to the Council for its written approval prior to Implementation of Phase 2 save for the Basement Works detailed plans, specifications and a management and maintenance plan (which shall include design, layout, pedestrian and cycle access routes and their standard, landscaping materials, draining, lighting and street furniture such as benches and bins and details on cleaning and repair) in relation to the Public Realm Works within Phase 2;

3 To ensure that prior to Occupation of any Phase the Public Realm Works in that phase are completed in accordance with the plans and specifications approved pursuant to paragraph 1 of part 6 this Schedule and that the Public Realm is thereafter (subject to paragraph 4 of part 6 of this Schedule) kept open for continuous unrestricted use by the public twenty four (24) hours per day seven (7) days a week and that no gates, fences or other means of enclosure shall be erected which would impede access to through or across these areas unless otherwise agreed in advance with the Council in writing;

4 To ensure that the Public Realm shall be managed and maintained in accordance with the details approved pursuant to paragraph 1 of part 6 of this Schedule (as may be updated with the prior written agreement of the Council from time to time) for the lifetime of the Development;

5 To ensure that the Public Realm is to be kept open for continuous unrestricted use by the public but subject to the following exclusions:

(i) the maintenance, repair, renewal, cleaning or other required works to the Public Realm;

(ii) in cases of emergency or danger to the public;

[4] Now includes formerly rights of way and open space

(iii) in the interests of security;

(iv) servicing of the Development at the time and for the periods to have been agreed previously with the Council;

(v) the maintenance, repair, renewal, cleaning or other required works to any part or parts of the Development abutting such areas (including works of shop fitting or other structural or non-structural works and/or alterations); and

(vi) closing such areas (or any part thereof) temporarily for not more than one day per year to assert rights of proprietorship preventing public or private rights from coming into being by means of prescription or other process of law.

6 The parties agree that the Public Realm shall not become dedicated as public highway.

Part 7 – Towpath Works

The following Definitions apply in this Part:

Towpath Works means the following works:

(a) repair the existing foot path surface using self-binding gravel;

(b) prune understorey vegetation on footpath as directed;

(c) retain and integrate existing granite setts on footpath, public draw dock and slipway;

(d) develop paved area on wharf to express existing railway tracks within new pavement design to seating area / wharf upgrade;

(e) provide seating;

(f) provide life-saving equipment and suicide prevention measures; and

(g) provide new planting in accordance with a scheme to be agreed in writing by the Council [in consultation with the PLA];

1. The Owner covenants with the Council so as to bind its interest in the Land other than the School Land as follows:

(a) to submit the planting scheme required under clause (g) of the definition of Towpath Works prior to first Occupation of the Development.

(b) to carry out the Towpath Works and the planting scheme approved in accordance with paragraph 1 of part 7 of this Schedule prior to completion of Phase 1(c).

2. The PLA consents to the Owner carrying out the Towpath Works on the PLA Land and covenants with the Council:

(a) to maintain the Towpath Works once they have been completed by the Owner.

(b) not to Commence nor cause nor permit Implementation of the Development.

Part 8 **– Car Club and Parking Permits**

The following Definitions apply in this Part:

Car Club means a club operated by a Car Club Operator which residents and commercial occupiers of the Development and the general public may join and which makes cars available for hire to members either on a commercial or part-subsidised rate.

Car Club Operator means a company that is accredited by CoMoUK to operate Car Clubs, or such other company operating a Car Club as is agreed with the Council in writing.

Commercial Floorspace Unit means the separate commercial units that are located within the Commercial Floorspace

CoMoUK means the national charity promoting responsible car use or such other body as the parties may agree capable of accrediting car clubs.

The Owner covenants with the Council so as to bind its interest in the Land other than the School Land as follows:

1 Car Club

1.1 To liaise with a Car Club Operator and use reasonable endeavours to establish a Car Club within the Development and to provide a minimum of two (2) car parking bays for the Car Club.

1.2 The Owner shall provide either directly or through the Car Club to the residents and employees and businesses of the Development free membership to the Car Club for a period of three years from the Occupation Date of each Dwelling and Commercial Floorspace Unit provided that during this three year period the Owner shall not be obliged to offer more than one membership to each Dwelling and Commercial Floorspace Unit.

1.3 For three years from the Occupation Date of each Dwelling and Commercial Floorspace Unit to provide marketing literature to the Occupiers of that Dwelling PROVIDED THAT this marketing literature shall include the incentives detailed in this clause.

1.4 To provide evidence of compliance with the provisions of this paragraph 1 of Part 8 to the Council when asked to do so and not to Occupy or cause or permit the Occupation until the Council has confirmed in writing that it is satisfied that if applicable the Car Club has been provided and all the related provisions of this Agreement have been complied with (insofar as they can be complied with at the relevant date).

2 Parking Permits

2.1 To ensure that the restrictions set out in paragraphs 2.2 and 2.3 below are included in any freehold transfer, lease or tenancy or licence or other disposal to any Occupier of the Development and ensure that all future Occupiers of the Dwellings will be advised in writing before acquiring any freehold, lease or tenancy or licence or other interest, of those restrictions and obligations.

2.2 All Occupiers of the Dwellings in the Development shall not be entitled to apply to the Council for, or hold a parking permit for, on-street parking, unless such Occupier is or becomes entitled to be a holder of a disabled persons badge issued pursuant to Section 21 of the Chronically Sick and Disabled Persons Act 1990, and the Occupier has first notified the Director in writing of such entitlement. [Council to confirm whether this applies to C2 use]

2.3 Any person or persons who has a parking permit or contract for on-street parking within the Borough will surrender such entitlement before taking up Occupation unless such Occupier is or becomes entitled to be a holder of a disabled persons badge issued pursuant to Section 21 of the Chronically Sick and Disabled Persons Act 1990 and the Occupier has first notified the Director in writing of such entitlement.

2.4 Any Occupier

(a) shall not bring any motor vehicle to be brought on to the Land to be left abandoned and/or parked within the Land other than in one of the approved and designated parking spaces; and

(b) shall not lease, sub-let or assign any parking space allocated to them.

Part 9 – Travel Plans

The following Definitions apply in this Part:

Commercial Travel Plan means a detailed plan or plans in accordance with Part 9 of Schedule 3, based on the principles within the [Framework Travel Plan] submitted with the Planning Applications setting out the management of travel demand and incentives for more sustainable travel for visitors to and those working in the Commercial Floorspace.

Residential Travel Plan means a detailed plan or plans in accordance with Part 9 of Schedule 3, based on the principles within the [Framework Travel Plan] submitted with the Planning Applications dated setting out the management of travel demand and incentives for more sustainable travel to and from the Development for residential Occupiers

The Owner covenants with the Council so as to bind its interest in the Land other than the School Land as follows:

1 The Owner shall submit the proposed Residential Travel Plan to the Council for approval prior to Occupation of the Dwellings.

2 The Owner shall submit the proposed Commercial Travel Plan to the Council for approval prior to Occupation of the Commercial Floorspace.

3 The Owner will implement and comply with the provisions of the approved Residential Travel Plan or such revised Residential Travel Plan as may be agreed with the Council in writing annually from Occupation of the first Dwelling for the lifetime of the Dwellings.

4 The Owner will implement and comply with the provisions of the approved Commercial Travel Plan or such revised Commercial Travel Plan as may be agreed with the Council in writing annually from Occupation of the Commercial Space for the lifetime of the Commercial Floorspace.

5 The Owner will implement the Residential Travel Plan and commence monitoring and review of the workings of the Residential Travel Plan on the date of Occupation of [50%] of the Dwellings and thereafter review its workings on the third year and the fifth years following Occupation of [50%] of the Dwellings and will submit details of the review in a report to the Council showing how the Residential Travel Plan has operated and specifically how effective it has been in achieving its targets and in the event that targets as set out in the Residential Travel Plan are not achieved identify any proposed amendments to the Residential Travel Plan together with a plan for future actions to be implemented.

6 The Owner will implement the Commercial Travel Plan and commence monitoring and review the workings of the Commercial Travel Plan on the date of first Occupation of the Commercial Floorspace and thereafter review its workings on the third year and the fifth years following first Occupation and will submit details of the review in a report to the Council showing how the Commercial Travel Plan has operated and specifically how effective it has been in achieving its targets and in the event that targets as set out in the Commercial Travel Plan are not achieved identify any proposed amendments to the Commercial Travel Plan together with a plan for future actions to be implemented.

7 Following each review it will be open to the Council to suggest reasonable ways of improving the effectiveness of the Residential Travel Plan and Commercial Travel Plan and the Owner will consider and procure the implementation of such reasonable agreed improvements within a timescale to be agreed with the Council with any dispute to be resolved through Clause 8..

8 If targets set out in the Residential Travel Plan have not been met annually following Occupation of [50%] of the Dwellings then a detailed review of the Residential Travel Plan will be undertaken with the Council and the Owner will procure that reasonable measures agreed with the Council to improve the effectiveness of the Residential Travel Plan are implemented and monitoring will continue with further reviews on the seventh and tenth years following Occupation of [50]% of Dwellings.

9 If targets set out in the Commercial Travel Plan have not been met annually following first Occupation of the Commercial Floorspace then a detailed review of the Commercial Travel Plan will be undertaken with the Council and the Owner will procure that reasonable measures agreed with the Council to improve the effectiveness of the Commercial Travel Plan are implemented and monitoring will continue with further reviews on the seventh and tenth years following first Occupation of the Commercial Floorspace.

Part 10 – Highways Works

The following Definitions apply in this Part:

Highways Works means [TBC - to cover any S278/38 works required across the Development but excluding in respect of Chalker's Corner Works – note: consider what works around the School will be adopted].

The Owner covenants with the Council so as to bind its interest in the Land other than the School Land as follows:

1 Not to Implement Planning Permission 1 until a scheme has been submitted for approval and been approved by the Council confirming the details of the Highways Works.

2 Not to Occupy [ ] Dwellings until the Highways Works have been completed to the written satisfaction of the Council.

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Schedule 4 – Owner's Obligations

Part 1 – Affordable Workspace

The following Definitions apply in this Part:

Affordable Workspace means the floorspace identified in the Affordable Workspace Strategy

Affordable Workspace Strategy means the detailed management plan setting out [TBC - include location and size [10% floorspace required], operator(s), marketing requirements, lease, rent [at 80% of market rate TBC, specification]

The Owner covenants with the Council so as to bind its interest in the Phase 1 Land as follows:

1 Prior to Implementation of Planning Permission 1 in respect of the Phase 1 Land, to submit the Affordable Workspace Strategy to the Council for approval.

2 Not to Implement Planning Permission 1 in respect of the Phase 1 Land until the Owner has submitted the Affordable Workspace Strategy to the Council for approval.

3 Prior to Occupation of more than **% of [Commercial Floorspace], to provide the Affordable Workspace in accordance with the approved Affordable Workspace Strategy in perpetuity.

Part 2 – Maltings Building Community Space

The following Definitions apply in this Part:

Maltings Building Community Space means the area shown coloured green on plan [ ] which shall be provided in accordance with the Maltings Building Community Space Specification.

Maltings Building Community Space Specification means the specification for the Maltings Building Community Space which sets out [TBC - details, location, payment arrangements, management including booking and scheduling, maintenance].

The Owner covenants so as to bind its interest in the Phase 1 Land as follows:

1 Prior to Implementation of Planning Permission 1 on the Phase 1 Land, to submit to the Council for approval the Maltings Building Community Space Specification.

2. Prior to Occupation of [%] Dwellings on the Phase 1 Land, to Practically Complete the Maltings Building Community Space in accordance with the approved Public Open Space Specification.

Part 3 – Water Sports Centre

The following Definitions apply in this Part:

Water Sports Centre means the building coloured blue on plan [ ]

Water Sports Centre Specification means a specification setting out [TBC - details, location, provisions for community use, payment, maintenance and management, safeguarding of use]

The Owner covenants so as to bind its interest in the Phase 1 Land as follows:

1 Prior to Implementation of Planning Permission 1 on the Phase 1 Land, to submit to the Council for approval the Water Sports Centre Specification.

2 Prior to Occupation of [%] Dwellings on the Phase 1 Land, to Practically Complete the Water Sports Centre in accordance with the approved Water Sports Centre Specification.

Part 4 – Financial contributions

The following Definitions apply in this Part:

Air Quality Contribution means the sum of £[TBC] towards [improving air quality].

[**Carbon off-set Contribution** means the sum included within the energy strategy submitted with the Planning Applications but which shall recalculated once the Development is Practically Complete using the [calculation TBC]]

[Controlled Parking Zone Review Contribution means [ ]]

[**Ecological Mitigation Contribution** means the sum of [£TBC] for the purposes of [TBC].[7]

[**Health Contribution** means the sum of ~~[£TBC]~~£465,850 for the purposes ~~of [TBC]~~[of meeting the primary healthcare requirements of the Development][8].

[**Landscaping Mitigation and Enhancements Contribution** means the sum of [£TBC] for the purposes of [TBC]][9]

Level Crossing Contribution means [ ]

Transport Contribution means the sum of [£TBC] for the purposes of [TBC - to include road safety and improved pedestrian and cycle facilities at junction of Upper Richmond Road West with Sheen Lane; street trees, bus stop alterations] (note: this is only required if there are works not covered by the highways agreement covered in Schedule 3 Part 10)

The Owner covenants so as to bind its interest in the Phase 1 Land as follows:

1 Prior to Occupation of [%] Dwellings on the Phase 1 Land, to pay to the Council 50% of the Transport Contribution.

2 [Prior to Occupation of [%] Dwellings on the Phase 1 Land, to pay to the Council 50% of the Health Contribution.]

3 [Prior to Occupation of [%] Dwellings on the Phase 1 Land, to pay to the Council 50% of the Carbon Off-set Contribution.]

4 [Prior to Occupation of [%] Dwellings on the Phase 1 Land, to pay to the Council 50% of the Air Quality Contribution.]

5 [Prior to Occupation of [%] Dwellings on the Phase 1 Land, to pay to the Council 50% of the Ecological Mitigation Contribution.]

6 [Prior to Occupation of [%] Dwellings on the Phase 1 Land, to pay to the Council 50% of the Landscaping Mitigation and Enhancements Contribution.]

7 [Prior to Occupation of [%] Dwellings on the Phase 1 Land, to pay to the Council 50% of the Level Crossing Contribution. TBC]

[7] To be justified and amount to be proposed by the Council for Applicant consideration
[8] To be justified and amount to be proposed by the Council for Applicant consideration
[9] To be justified and amount to be proposed by the Council for Applicant consideration

8 [Prior to Occupation of [%] Dwellings on the Phase 1 Land, to pay to the Council 50% of the Controlled Parking Zone Review Contribution TBC]

Schedule 5 – Owner's Phase 2 Obligations

Part 1 – Access

The following Definitions apply in this Part:

Basement Works means those works carried out under ground floor level of the Development for the purposes of constructing the basement which shall not constitute Implementation.

School Access Road means the road shown coloured orange on plan [ ].

Temporary Access Route means [the temporary access to be provided to the north of the School Land as shown coloured blue on plan [ ]

Temporary Access Route Specification means a specification setting out [TBC]

The Owner covenants with the Council so as to bind its interest in the Phase 2 Land as follows~~:~~:

1 Prior to Implementation of Planning Permission 1 on the Phase 2 Land save for the Basement Works, to submit to the Council for approval the Temporary Access Route Specification.

2 Prior to Implementation of Planning Permission 1 on the Phase 2 Land save for the Basement Works, to lay out the Temporary Access Route and make it available for the construction and access to the Phase 2 Land.

3 Prior to Occupation of [%] Dwellings on the Phase 2 Land to lay out the School Access Road to adoptable standard and made available for adoption by the highway authority

4 Upon Practical Completion of the Development, the Temporary Access Route shall be converted into a cycle and pedestrian route [details and timings TBC].

Part 2 – Community Park

The following Definitions apply in this Part:

Community Park means the area coloured green shown on plan [ ] to be provided and transferred to the Council under Schedule 5, part [2]

Community Park Specification means the specification for the Community Park which will provide [TBC - to include a requirement that the design and layout will not prejudice the potential future delivery of a bus layover]

Community Park Transfer means [a transfer substantially in the form attached at Appendix [ ]]

The Owner covenants with the Council so as to bind its interest in the Phase 2 Land as follows:

1 Prior to Occupation of the School, to submit to the Council for approval the Community Park Specification.

2 Prior to Occupation of [%] Dwellings on the Phase 2 Land:

(a) to lay out the Community Park; and

(b) to enter into the Community Park Transfer with the Council.

Part 3 – Assisted Living

The following Definitions apply in this Part:

Extra Care Units means the [up to] 80 units to be delivered on the Phase 2 Land as shown coloured purple on Plan [ ]

Extra Care Units Specification means the specification to be submitted for approval which provides for [principles TBC - minimum age, needs assessment, hours of care, management plan, etc.]

The Owner covenants with the Council so as to bind its interest in the Phase 2 Land as follows:

1 Subject to the outcome of any affordable housing review process prior to Occupation of any Dwellings on the Phase 2 Land to submit the Reserved Matters Application in respect of the Extra Care Units.

2 Prior to Occupation of [%] Dwellings on the Phase 2 Land to Provide the Extra Care Units in accordance with the Extra Care Specification.

Part 4 – Financial contributions

The following Definitions apply in this Part:

Air Quality Contribution means the sum of £[TBC] towards [improving air quality].

[**Carbon off-set Contribution** means the sum included within the energy strategy submitted with the Planning Applications but which shall recalculated once the Development is Practically Complete using the [calculation TBC]]

[Controlled Parking Zone Review Contribution means [ ]]

[**Ecological Mitigation Contribution** means the sum of [£TBC] for the purposes of [TBC].[10]

[**Health Contribution** means the sum of ~~[£TBC]~~£465,850 for the purposes of [~~TBC]~~meeting the primary healthcare needs of the Development][11].

[**Landscaping Mitigation and Enhancements Contribution** means the sum of [£TBC] for the purposes of [TBC]][12]

Level Crossing Contribution means the sum of [£ TBC] for the purposes of [TBC]

[Transport Contribution means the sum of [£TBC] for the purposes of [TBC - to include road safety and improved pedestrian and cycle facilities at junction of Upper Richmond Road West with Sheen Lane; street trees, bus stop alterations] (note: corresponding S278 agreement(s) required)]

The Owner covenants with the Council so as to bind its interest in the Phase 2 Land as follows:

1 Prior to Occupation of [%] Dwellings on the Phase 2 Land, to pay to the Council 50% of the Transport Contribution.

2 [Prior to Occupation of [%] Dwellings on the Phase 2 Land, to pay to the Council 50% of the Health Contribution.]

3 [Prior to Occupation of [%] Dwellings on the Phase 2 Land, to pay to the Council 50% of the Carbon Off-set Contribution.]

4 [Prior to Occupation of [%] Dwellings on the Phase 2 Land, to pay to the Council 50% of the Air Quality Contribution.]

5 [Prior to Occupation of [%] Dwellings on the Phase 2 Land, to pay to the Council 50% of the Ecological Mitigation Contribution.]

6 [Prior to Occupation of [%] Dwellings on the Phase 2 Land, to pay to the Council 50% of the Landscaping Mitigation and Enhancements Contribution.]

7 [Prior to Occupation of [%] Dwellings on the Phase 2 Land, to pay to the Council 50% of the Level Crossing Contribution. TBC]

[10] To be justified and amount to be proposed by the Council for Applicant consideration
[11] To be justified and amount to be proposed by the Council for Applicant consideration
[12] To be justified and amount to be proposed by the Council for Applicant consideration

8 [Prior to Occupation of [%] Dwellings on the Phase 2 Land, to pay to the Council 50% of the Controlled Parking Zone Review Contribution TBC]

Schedule 6 – The School Land Obligations

Part 1 – Barnes Eagles commitments

The following Definitions apply in this Part:

Barnes Eagles means Barnes Eagles Football Club or such successor football club

Initial Barnes Eagles Contribution means a contribution of ninety thousand seven hundred and fifty pounds (£90,750) [Index Linked] towards either the provision of temporary football pitches for use by Barnes Eagles whilst the Development is being constructed [or for the future costs of Barnes Eagles associated with the Development] .

Community Use Agreement means [an agreement between the School and Council to ensure that for 25 years from first Occupation of the Schooland Barnes Eagles will be ablein relation to the use the artificial grass pitch and ancillaryof the sports facilities for two nights a week and between 09.00 to 15.30to be provided on Sundays during the football season [August to May] at [preferential rates] and at all other times for public use [such agreement to bethe School Land as amended from time to time substantially in the form attached at Appendix [ ]].

ESFA means the Education and Skills Funding Agency which is an executive agency sponsored by the Department for Education accountable for funding education and skills for children, young people and adults (or such other successor body which may replace it and inherit its functions) or any nominee of the ESFA.

School Bus Contribution means the sum of [£TBC] for the purposes of [providing a bus service to serve the School]

Existing Licence Agreement means a licence between the Owner and Barnes Eagles Football Club dated 1 July 2016 as varied relating to the Land.

Occupation Date means the date the sports facilities are Practically Complete and available for use by Barnes Eagles and the Community Use Agreement and the School Licence to Barnes Eagles for the use of such facilities have been completed.

School Licence means an agreement between the School and Barnes Eagles for the use of the sports facilities.

Top-up Barnes Eagles Contribution means the sum of £45,375 (index linked).

Vacation Date means the date Barnes Eagles are required to vacate the existing football pitch in accordance with the Existing Licence Agreement.

1 The Owner covenants with the Council so as to bind its interest in the School Land as follows:

(a) not to terminate the arrangements for Barnes Eagles to use the existing football pitch until theto pay the Initial Barnes Eagles Contribution to the Council.[13]

[13] Payor TBC

(b) not to terminate the Existing Licence Agreement until the Initial Barnes Eagles Contribution has been paid to ~~the Council~~Barnes Eagles.

(c) ~~(b)~~ not to Occupy the School prior to entering into the Community Use Agreement.

(d) not to Occupy the School until the School Licence has been entered into.

(e) to use the facilities at the School in accordance with the Community Use Agreement.

2 The Owner shall pay the Top-up Barnes Eagles Contribution to the Council upon every anniversary of the Vacation Date commencing on the third anniversary until the facilities at the School have been provided and are ready and available for use by Barnes Eagles and the Community Use Agreement and the School Licence have been completed.

3 If the Occupation Date shall fall prior to the relevant anniversary of the Vacation Date for the Top-up Barnes Eagles Contribution, the Top-up Barnes Eagles Contribution shall be apportioned accordingly on a daily basis.

4 ~~2~~ The Council covenants to pass the Initial Barnes Eagles Contribution ~~to the English Schools' Football Association, or any relevant successor organisation, within [~~and the Top-Up Barnes Eagles Contribution to Barnes Eagles within 20 working days~~]~~ of receipt ~~and to use reasonable endeavours to ensure~~.

5 Should the Council fail to pass the Initial Barnes Eagles Contribution ~~will be paid by the English Schools' Football Association~~and the Top-Up Barnes Eagles Contribution to Barnes Eagles within 20 working days then the Council shall return the monies to the Owner and the Owner will pass the Initial Eagles Contribution and the Top-Up Barnes Eagles Contribution to Barnes Eagles within a further 20 working days.

Part 2 – School obligations

The following Definitions apply in this Part:

Chalker's Corner Works means the works authorised under Planning Permission 3.

relevant Chalker's Corner Works Contribution means the sum identified to be paid in respect of the School Land.

School Bus Contribution means the sum of [£TBC] for the purposes of [providing a bus service to serve the School]

School Lease means the lease to be entered into with the ESFA.

School Travel Plan means a detailed plan or plans in accordance with part 2 of Schedule 6, which sets out the management of travel demand and incentives for more sustainable travel to and from the School.

Travel Plan Monitoring Contribution means the sum of [£TBC] for the purposes of monitoring compliance with the Commercial Travel Plan and the Residential Travel Plan [and the School Travel Plan]

1 The Owner covenants with the Council so as to bind its interest in the School Land as follows:

1.1 Not to Occupy more than [%] Dwellings, until the School Lease has been entered into with the ESFA or a nominated body upon terms [substantially] similar to those set out at Appendix A.

1.2 Prior to [TBC] to pay the Level Crossing Contribution [TBC]

1.3 Not to Occupy the School until either the:

(i) completion of the Chalker's Corner Works; or

(ii) if the Chalker's Corner Works are undertaken by Transport for London [or a developer who is not the Owner]) to pay the relevant Chalker's Corner Works Contribution to the Council. [14]

[14] Note to Council: we will need to provide for the Owners to have the ability to carry out the Chalker's Corner Works and, if not, to make a contribution. The split between the School and the Owner will need to be quantified.

2 [To submit and comply with a construction management/logistics plan – details TBC].

[Note: Transport, Energy, Air Quality Ecology and Landscaping contributions have all been secured in relation to Phases 1 and 2 but are also noted as also relating to the School]

3 Pay the School Bus Contribution to the Council annually in five equal instalments beginning on the date of Occupation of the School and ending on the 5th anniversary of Occupation of the School.

4 Submit the proposed School Travel Plan to the Council for approval prior to Occupation of the School.

5 Comply with the provisions of the approved School Travel Plan (or such revised School Travel Plan as may be agreed with the Council in writing annually) from Occupation of the School for the lifetime of the School.

6 [Pay the Travel Plan Monitoring Contribution in respect of the School Travel Plan prior to Occupation of the School.]

Schedule 7 – The Councils' Covenants

The Council covenants with the Owner as follows:

1 Planning permission

Not to use sums received from the Owner under this Deed for the any purposes other than those specified in this Deed for which they are to be paid (or for such other purposes for the benefit of the Development as the Owner and the Council shall agree).

2 Repayment of contributions

2.1 To pay to the Owner such amount of any payment made by the Owner to the Council under this Deed which has not been expended in accordance with the provisions of this Deed within 5 years of the date of receipt by the Council of such payment together with interest at the accrued for the period from the date of payment to the date of refund within 28 days of the request for the same made by the Owner.

2.2 To provide to the Owner such evidence as the Owner shall reasonably require in order to confirm the expenditure of the sums paid by the Owner under this Deed.

3 **Discharge** of obligations

To provide written confirmation of the discharge of the obligations contained in this Deed within 10 working days of a written request by the Owner to do so.

4 **Consents** and approvals

Where the Owner is required under the terms of this Deed to secure the approval or consent of the Council such approval or consent shall not be unreasonably withheld or delayed.

Appendix A – School Lease to ESFA – Heads of Terms

Demise:	Boundary as shown on red line plan, including the Sports Pavilion in its current condition
	[Exclude Community Park/potential bus layover space]
Term:	125 years
Rent:	£1
Use:	Secular secondary school and ancillary uses
	No commercial use of premises other than permitted community uses
Rights:	Access rights over adjacent road to highway (unless adopted) subject to making contribution to upkeep
	Subject to the licence in favour of Barnes Eagles (terminable on 28 days notice)
Alterations:	Consent required for major works or rebuilding that would affect the character of the estate
Insurance:	School to insure
Physical repair:	All responsibility on School
Reservations:	[depends on services/utilities]
Termination:	Termination if the School has not been built out within [5] years of the grant of the lease
	Termination if site not used for a school and ancillary uses for a period in excess of [24] months

Appendix B – Community Park Transfer to Council - Heads of Terms

[TBC]

Demise:	As shown coloured green on plan [ ]
Use:	Only for use as a community park
Obligations:	[To maintain the Community Park in a tidy and proper manner]
Reservations:	[To permit the Owner to erect and thereafter maintain signage relating to the sale of the Dwellings until [ ]]

Executed as a deed by affixing)
the common seal of)
THE LONDON BOROUGH OF)
RICHMOND UPON THAMES)
in the presence of:)

Authorised signatory

EXECUTED AS A DEED BY)
RESELTON PROPERTIES LTD)
acting by a Director and its Secretary or)
by two Directors)

Director

Director/Secretary

THE COMMON SEAL of the)
PORT OF LONDON AUTHORITY)
was hereunto affixed in my presence:)

Secretary to the Authority

Document comparison by Workshare 9.5 on 01 October 2019 14:46:16

Input:	
Document 1 ID	file://C:\Users\kgill\AppData\Local\Temp\Workshare\wmtempb28\Section 106 Clean 5.9.19 to LPA(66860569_1)(67284128_1).DOCX
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Description	Section 106 - Stag Brewery as of 24.9.19(67149566_1)
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Moved cell	
Split/Merged cell	
Padding cell	

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	Count
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Deletions	48
Moved from	2
Moved to	2
Style change	0
Format changed	0
Total changes	110

Appendix B

Appendix 3

BARNES EAGLES FOOTBALL CLUB

www.barneseagles.co.uk

Chairman: Paul Mallon
☎ 07884 238 383

Treasurer: Eric Pinn
☎ 07884 112 822

Club Secretary: Symone Coleman
☎ 07740 951 513

17 July 2019

The Site: The Stag Brewery, Mortlake ("the Site")
The Development: Residential development of circa 850 dwellings with ancillary commercial space on the Site including the provision of a School with enhanced sports facilities
The Developer: Reselton Properties Ltd

I, Paul Mallon on behalf of Barnes Eagles Football Club ("BEFC") confirm that BEFC have reached an agreement in principle with the Developer in relation to the future use of the sports facilities as part of the Development.

The Developer will enter into a Section 106 Planning Obligation for the provision of an all-weather floodlit full size 4G artificial football pitch and community changing facilities at the School which will be built as part of the Development. This will also contain an obligation enter into a Community Use Agreement, to govern the use of the new facilities including priority being given to BEFC.

The Developer has offered to provide a temporary licence of the Site for BEFC until commencement of the Development with 6 months' notice to vacate and compensation payable directly to BEFC until the new facilities are capable of being occupied by BEFC.

The above terms have been agreed, subject to contract, and the legal agreements are currently being progressed as part of the planning process.

Paul Mallon
Chairman
Barnes Eagles Football Club

Appendix B

Appendix 4

GILLESPIES



Landscape Design and Access Statement: Application B

For Reselton Properties

RE06 October 2019

REVISION NO:	ISSUE DATE:	PREPARED BY:	APPROVED BY:
00	14/02/2018	RJ	RC
01	11/04/2019	RJ	RC
02	26/04/2019	GP	RC
03	03/05/2019	GP	RC
04	12/09/2019	CL	RM
05	20/09/2019	CL	RM
06	02/10/2019	CL	RM

Contents

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5.1 Site Wide Landscape Masterplan
5.2 School Landscape Masterplan
5.3 Tree Retention
5.4 Vehicular Circulation Strategy
5.5 Pedestrian Circulation Strategy
5.6 Cycle Circulation Strategy
5.7 Hard Landscape Strategy
5.8 Street Furniture Strategy
5.9 Soft Landscape Strategy
5.10 Fencing
5.11 Sports Provision
5.12 Play

Introduction

This Stag Brewery Design & Access Statement has been prepared by Gillespies Landscape Architects on behalf of Reselton Properties Limited ('the Applicant') in support of three linked planning applications for the comprehensive redevelopment of the former Stag Brewery Site in Mortlake ('the Site') within the London Borough of Richmond Upon Thames ('LBRuT').

The former Stag Brewery Site is bounded by Lower Richmond Road to the south, the river Thames and the Thames Bank to the north, Williams Lane to the east and Bulls Alley (off Mortlake High Street) to the west. The Site is bisected by Ship Lane. The Site currently comprises a mixture of large scale industrial brewing structures, large areas of hard standing and playing fields.

The redevelopment will provide homes (including affordable homes), accommodation for an older population, complementary commercial uses, community facilities, a new secondary school alongside new open and green spaces throughout. Associated highway improvements are also proposed, which include works at Chalkers Corner junction.

The three planning applications are as follows:

• Application A – hybrid planning application for comprehensive mixed use redevelopment of the former Stag Brewery site consisting of:
i. Land to the east of Ship Lane applied for in detail (referred to as 'Development Area 1' throughout); and
ii. Land to the west of Ship Lane (excluding the school) applied for in outline detail (referred to as 'Development Area 2' throughout).

• Application B – detailed planning application for the school (on land to the west of Ship Lane).

• Application C – detailed planning application for highways and landscape works at Chalkers Corner.

Full details and scope of all three planning applications are described in the submitted Planning Statement, prepared by Gerald Eve LLP.

This section of the report sets out design principles and detailed strategies to support Application B for the school.

Revised Submission

Following consultation with council Planning, Tree and Environment officers, various review meetings and negotiations with LBRuT, we have adjusted a number of elements and design to refine and clarified the landscape design in each Application. Where necessary, amended diagrams, text and supporting drawings have been prepared and submitted.


N
Ship Lane
Maltings
River Thames
Thames Street
Williams Lane
School
Lower Richmond Road
Mortlake High Street
Mortlake Green
Sheen Lane
Williams Lane
Lower Richmond Road
1 Green Link
2 Bottleworks Square
3 Maltings Plaza
4 Riverside terrace
5 Courtyard garden
6 Towpath
7 School Entry Court
8 Private garden
9 Residential street
10 School sports field
11 Public amenity space
12 Community park
13 New park
14
Site Application Boundary
School Application Boundary

5.2 School Landscape Masterplan

The final masterplan for the school site has been designed to follow the original Concept Plan from LBRuT and maintain the open space character of the current site. The site plan as indicated includes provision of a new Community Park along the Lower Richmond Road frontage, a Multi-Use Games Area (MUGA) and Habitat Area associated with the school outdoor recreational facilities. North of this area, the all-weather 3G Sports Pitch extends up to the new street on the northern edge of the site, adjacent to the bend in Williams Lane, in a similar manner to the existing open playing field. The group of existing trees on the northern side of this new street have been retained and protected to maintain the existing character of this part of the site and as a feature within the proposed landscape at the edge of the new School property.

The new School building is situated adjacent to the new eastern Street, with the main entrance, bus setdown and carparking area along this street. Two bus bays are provided for school use and will also be used by waste vehicles collecting from the bin store adjacent to the entrance to the school. The carpark provides five (5) disabled accessible bays and ten (10) standard bays for staff and visitors to the school.

The northern street is proposed to function as a limited access zone for pedestrians and cyclists accessing the school and traversing through the site (east to west), with limited service and emergency access for vehicles as well as school buses on a one way street towards the western connection to Williams Lane. In the short term, subject to staging of the surrounding development, this street will provide a through connection for traffic associated with the school, leaving the site via Williams Lane to Lower Richmond Road. Once the remaining street network is constructed, it is intended that the School manage access to this northern street zone with retractable or removable bollards at either end. This will allow vehicles to traverse east into Ship Lane to exit the precinct, rather than circulating west via Williams Lane. One bus stop will be located on the northern street.



- School Application Boundary
- School Ownership Boundary
- Future Bus Terminal Location Boundary
- Site Application Boundary

1. Green Link
2. Maltings Plaza
3. Entry Plaza
4. Courtyard garden
5. New park entrance
6. School Entry Court
7. School sports field
8. Public amenity space
9. Community park
10. Car park
11. Coach parking
12. MUGA
13. Habitat area
14. Private garden

School Landscape Masterplan Final



School Landscape Masterplan Interim

5.2 School Landscape Masterplan

The northern street will be constructed in the first stage, along with the school building and surrounds, providing one way access (west) from the eastern street to Williams Lane and out to Lower Richmond Road. This street will also allow for loading and unloading of buses for school excursions and circulation of cyclists from Williams Lane and north or south of the site, via Lower Richmond Road or the cycle path network on the bridge and Thames Path on the river edge.

A small carpark adjacent to the school eastern end, including a minimum of 10 standard bays and five disabled bays with required circulation space. Two bus parallel parking bays 913) are to be provided on the street adjacent to the main school entry. A third bus stop is proposed within the northern shared access zone and controlled by the school.

Within the development of the Development Area 2, further street network construction will provide connection of the eastern street across to Ship Lane, thereby allowing the partial closure of North Street and control of access through this zone, while maintaining cycle and pedestrian access and circulation.

The shared cycle and pedestrian connection east west to Ship Lane and the Development Area 1 will also be built at this time to connect the network through the site to Mortlake Green, Lower Richmond Road and Mortlake High Street and beyond to the east and south.

1. Green Link
2. Maltings Plaza
3. Entry Plaza
4. Courtyard garden
5. New park entrance
6. School Entry Court
7. Temporary grass verge
8. School sports field
9. MUGA
10. Habitat area
11. Existing sports field Kept
12. Car park
13. Coach parking

- School Application Boundary
- School Ownership Boundary
- Future Bus Terminal Location Boundary
- Site Application Boundary

5.3 Tree Retention

This diagram indicates existing trees from the Tree Survey which will be retained or removed as a result of the proposed school masterplan development.

Qualitative assessment and allocated category of each tree has been taken into account in decisions to retain and or remove and where possible, adjustments to the masterplan have enabled the retention of the majority of Category A and B trees.

Allowance is made in the treatment adjacent to retained trees. Pavement treatment of paths and paving adjacent to or within the Root Protection Zone has also been adjusted to avoid excessive excavation or disturbance of root zones or future compaction of this area.
Full tree removal list please refer to Stag Brewery Landscape Design & Access Statement Application A.



Diagram is based on Arboricultural Survey and Impact Assessment WIE10667-100_R_3_3_3_ASR&IA.

Legend

- Remove
- Retain
- School Application Boundary
- Site Application Boundary

5.4 Vehicular Circulation Strategy

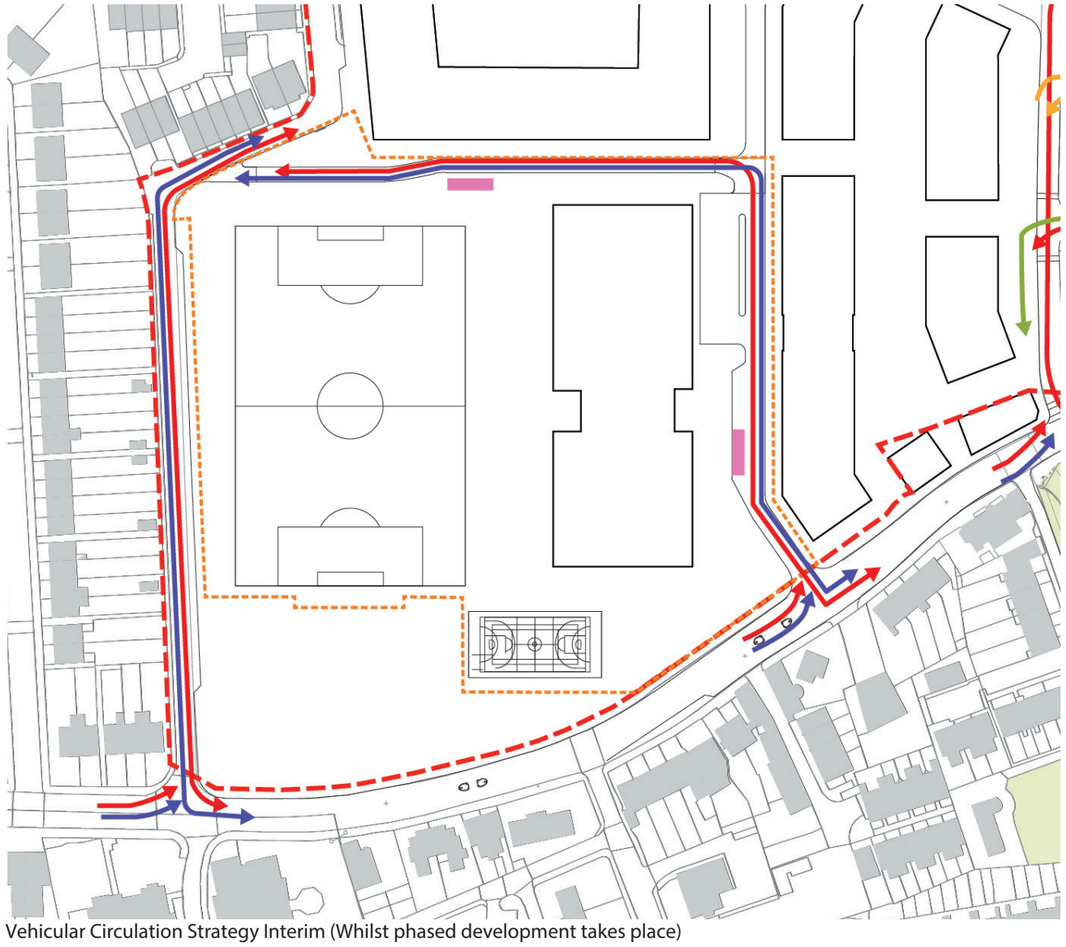
The North Street will be constructed to allow controlled vehicular access and movement for service and emergency vehicles but is mainly intended as a pedestrian and cycle access to the school. A one way asphalt pavement (4m wide) with 300mm wide granite kerbs, will provide for vehicles and footpaths, street trees and planting will be provided to ensure this zone reinforces the pedestrian nature and accessibility to the school.

Street lighting is provided in accordance with local authority requirements and is detailed under the Lighting Design section of this report.

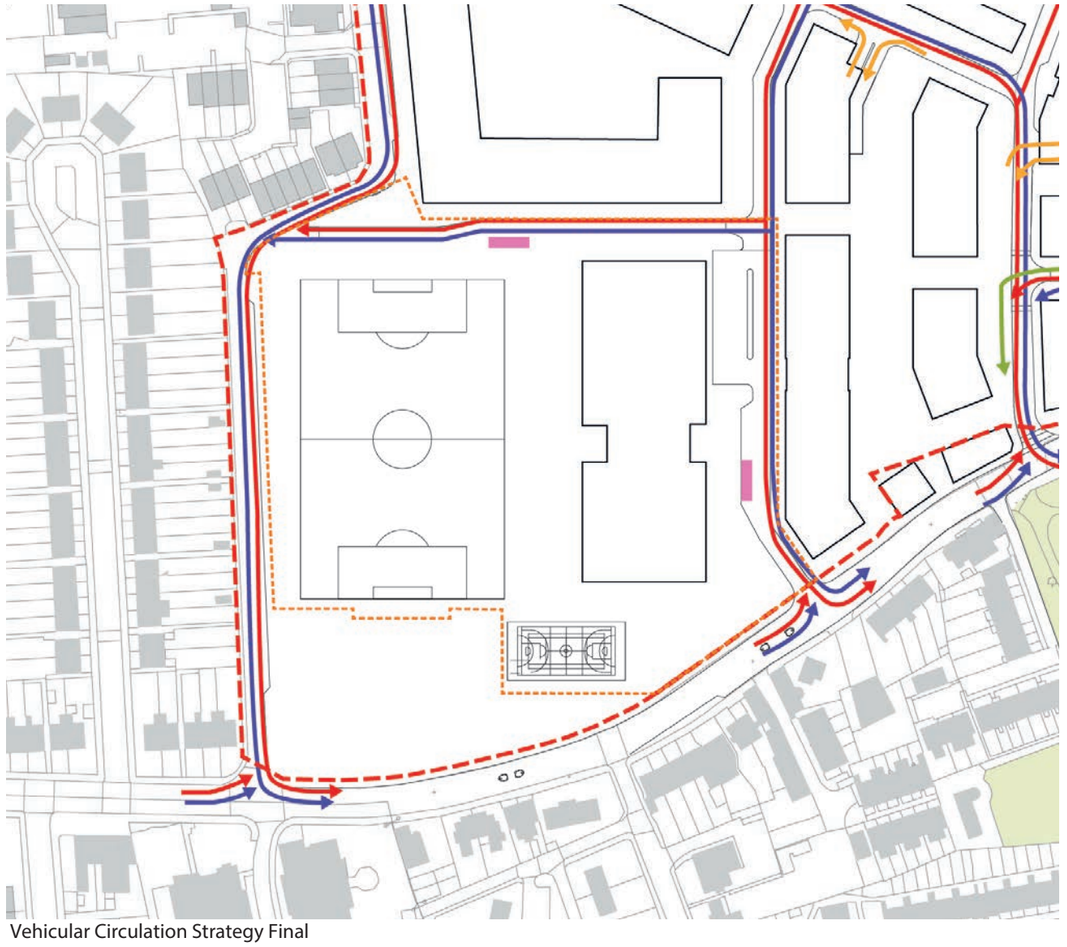
Eastern Street provides for two-way traffic and includes two set down bays for buses outside the school entry. These bays are also used by Waste collection vehicles collecting from the designated bin store area of the school.

Legend

- Fire Tender
- Waste Collection
- Delivery
- Passenger (Residential/Retail)
- School Bus Stops
- School Application Boundary
- Site Application Boundary



Vehicular Circulation Strategy Interim (Whilst phased development takes place)



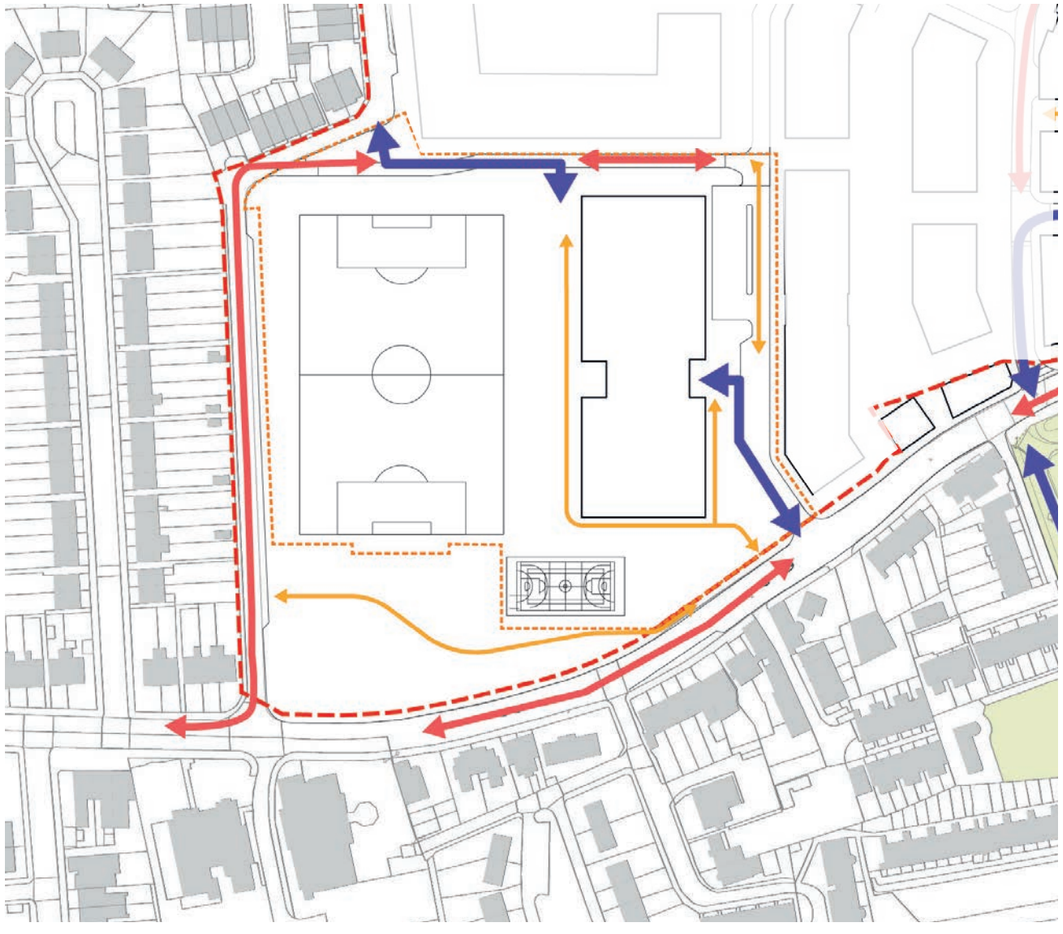
Vehicular Circulation Strategy Final

5.5 Pedestrian Circulation Strategy

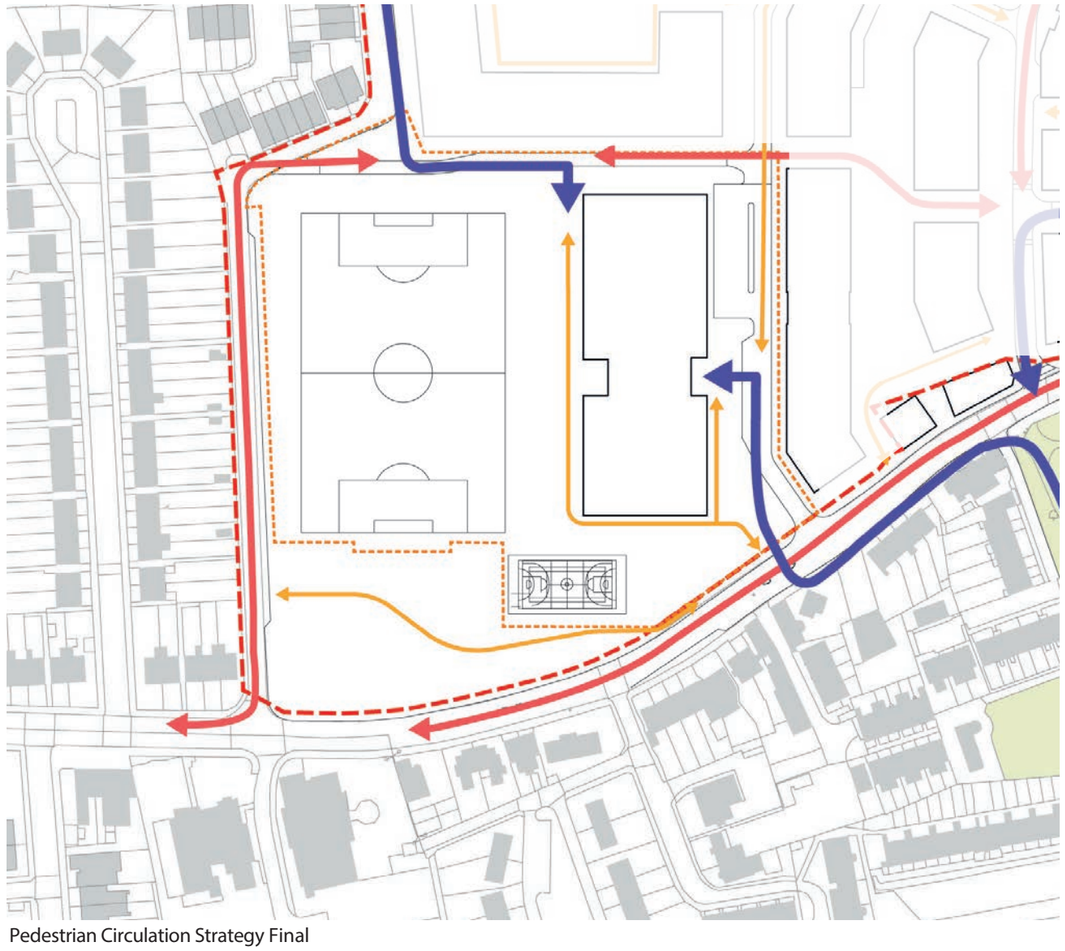
Consideration has been given to the principle of maximising pedestrian access and circulation within and beyond the school, affording students and visitors the opportunity to move through the school site and connect to the surroundings. Connection with the existing street network, riverside path, open space and surrounding development has been paramount in the establishment of a new school masterplan.

Legend

- Primary
- Secondary
- Tertiary
- School Application Boundary
- Site Application Boundary



Pedestrian Circulation Strategy Interim (Whilst phased development takes place)



Pedestrian Circulation Strategy Final

5.6 Cycle Circulation Strategy

The site affords connectivity and circulation by cycles for school children and visitors from the local area, with broad pavements and a series of connecting streets, paths and open spaces. The Cycle Strategy allows for cycle access throughout the school site and connection to the wider network of streets and cycle paths at a number of points. This allows the site to provide a facility for safe quiet recreational cycling away from the busier roads.

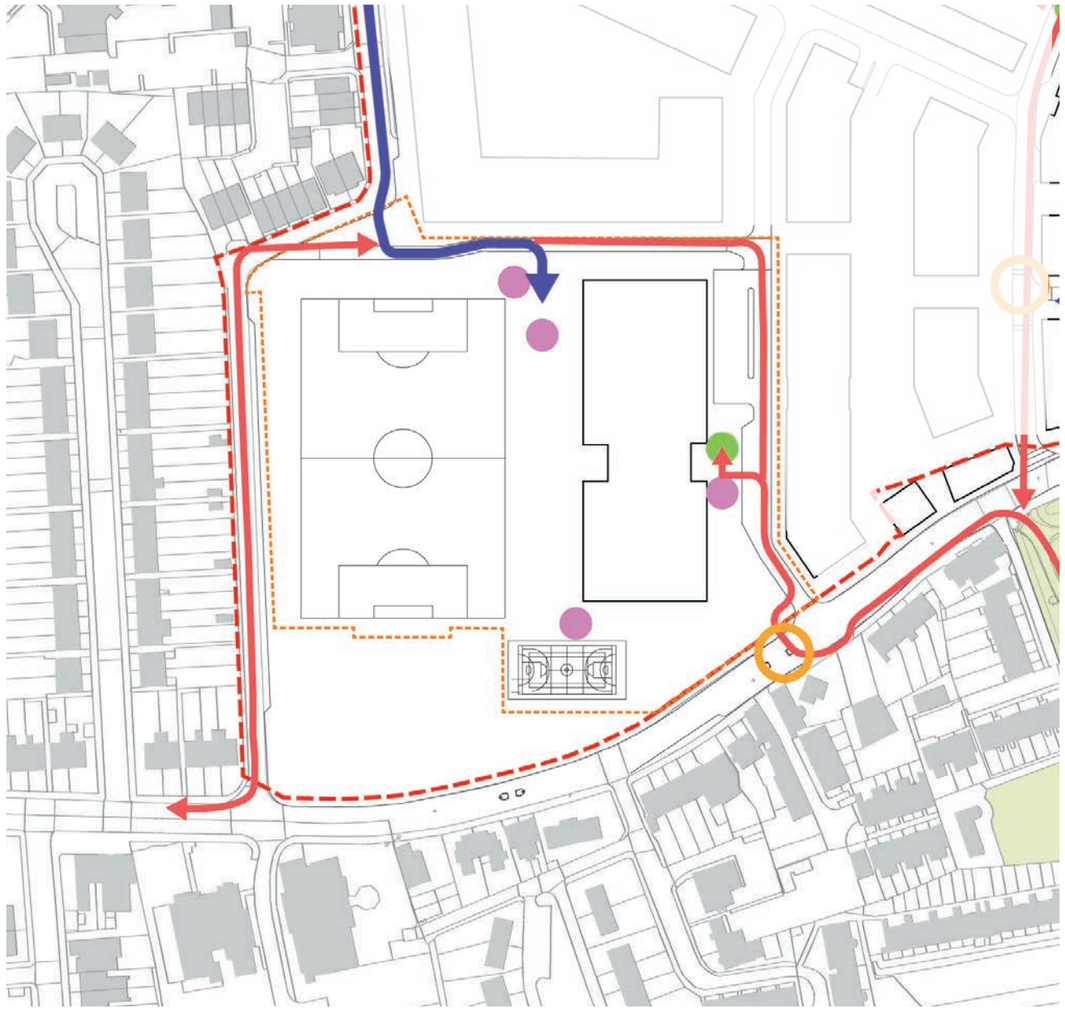
The primary routes indicated show connection from the A316 and Chiswick Bridge down along Williams Lane to the Secondary School and further into the site, with an exit onto Mortlake High Street at the western end of the site.

Secondary routes are shown to the school and along Ship Lane to the river and the proposed streets and laneways within the development also provide sufficient space to cater for cyclists as well as pedestrians.

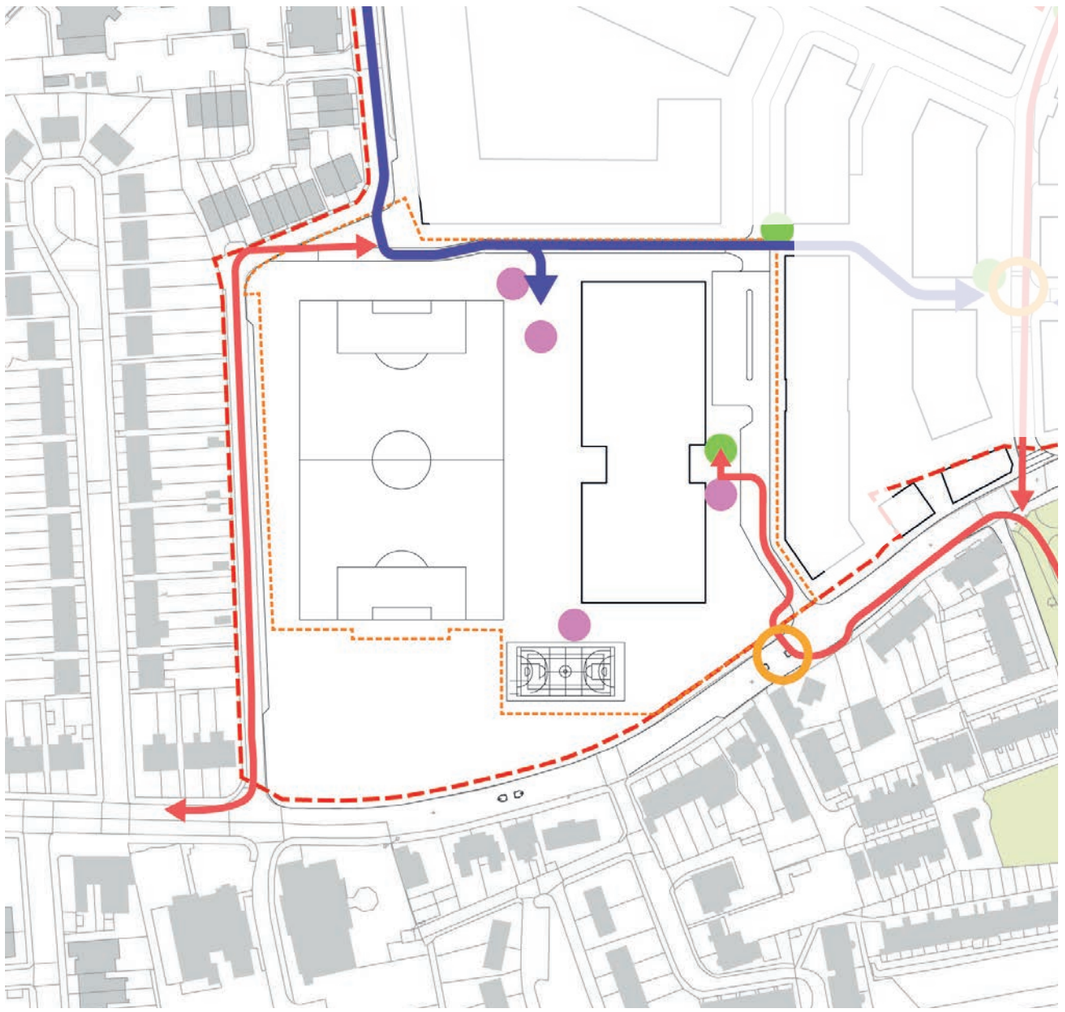
Cycle racks for short stay and long stay are required as per New London Plan and provided in a number of locations around the site adjacent to entrances to the school and inside of the school. Please refer to Cycle Parking Strategy in this document for details.

Legend

- Primary (Quiet Route)
- Secondary
- Towpath
- External Cycle Rack Location
- Secured Long Stay Cycle Rack Locations
- Crossing Treatment
- School Application Boundary
- Site Application Boundary



Cycle Circulation Strategy Interim



Cycle Circulation Strategy Final

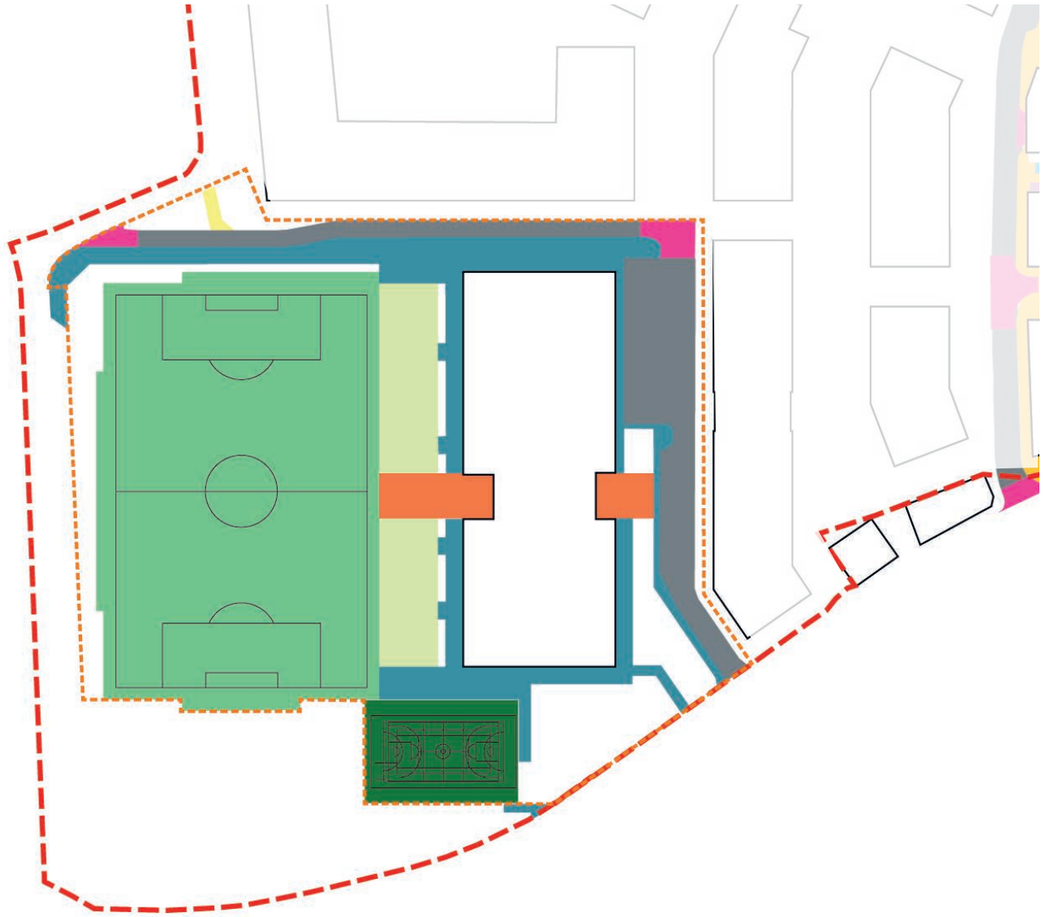
5.7 Hard Landscape Strategy

The main aims of the hard landscape strategy are simplicity of design and layout, and overall quality, bearing in mind maintenance considerations, and cost limitations. Colour, texture and unit size help to define the uses of various spaces, including using paving sizes and patterns in 'streets' to identify pedestrian priority. The accessibility requirements of vision and mobility impaired users is a factor in the determination of surface and edge types to provide a legible and safe environment in accordance with current requirements.

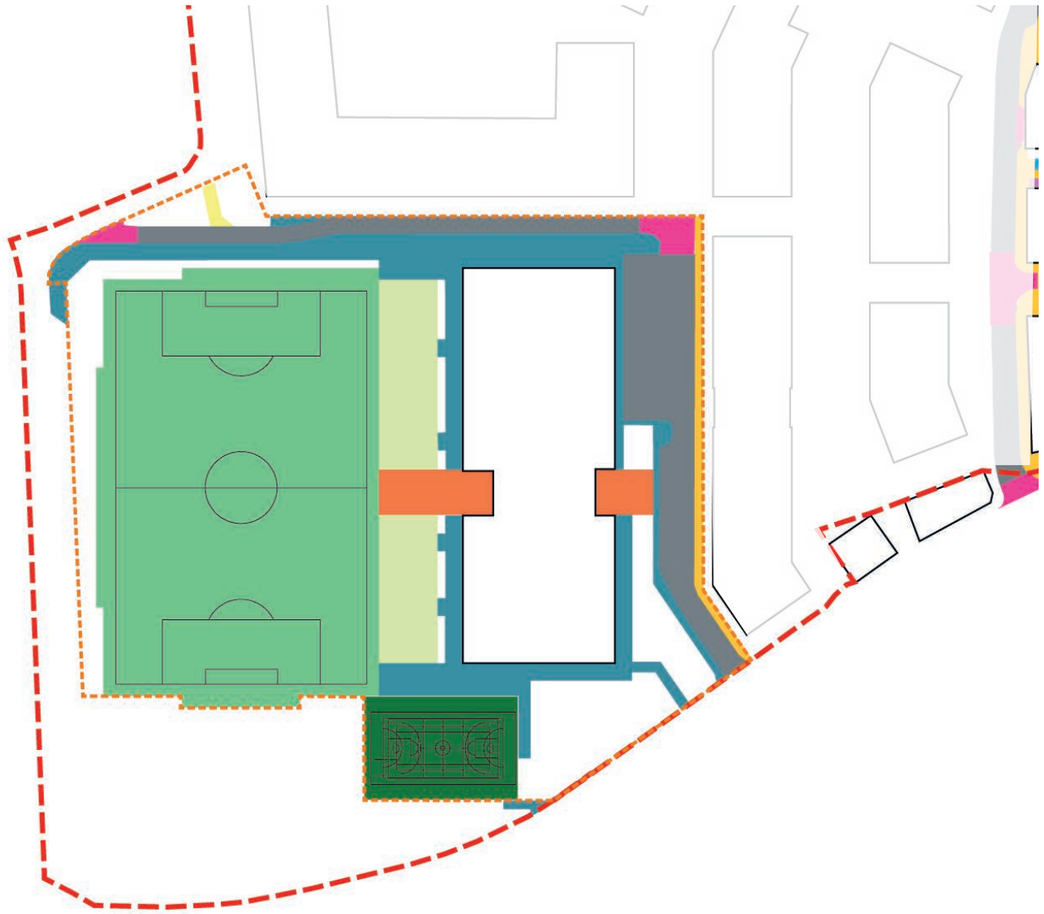
It is proposed to use paved surfaces of different scale and grain to create a range of distinct characters within a unified warm palette of materials. Artificial stone flags can potential create a more permeable surface for storm water infiltration.

Legend

- Asphalt
- Small Block Setts
- Artificial Stone Flag Paving
- Dark Green Porous Macadam Surfacing
- Light Green Porous Macadam Surfacing
- 3G Pitch Material
- Feature Stone Paving
- Resin Bound Aggregate Paving
- School Application Boundary
- Site Application Boundary



Hard Landscape Palette Interim



Hard Landscape Palette Final

Hard Landscape Precedent Images



Small block setts



Muga - Pitch Treatment



3G Pitch Treatment



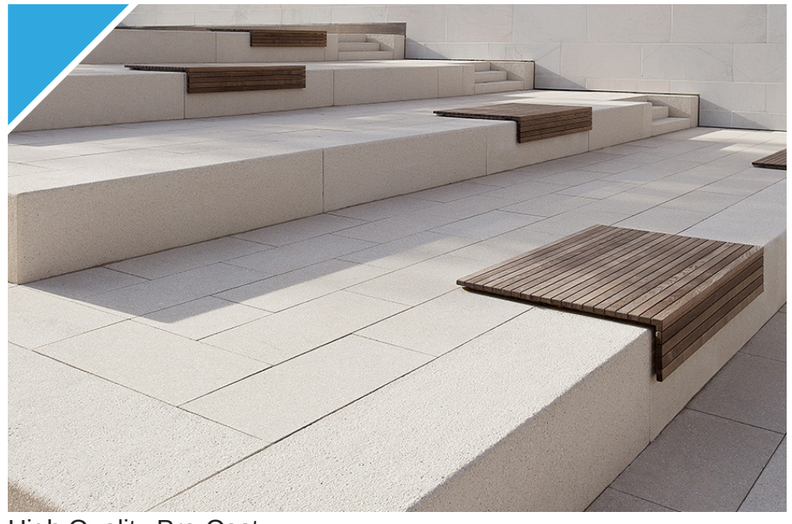
Resin Bound Aggregate



Artificial Stone Flag Paving



Hot Rolled Asphalt



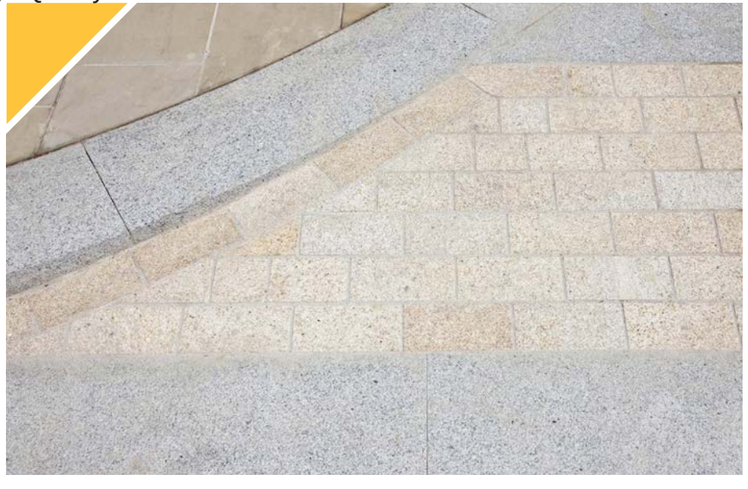
High Quality Pre-Cast



Feature Mix Stone Paving



High Quality Stone Paving



High Quality Stone Paving

5.8 Street Furniture Strategy

The selection of materials and finishes reflects this approach of improving quality of the public landscape and school design, and is intended to integrate the school site into the broader context of overall site as well as Mortlake.

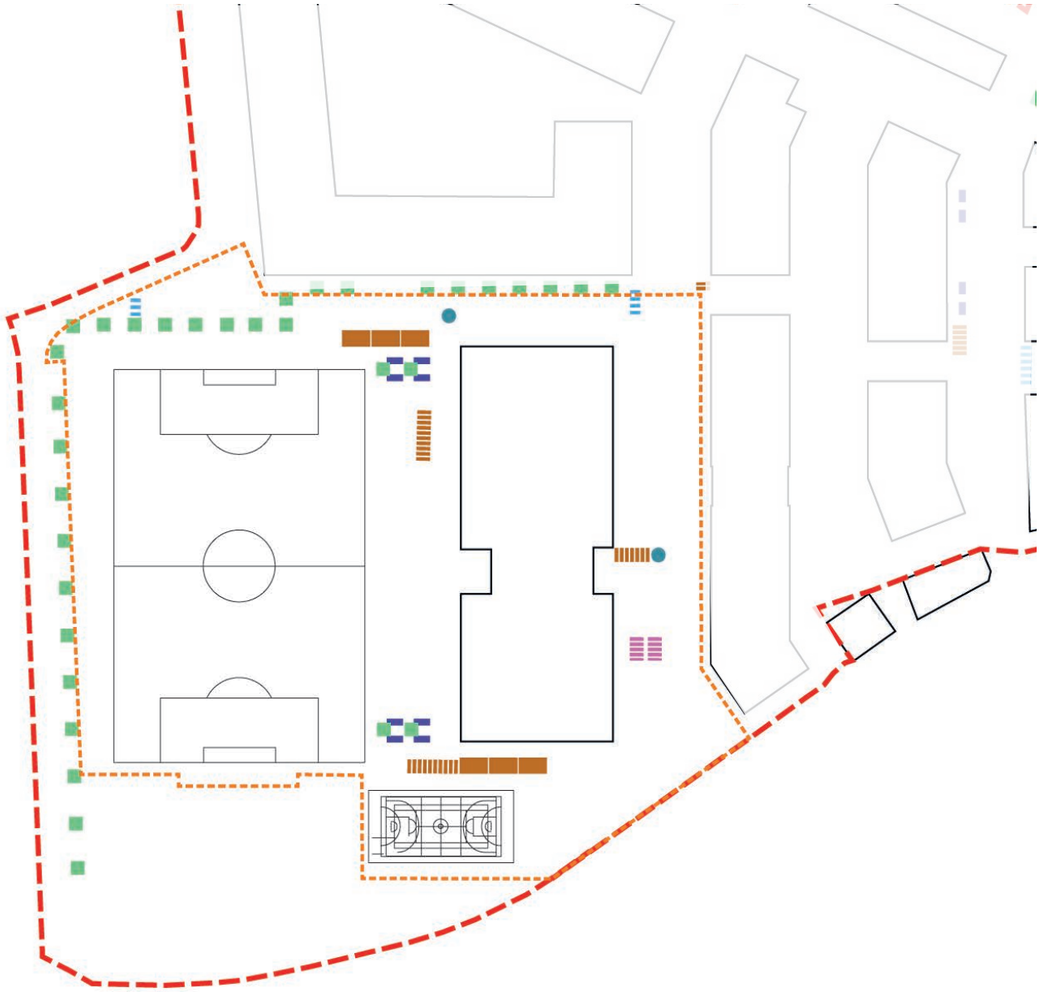
Subtle changes of materials and patterns will be used to differentiate use areas and functions between public and private, vehicle and pedestrian and to define different character to special areas. Materials are selected for durability and functionality as well as appearance. Where feasible, materials will utilise recycled and recyclable materials and techniques and minimise energy and resource use throughout their life cycle.



Street Furniture Interim

Legend

- Concrete/timber benches
- Resin bound gravel tree pit
- Bins
- Bollards
- Cycle stands
- Cycle stands in bin & cycle store
- Two-tier cycle rack shelter
- School Application Boundary
- Site Ownership Boundary



Street Furniture Final

Cycle Parking Strategy for School (Interim and final)



	No. of New Parking (Long Stay)		No. of New Parking (Short Stay)	
	Required	Provided	Required	Provided
School	179	180	13	14

Legend

- Short stay parking - Sheffield stand
- Long stay parking - Sheffield stand (within school fence)
- Long stay parking - Two tier cycle shelter (within school fence)
- Long stay parking in locked bin store
- Site Application Boundary
- School Application Boundary

Precedent images



Concrete benches



Bins



SFD
streetfurnituredirect

Call our Sales Team: 01625 879442
Email: sales@streetfurnituredirect.co.uk
Web: www.streetfurnituredirect.co.uk

Manchester Cast Bollard / SFD560

Product Description

The Manchester Cast Iron Bollard has a traditional and contemporary design which makes it popular choice with Architects and Councils. The Cast Iron Bollard adds a classic look to any high street, while providing strength.

Dimensions

Length 1300mm.
Diameter 230mm.
Manufactured from Cast Iron, Finished in black gloss.
Root Fixed.



Bollards



Resin bound gravel tree pit



Tree grilles



Cycle stand



Timber benches

5.9 Soft Landscape Strategy

Trees

The proposed tree strategy can be broken down into the following landscape types and will be defined by the tree species shown in the indicative planting list and the tree strategy plan:

1) Retained trees: on-going husbandry and canopy management of the existing trees, alongside a new augmented tree planting to emphasise and enhance the amenity impact of any blocks of planting.

2) Structural Street Tree Planting: along the streets, tree planting is to be predominantly native species with columnar canopies, allowing the trees to be situated in close proximity to the building massing & thereby providing shade and shelter from wind and giving seasonal interest in leaves, bark and form. Interspersed softscape bays and corners are populated with clusters that unify the street scene and define their own character.

3) Augmented tree planting in softscape areas throughout the school and wider masterplan: these are predominantly of a smaller habit, native species and mixed forms with some multi-stem species that have good seasonal qualities, suited to the spaces and anticipated light levels.

4) Specimen trees: will be interspersed throughout the development in selected parts of pedestrianised areas and in locations which present a good opportunity to host and display trees of particular merit.

5) A dense screen of trees has been provided along the western edge of the sports pitch to shield nearby residents from glare from the pitch floodlighting – provided to Sports England and Football Association recommendations to maximise access to this facility. Agreement with local sports clubs is currently being negotiated to ensure the high quality sports facilities benefit the largest proportion of the community possible.

Images of the trees are shown on the next pages.

Legend

- Specimen Trees - Mixed (Clearstem: 2.5m | H:5-10m)
- Native Ornamentals - Mixed (Clearstem: 2M | H:4-7M)
- Hardy Native Columnar Street Trees (SM | Clearstem: 2.5m | H:5-7m)
- Retained Trees
- School Application Boundary
- Site Application Boundary



Tree Planting Interim



Tree Planting Final

Tree Palette



EG: ACER X FREEMANII 'AUTUMN BLAZE'



EG: TILIA CORDATA



EG: MALUS SYLVESTRIS



EG: CORNUS SANGUINEA



EG: PRUNUS SERRULA(STANDARD & MULTI-STEM)



EG: BETULA UTLIS V. JACQUIMONTII (STANDARD & MULTI-STEM)



EG: CRATAEGUS MONOGYNA



EG: ROSA CANINA



EG: ACER CAMPESTRE 'STREETWISE'



EG: BETULA PENDULA



EG: VIBURNUM OPULUS

Tree Palette



EG: TILIA CORDATA



EG: ACER PLATANOIDES ‘COLUMNARE’



EG: CARPINUS BETULUS ‘FRANS FONTAINE’



EG: ACER CAMPESTRE ‘STREETWISE’

5.9 Soft Landscape Strategy

Planting

The soft landscape strategy of the school development includes several layers of planting typologies including streetscapes, pocket park and incorporation of existing trees. Part of existing Watney's Sports Ground will be kept at the School Interim phase, however this is part of Application A.

Soft landscape strategy for streets, pocket parks and Habitat area in the school development will provide for a range of functions and activities, as well as providing resting places, shade and seasonal celebration.

Good quality existing trees around the site will add valuable character to the site, and together with the soft landscape strategy, will deliver a well-connected green network in and around school and overall development.

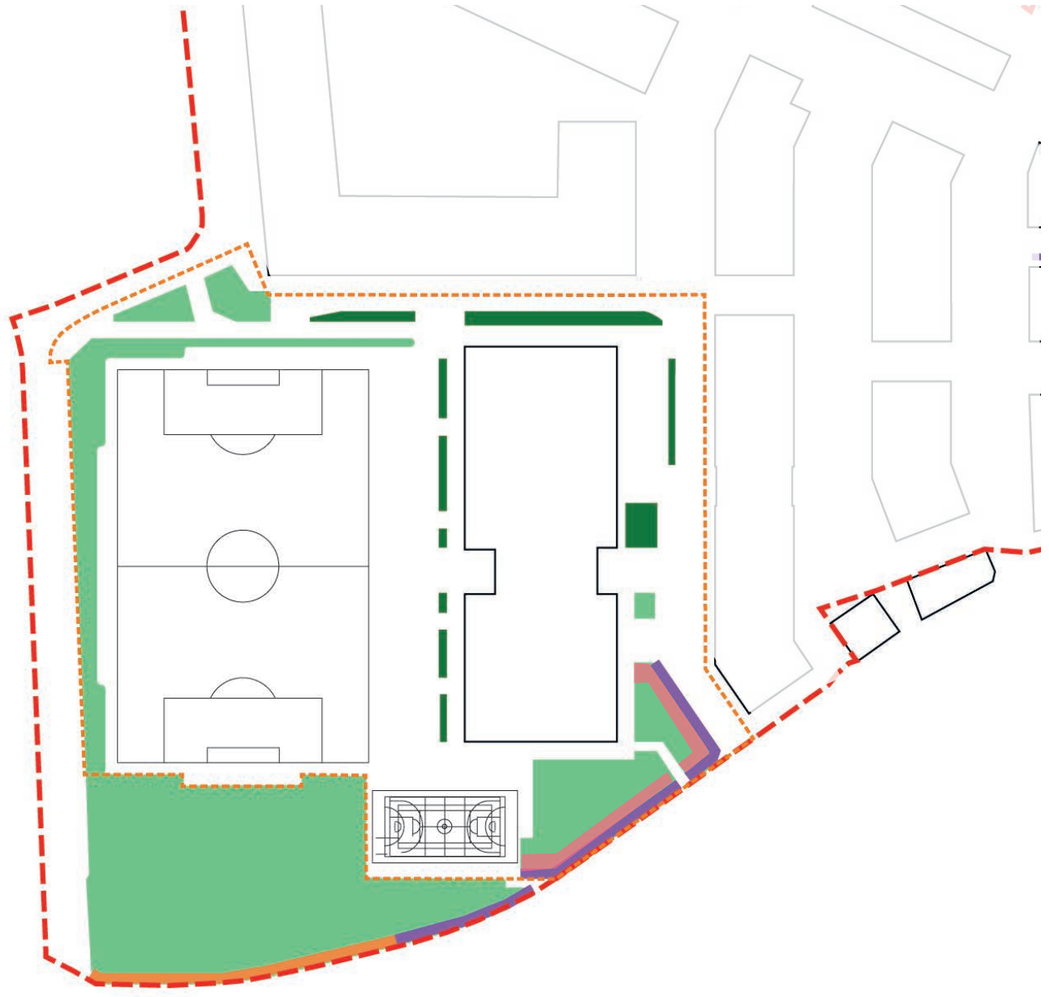
We have provided a habitat area of 1210m^2 at the southeast corner of the school for educational purpose and meet Education Funding Agency and Department of Education requirements. Lawn with meadow planting and new tree planting will be provided for the habitat area. Further details and access management arrangements will be included in the next stage of the development.

Legend

- Lawn
- Meadows
- Mass Plantings
- Existing Hedges
- Hedges with fencing
- Partial Existing Sports Field (Interim Phase)
- School Application Boundary
- Site Application Boundary



Planting Interim



Planting Final

Mass planting: typical mixes

SHADE PLANTING



Aconitum spp.



Lunaria



Vinca difformis



Saxifraga umbrosa



Aster divaricatus



Helleborus niger



Tiarella spp.



Persicaria affinis



Digitalis



Blechum orientale



Polypodium



Polystichum

SUN PLANTING



Allium



Eremurus



Agastache



Osteospermum



Armeria maritima



Aster



Lupinus



Digitalis purpurea



Perovskia



Crocosmia



Helianthemum



Thymus vulgaris



Cyperus Involucratus



Galium Odoratum



Zantedeschia Aethiopica



Francoa Sonchifolia



Dianella Tasmanica



Heuchera Cylindrica



Luzula Nivea



Arum Pictum



Crinum Asiaticum



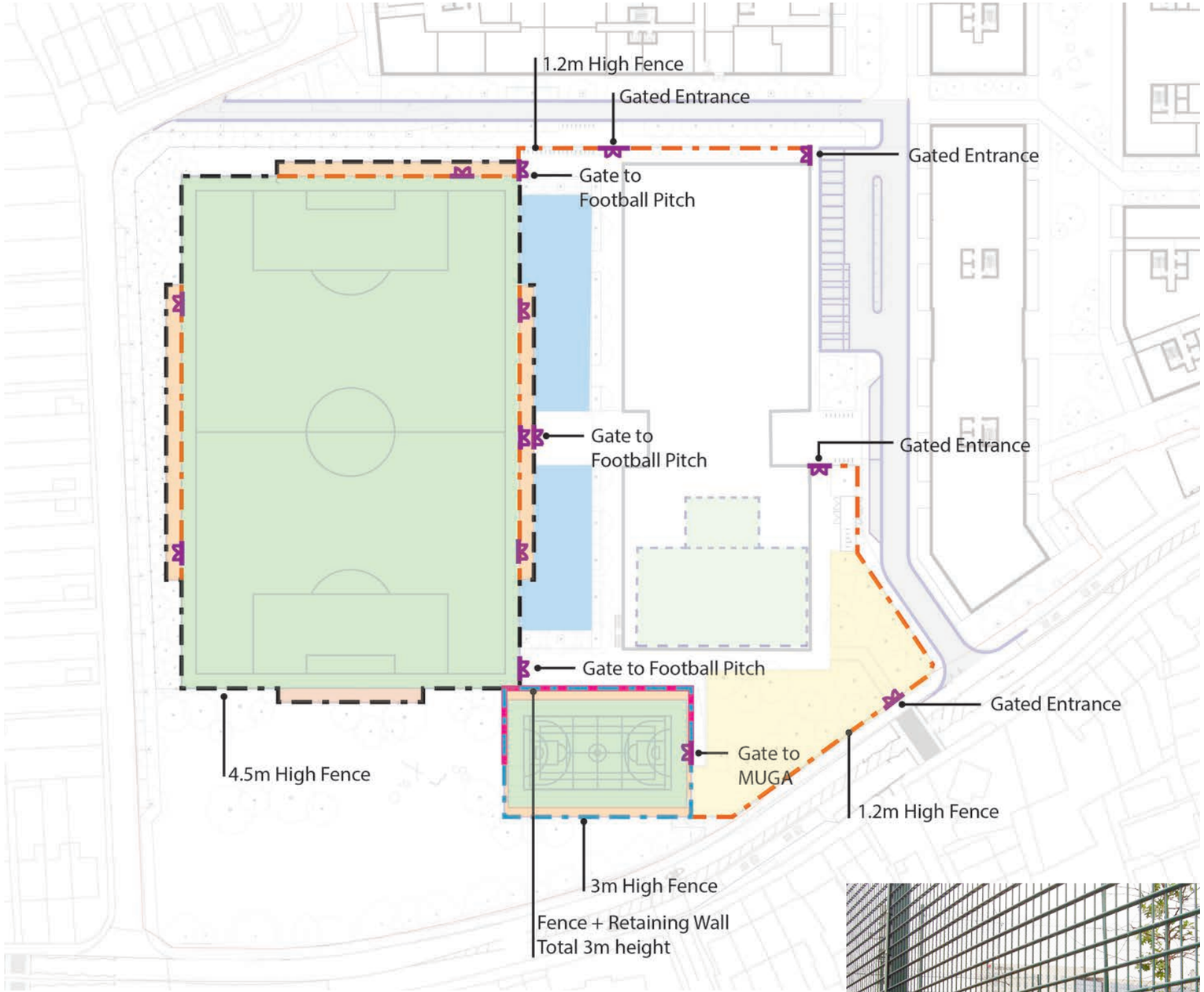
Asarum Europaeum



Asplenium scolopendrium



Adiantum Aleuticum



Legend

- 1.2m high fence
- 3m high fence
- Fence with retaining wall (3m)
- 4.5m high twin bar super rebound fence



Precedent image from manufacturer ZAUN

5.10 Fencing

The school grounds will be fenced as indicated and include a full size all weather (3G) football pitch, a Multi-use Games Area (MUGA) and Habitat Area – as designated by Department for Education and Education Funding Agency's recommendations, as well as circulation and open space for children during breaks and outdoor activity times. These facilities, along with the second Play Space on the roof of the school building, and the indoor gymnasium, will be accessible to the residents of the site development and the wider community of Mortlake under a Community Agreement (a draft has been submitted with this application). This is covered in more detail elsewhere in this submission.

Fencing Detail

Fencing to Sports Pitch and MUGA, as well as school grounds and Habitat Area is based on industry standards and is in accordance with ESFA requirements and Sport England recommendations.

Lighting has been designed for the sports pitch to designated FA levels (Category 2&3) – refer to Sports Pitch Lighting Assessment 547-(010)-RP-EX-LA.

Fencing heights of 4.5m, 3m and 1.2m is in accordance with height requirements under SAPCA (Spots and Play Construction Association)Code of Practice for the Construction and Maintenance of Fencing Systems

All fence types are twin bar super rebound and black in colour. Products from manufacturers such as ZAUN and Sports & Safety Surfaces or similar approved will be used.

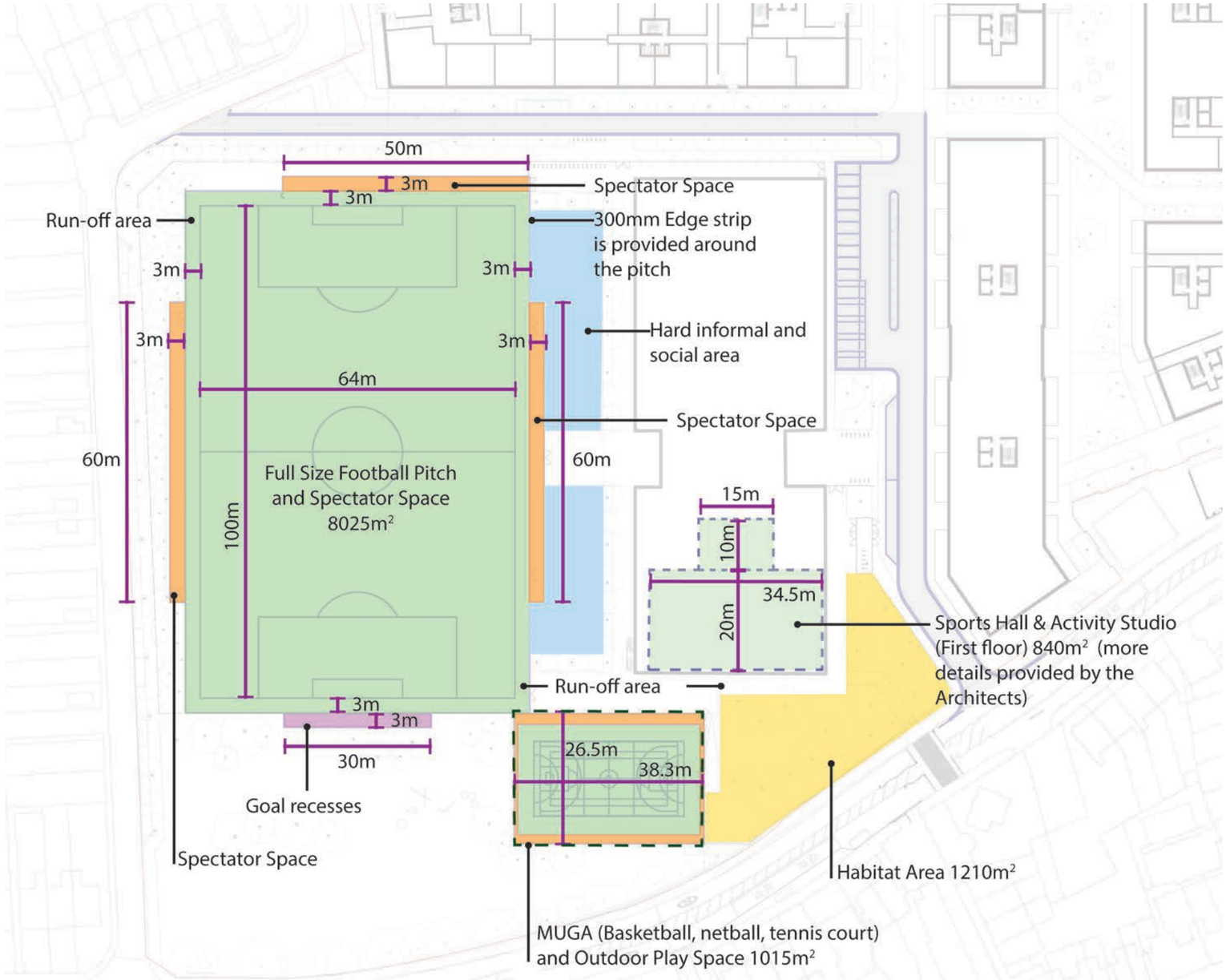
In respect of noise, there are a number of design solutions that will be incorporated into the design as a minimum to reduce rattle and ball impact noise, including a weld mesh with EPDM rubber inserts and fixings. If required from further subsequent detailed assessment, an acoustic grade timber fence with sufficient mass (15kg/m2) or barrier made from transparent/opaque plastic material where visual amenity is an important consideration will be incorporated. A maintenance scheme will be implemented to prevent deterioration in performance of the sports facilities that could result from damaged panels, loose brackets, worn AV bushing and squeaky gates.

Furthermore, residential building will be designed such that internal noise levels do not exceed 35 dB LAeq,16h during the daytime and 30 dB LAeq,8h & 45 dB LAmax at night from anonymous sources of noise such as road traffic. As noise levels from anonymous sources will be greater than those expected from the 3G Football Pitch and MUGA, the façade will be sufficient to reduce noise to an appropriate level.

5.11 Sports Provision

School Play facilities are considered in the application and have been measured as part of the 12 yr + age group provisions required under LBRuT and GLA Play Space requirements. Sports pitch - full size football pitch with spectator space, MUGA area (Basketball, netball, tennis court) as well as indoor sports hall and rooftop play area are provided for the school development, with total of 12120m2.

The football pitch and spectator space dimensions are using FA Guide to 3G Football Turf Pitches and designed for site specific condition.



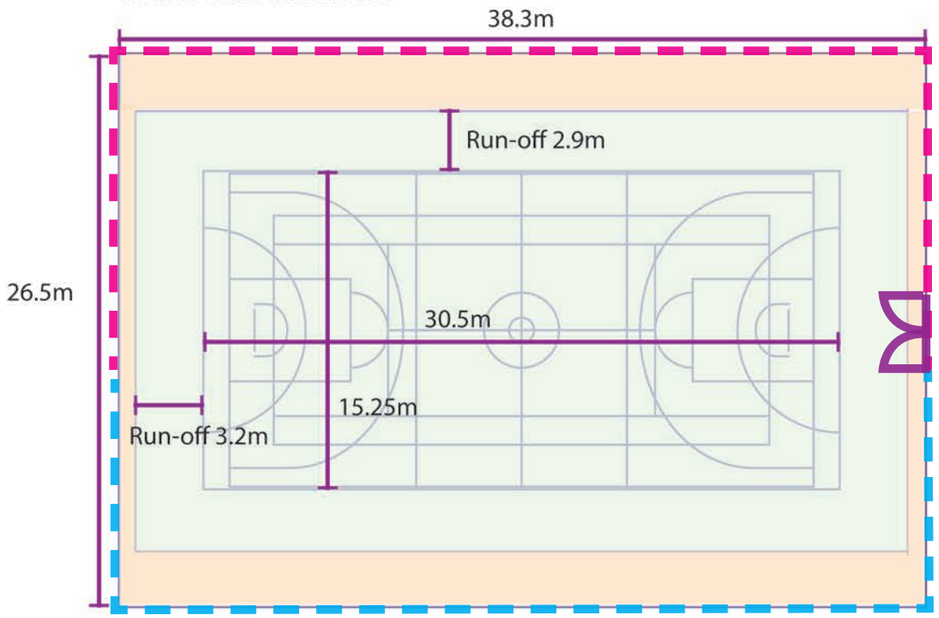
Legend

- Sports field
- Spectator area
- Goal recesses
- Social area
- Habitat area

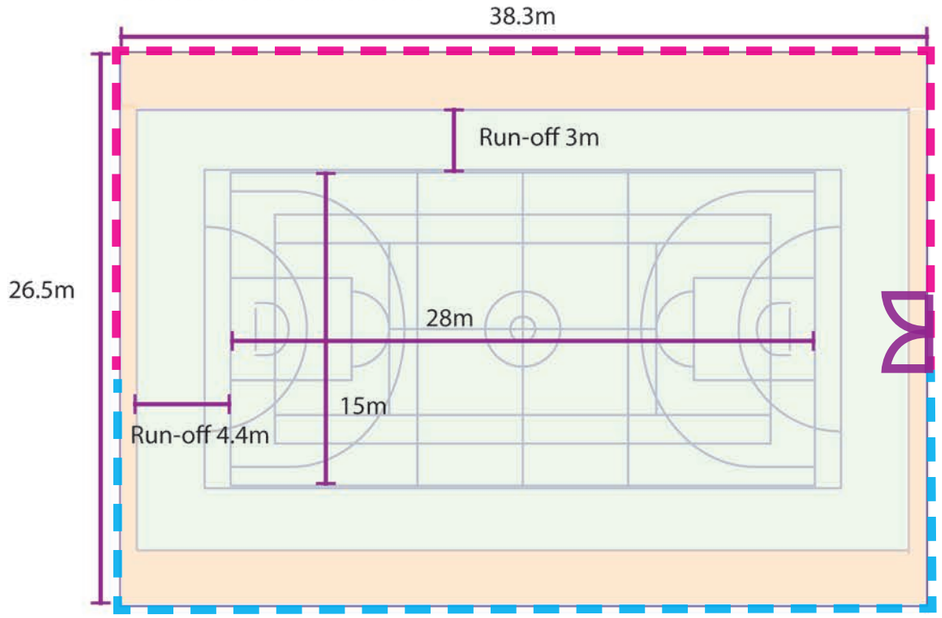
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Outdoor MUGA Sports Court Dimensions

Netball court dimensions



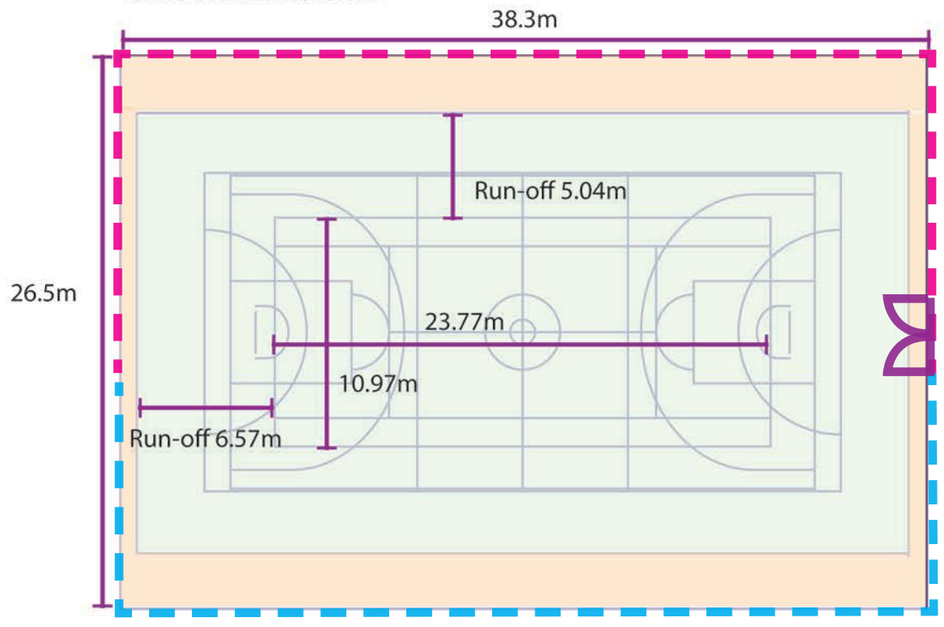
Basketball court dimensions



Legend

- Sports field
- Spectator area
- 3m High fence
- Fence and retaining wall total of 3m high
- Gate

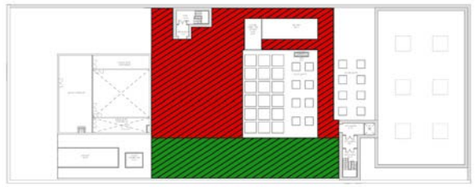
Tennis court dimensions







SCHOOL INDOOR MUGA /ACTIVITIES HALL



SCHOOL ROOF PLAYSPACE

Legend

- Under 5 Years
- 5 - 11 Years
- 12 + Years
- Proportional use for school
- School Application Boundary
- Site Application Boundary

Table 1: Total playspace required and achieved

site wide including Detailed, Outline areas and School

AGE	No. of children	Play Space required GLA (Sqm)	Actual playspace provided (Excluding school)	Actual playspace provided (Including school)
0 - 5	134	1,340	1,846	1,846
5 - 11	94	940	1,612	2,553
12 - 18	53	530	626	2,508
TOTAL	281	2,810	4,084	6,907

5.12 Play

Table 1 indicates targets and provision of play spaces for different age groups in and around school.

Within the calculation of the school playspace facilities (indoor and outdoor) a weighted contribution has been included in figures for 5yrs and above, in line with the intention to arrange a community use agreement with the residential development community. We have calculated these facility areas on the basis of intermittent use outside school hours (during week nights and weekends) as 2/7 of the actual space.

Appendix B

Appendix 5



LEGEND

GENERAL

- Site Planning Application Boundary
- School Planning Application Boundary

PAVING

- Paving Type 1 — Stone slabs for footpath
- Paving Type 2 — Stone paving for shared surface
- Paving Type 5 — Stone flag paving for plazas and entrances
- Paving Type 8 — Resin bound gravel
- Paving Type 9 — Artificial stone flag paving
- Paving Type 10 — School road asphalt paving with 300mm granite kerb
- Paving Type 11 — Macadam MUGA surfacing
- Paving Type 12 — 3G artificial grass
- Paving Type 13 — Rubber surfacing

STRUCTURES

- Fence Type 1 — 1.2m high fence for school
- Fence Type 2 — 3.0m high fence for school
- Fence Type 3 — 4.5m high twin bar super rebound fence for school
- Gate Type 1 — Double door gate for school

FURNITURE

- Seat Type 1 — Concrete bench
- Cycle Stand Type 1 — Sheffield cycle hoop - galvanised steel
- Two Tier Cycle Shelter — 20 secure per module
- Retaining Wall — Retaining wall with fence
- Tree Surround Type 1 — Resin bound gravel

PLANTING

- Short Mown Grass
- Existing Grass
- Planting Mix — Mixed perennial and evergreen planting
- Hedge — 1m high hedge
- Existing Hedge
- Meadow Planting — Mixed meadow planting
- Existing Trees to be Retained — Protected during all works
- Proposed Trees

LIGHTING

- Lighting Column — To lighting designer's details
- Lighting Column — To lighting designer's details
- Sports Lighting Column — To lighting designer's details
- Sports Lighting Column — To lighting designer's details

rev	details	by	date
D00	Issue for Planning	RJ	02.02.2018
D01	Issue for Planning	RJ	09.02.2018
D02	Issue for Planning	RJ	14.02.2018
D03	Planning Substitution	RJ	11.04.2019
D04	Updated for Planning	GP	26.04.2019
D05	Updated for Planning	CL	24.09.2019

rev	details	by	date

Notes

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Project title
STAG BREWERY

Drawing title
School Rendered Masterplan (Interim)

Drawing number
P10736-00-001-130

Drawing Status: DESIGN
Revision: D05

Date	Scale	Drawn	Checked
02.02.18	1:500 @ A1	RJ	RC

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LEGEND

GENERAL

- Site Planning Application Boundary
- School Planning Application Boundary

PAVING

- Paving Type 1 — Stone slabs for footpath
- Paving Type 2 — Stone paving for shared surface
- Paving Type 5 — Stone flag paving for plazas and entrances
- Paving Type 8 — Resin bound gravel
- Paving Type 9 — Artificial stone flag paving
- Paving Type 10 — School road asphalt paving with 300mm granite kerb
- Paving Type 11 — Macadam MUGA surfacing Colour dark green
- Paving Type 12 — 3G artificial grass
- Paving Type 13 — Rubber surfacing
- Paving Type 14 — Macadam surfacing Colour light green

STRUCTURES

- Fence Type 1 — 1.2m high fence for school
- Fence Type 2 — 3.0m high fence for school
- Fence Tvpe 3 — 4.5m high twin bar super rebound fence for school
- Gate Type 1 — Double door gate for school

FURNITURE

- Seat Type 1 — Concrete bench
- Cycle Stand Type 1 — Sheffield cycle hoop - galvanised steel
- Two Tier Cycle Shelter — 20 space per module
- Retaining Wall — Retaining wall with fence
- Tree Surround Type 1 — Resin bound gravel

PLANTING

- Short Mown Grass
- Planting Mix — Mixed perennial and evergreen planting
- Hedge Type 1 — 1.5m high hedge
- Hedge Type 2 — 1m high hedge
- Existing Hedge
- Meadow Planting — Mixed meadow planting
- Existing Trees to be Retained — Protected During all works
- Proposed Trees

LIGHTING

- Lighting Column — To lighting designer's details
- Lighting Column — To lighting designer's details
- Sports Lighting Column — To lighting designer's details
- Sports Lighting Column — To lighting designer's details

rev	details	by	date
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D02	Issue for Planning	RJ	14.02.2019
D03	Design Update	RJ	13.03.2019
D04	Updated for Planning	GP	26.04.2019
D05	Updated for Planning	CL	23.09.2019

rev	details	by	date

Notes

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Project title
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Drawing title
School Rendered Masterplan (Final)

Drawing number
P10736-00-001-131

Drawing Status
DESIGN

Revision
D05

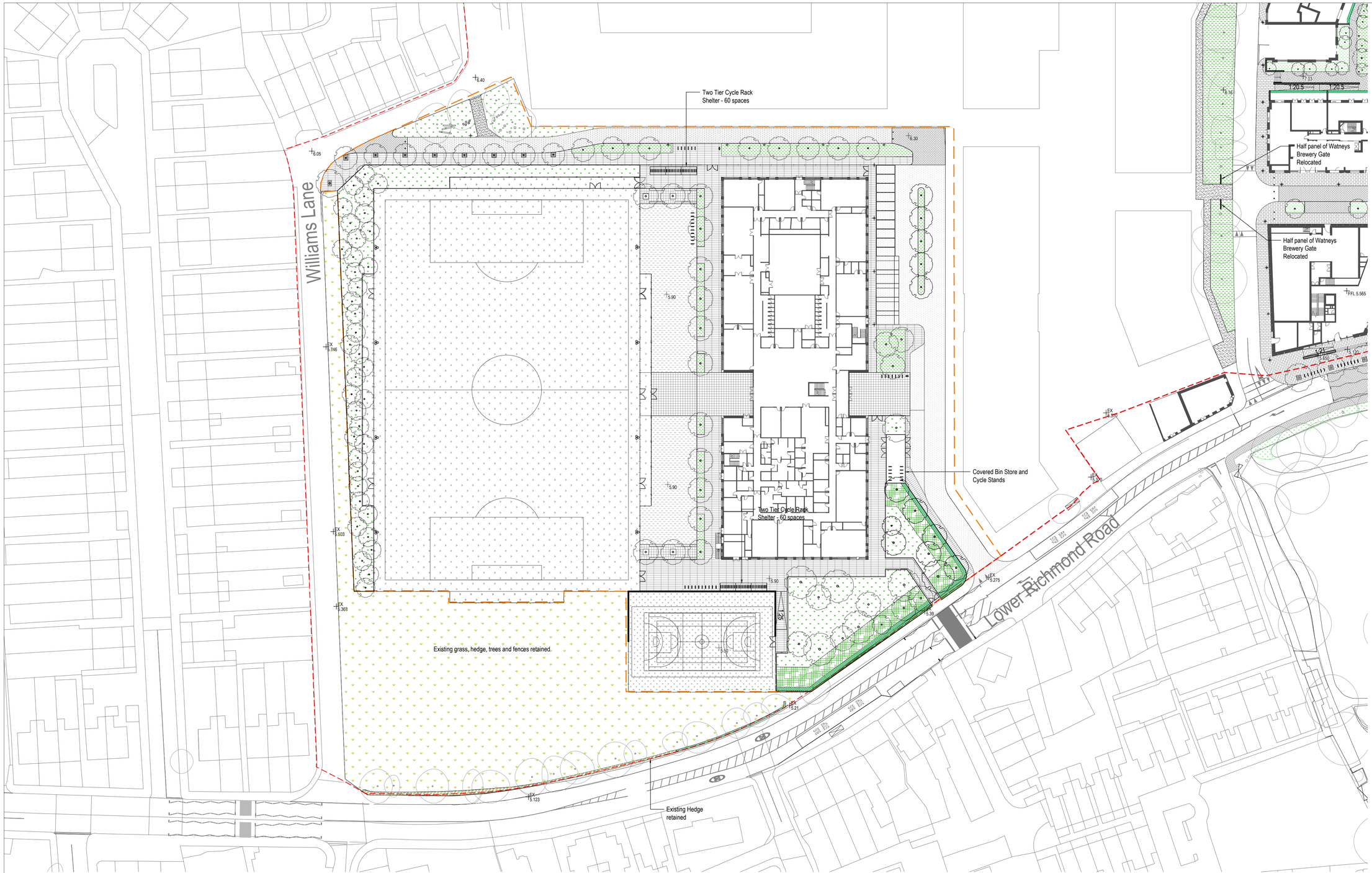
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LEGEND

GENERAL

- Site Planning Application Boundary
- School Planning Application Boundary
- Existing Surface Level
- Proposed Surface Level
- Top of Wall Level
- Finished Floor Level (Internal)

PAVING

- Paving Type 1 — Stone sidba for footpath
- Paving Type 2 — Stone paving for shared surface
- Paving Type 5 — Stone flag paving for plazas and entrances
- Paving Type 8 — Resin bound gravel
- Paving Type 9 — Artificial stone flag paving
- Paving Type 10 — School road asphalt paving with 300mm granite kerb
- Paving Type 11 — Porous Macadam MUGA surfacing
- Paving Type 12 — 3G artificial grass
- Paving Type 14 — Macadam surfacing Colour light green

STRUCTURES

- Fence Type 1 — 1.2m high fence for school
- Fence Type 2 — 3.0m high fence for school
- Fence Type 3 — 4.5m high twin bar super rebound fence for school
- Gate Type 1 — Double door gate for school

FURNITURE

- Seat Type 1 — Concrete bench
- Cycle Stand Type 1 — Sheffield cycle hoop - galvanised steel
- Two Tier Cycle Shelter — 20 space per module
- Retaining Wall — Retaining wall with fence
- Tree Surround Type 1 — Resin bound gravel

PLANTING

- Short Mown Grass
- Existing Grass
- Planting Mix — Mixed perennial and evergreen planting
- Hedge Type 1 — 1.5m high hedge
- Hedge Type 2 — 1m high hedge
- Existing Hedge — Maintained
- Meadow Planting — Mixed meadow planting
- Existing Trees to be Retained — Protected during all works
- Proposed Trees

LIGHTING

- Lighting Column — To lighting designer's details
- Lighting Column — To lighting designer's details
- Sports Lighting Column — To lighting designer's details
- Sports Lighting Column — To lighting designer's details

01 SCHOOL INTERIM DESIGN - PLAN

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D01	Issue for Information	RJ	17.01.2018
D02	Issue for Planning	RJ	09.02.2018
D03	Issue for Planning	RJ	13.02.2018
D04	Updated for Planning	RJ	19.03.2019
D05	Updated for Planning	GP	26.04.2019
D06	Updated for Planning	CL	24.09.2019
D07	Updated for Planning	RM	30.09.2019

rev	details	by	date

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Drawing title
School Landscape GA Plan (Interim)

Drawing number
P10736-00-001-132

Drawing Status: DESIGN
Revision: D07

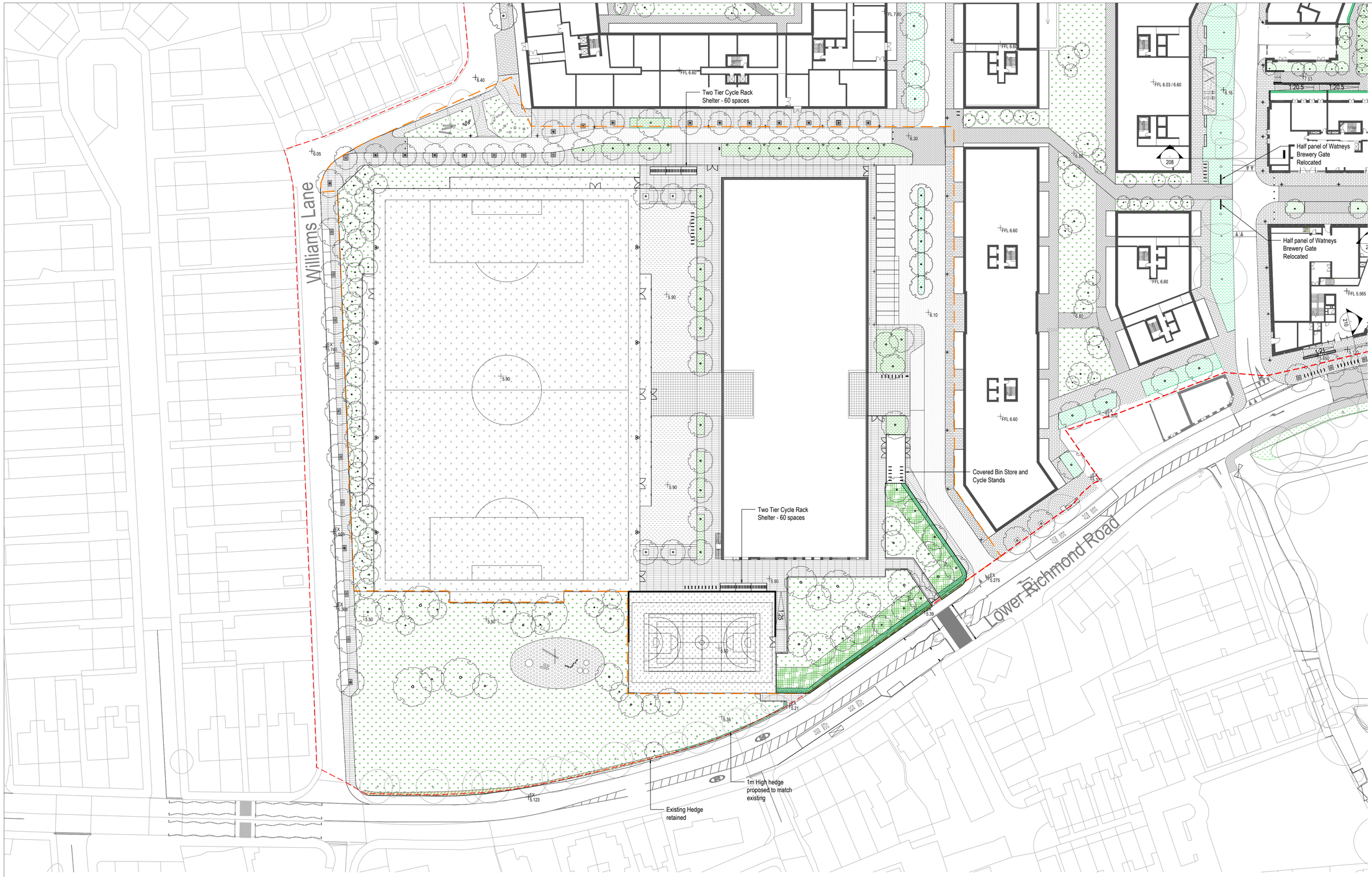
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LEGEND

GENERAL

- Site Planning Application Boundary
- School Planning Application Boundary
- Existing Surface Level
- Proposed Surface Level
- Top of Wall Level
- Finished Floor Level (Internal)

PAVING

- Paving Type 1 — Stone slabs for footpath
- Paving Type 2 — Stone paving for shared surface
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- Paving Type 8 — Resin bound gravel
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- Paving Type 10 — School road asphalt paving with 300mm granite kerb
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- Paving Type 12 — 3G artificial grass
- Paving Type 13 — Rubber surfacing for playground
- Paving Type 14 — Macadam surfacing, Colour light green

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- Lighting Column — To lighting designer's details
- Sports Lighting Column — To lighting designer's details
- Sports Lighting Column — To lighting designer's details

01 SCHOOL FINAL DESIGN - PLAN

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D01	Issue for Planning	RJ	02.02.2018
D02	Issue for Planning	RJ	09.02.2018
D03	Issue for Planning	RJ	14.02.2018
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D05	Planning Substitution	GP	26.04.2019
D06	Planning Substitution	YA	13.09.2019
D07	Planning Substitution	CL	23.09.2019

rev	details	by	date
D08	Planning Substitution	RM	30.09.2019

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Drawing title
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Drawing number
P10736-00-001-133

Drawing Status: DESIGN
Revision: D08

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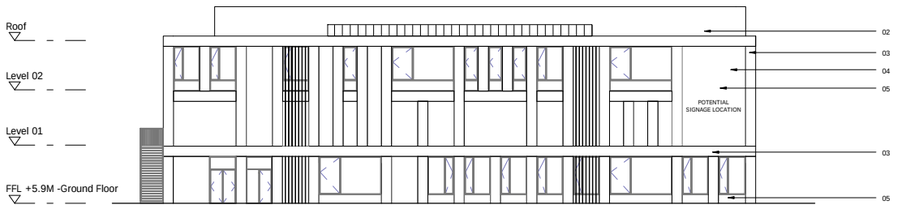
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Appendix B

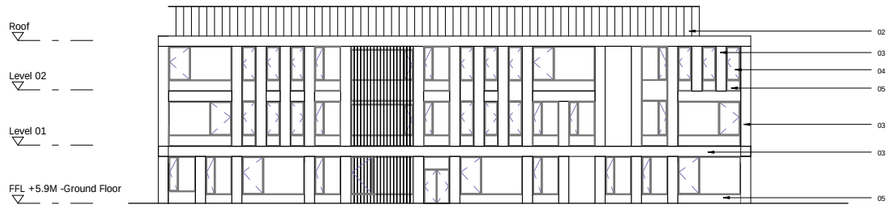
Appendix 6



2 PROPOSED EAST ELEVATION
1 : 200



3 PROPOSED SOUTH ELEVATION
1 : 200



4 PROPOSED NORTH ELEVATION
1 : 200



1 PROPOSED WEST ELEVATION
1 : 200

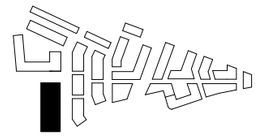
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NORTH



MATERIALS KEY

01. PPC METAL FLASHING
02. PPC METAL CLADDING
03. BRICK WALL/PIER
04. CLEAR GLAZING WITH PPC ALUMINIUM FRAME
05. PPC METAL SPANDREL PANEL
06. CONTRASTING BRICK TEXTURE TO PIERS AROUND ENTRANCE

Revision description	Date	Check	Rev
PLANNING SUBSTITUTION DRAWINGS	01/03/19	EmK	A
PLANNING APPLICATION	12/02/18	BJ	-

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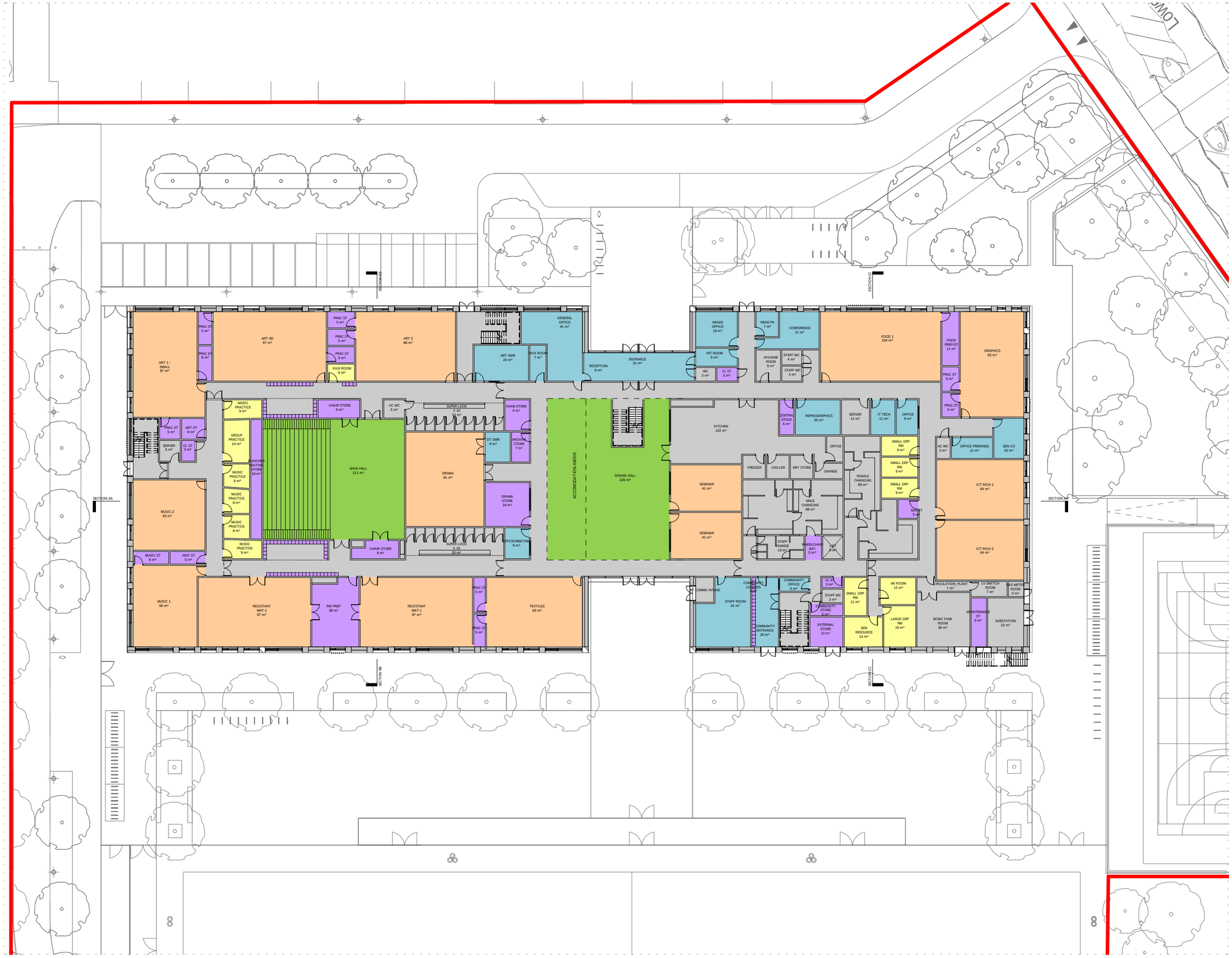
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Project
Stag Brewery
Richmond

Drawing
Z3 SCHOOL - PROPOSED ELEVATIONS

Drawn	Date	Scale
NRH	01/17/18	1 : 200 @ A1 1 : 400 @ A3

Job Number	Drawing number	Revision
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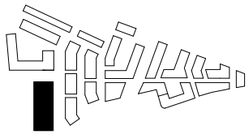


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NORTH



- BASIC TEACHING AREA
- LARGE SPACE
- LEARNING RESOURCE AREA
- NON-NET AREA
- STAFF AND ADMINISTRATION AREA
- STORAGE

Revision description	Date	Check	Rev
PLANNING SUBSTITUTION DRAWINGS	01/03/19	EmK	A
PLANNING APPLICATION	12/02/18	BJ	-

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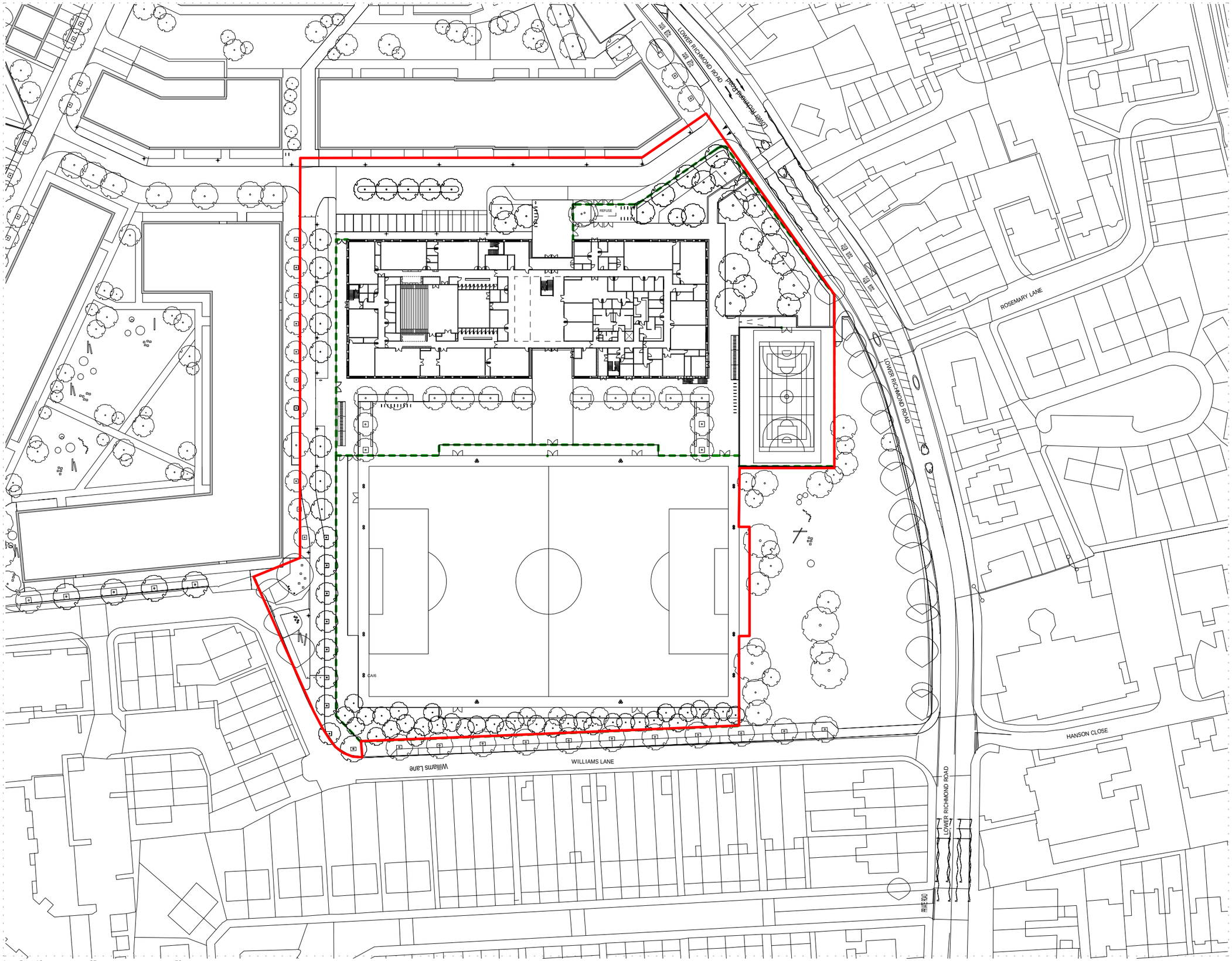
Stag Brewery
Richmond

Drawing

Z3 SCHOOL - PROPOSED GROUND FLOOR PLAN

Drawn	Date	Scale
RKL	01/17/18	1 : 200 @ A1 1 : 400 @ A3

Job Number	Drawing number	Revision
16019	C645_Z3_P_00_001	A



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NORTH

SCHOOL APPLICATION BOUNDARY

SCHOOL FENCE LINES

Revision description	Date	Check	Rev
PLANNING SUBSTITUTION DRAWINGS	01/03/19	EmK	A
PLANNING APPLICATION	12/02/18	BJ	-

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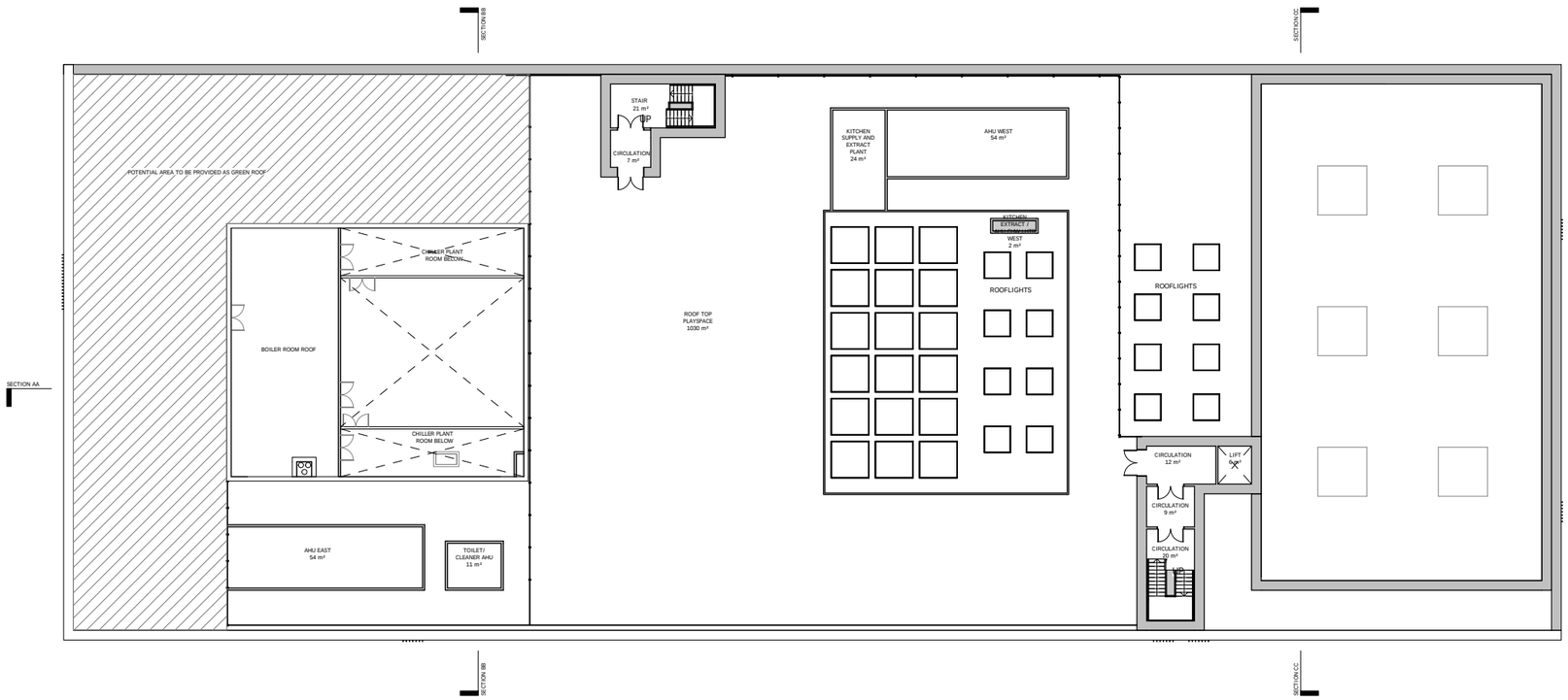
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Richmond

Drawing

Z3 SCHOOL -PROPOSED SITE PLAN

Drawn	Date	Scale
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Job Number	Drawing number	Revision
16019	C645_Z3_P_AL_001	A



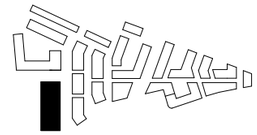
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Z3 SCHOOL - PROPOSED ROOF PLAN

Drawn	Date	Scale
RKL	01/17/18	1 : 200 @ A1 1 : 400 @ A3

Job Number	Drawing number	Revision
16019	C645_Z3_P_RF_001	A

Appendix B

Appendix 7

BRIEFING PAPER – CONFIDENTIAL

PROJECT:	**Reselton Properties Limited – Stag Brewery**
SUBJECT:	**Sport and Leisure Facilities within Proposed Development**
DATE:	**April 2019**
VERSION:	**5.0**

1. Introduction

1.1 This Sport and Leisure Facilities Briefing Paper has been prepared by The Sport, Leisure and Culture Consultancy on behalf of Reselton Properties Limited ('the Applicant') in support of three linked planning applications for the comprehensive redevelopment of the former Stag Brewery Site in Mortlake ('the Site') within the London Borough of Richmond Upon Thames ('LBRuT').

1.2 The former Stag Brewery Site is bounded by Lower Richmond Road to the south, the river Thames and the Thames Bank to the north, Williams Lane to the east and Bulls Alley (off Mortlake High Street) to the west. The Site is bisected by Ship Lane. The Site currently comprises a mixture of large scale industrial brewing structures, large areas of hardstanding and playing fields.

1.3 The redevelopment will provide homes (including affordable homes), a Care Village for an older population, complementary commercial uses, community facilities, a new secondary school alongside new open and green spaces throughout. Associated highway improvements are also proposed, which include works at Chalkers Corner junction.

1.4 The three planning applications are as follows:

- Application A – hybrid planning application for comprehensive mixed use redevelopment of the former Stag Brewery site consisting of:
  - i. Land to the east of Ship Lane applied for in detail (referred to as 'Development Area 1' throughout); and
  - ii. Land to the west of Ship Lane (excluding the school) applied for in outline detail (referred to as 'Development Area 2' throughout).
- Application B – detailed planning application for the school (on land to the west of Ship Lane).
- Application C – detailed planning application for highways and landscape works at Chalkers Corner.

1.5 Full details and scope of all three planning applications are described in the submitted Planning Statement, prepared by Gerald Eve LLP.

1.6 This report addresses the loss of 2 youth 11v11 football pitches / 1 cricket pitch on the existing Site, and the need for and impact of the community sport and leisure provision included as part of the Application B.

2. Sport and Leisure Provision – Application B

2.1 The Application positions the school building in the eastern side of the existing playing field land.

2.2 A floodlit 3G football pitch (64m x 100m) with a total area (including run off) of 7,420m^2 is included west of the school building on the portion of the site bordering with Williams Lane.

2.3 The school building includes a 4-court sports hall designed to meet Sport England specifications (34.5m x 20m x 7.5m) and an activity hall / studio (10m x 15m).

2.4 A multi-use games area (26.5m x 36.3m) is included to the south of the school.

2.5 The school building also includes the following changing room provision:

- Male changing room – 68m^2
- Female changing room – 69m^2
- Staff changing room – 13m^2.

2.6 The southern portion of the existing playing field land south of the 3G football pitch is comprised of a Community Park bordering with Lower Richmond Road.

Figure 1: Site plan for relevant portion of site

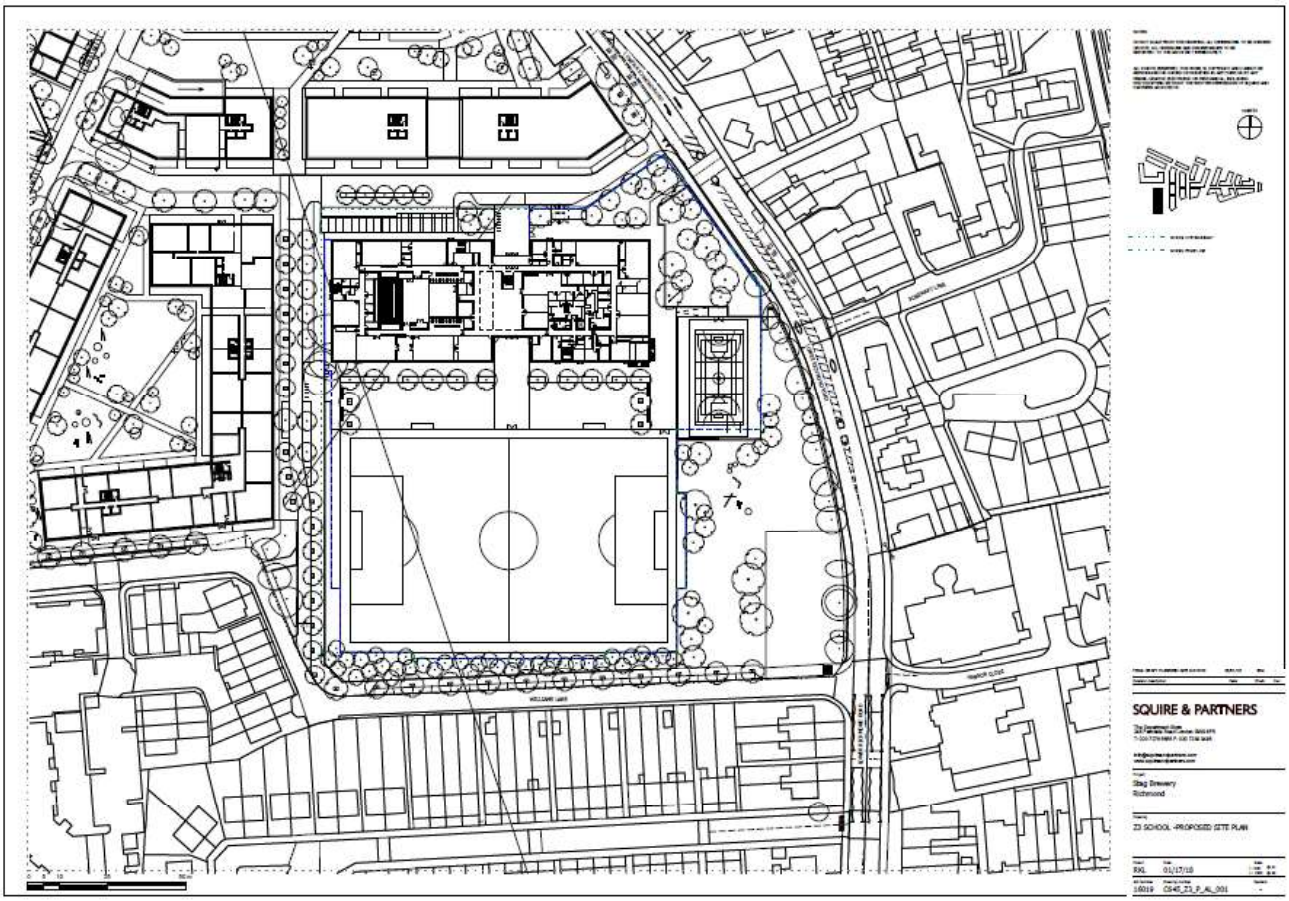


Figure 2: Proposed School Ground Floor Plan



Figure 3: Proposed School First Floor Plan



3. Meeting the Requirements of Sport England Policy Exception E5

3.1 In respect of the loss of playing field land, the loss of existing sports facilities and pitches can be considered acceptable from a policy perspective if the conditions of at least one of Sport England's policy exceptions can be met.

3.2 The 2015 Playing Pitch Strategy for LBRuT found there to be a shortfall of youth 11v11 pitches in the borough of 1 match equivalent session in 2015, increasing to 14 match equivalent sessions in 2025. In the Richmond Analysis Area into which the site falls, supply and demand for 11v11 youth pitches is in balance currently, but there will be a shortfall of 6 match equivalent sessions in 2025.

3.3 There is also a current shortfall of Adult football pitches and mini pitches (7v7) and a projected future shortfall for all football pitch types with the exception of mini pitches (5v5) in 2025 in the Richmond Analysis Area.

3.4 The existing football pitches on the Site were not assessed as part of the 2015 Playing Pitch Strategy and not included in the calculation above. However, assuming the pitches are of

standard quality, each pitch will have a total capacity of 2 match equivalent sessions per week (4 match equivalent sessions per week in total).

3.5 If the pitches are of good quality the total capacity would increase to 3 match equivalent sessions per week per pitch – 6 match equivalent sessions in total.

3.6 The playing fields are not currently used as a cricket pitch, but there is a suggestion that they may have historically been used for cricket in the summer months. LBRuT's Playing Pitch Strategy did not include the Site in its consideration of the existing cricket supply. The Strategy however, found that the current number of cricket squares in the borough can accommodate demand, and that there is spare capacity of 2 pitches in the Richmond Analysis area into which the site falls.

3.7 Although they were not included in the Playing Pitch Strategy calculations and therefore their loss would most likely not exacerbate the existing shortfalls, their loss cannot be justified on the basis that the pitches are surplus to requirements based on the current and future supply and demand balance for football pitches (Policy Exception E1).

3.8 Sport England's Policy Exception E5, however, would be applicable in the context of the revised proposal set out above if it can be demonstrated that the development of indoor and / or outdoor sports facilities as part of the proposal would be of sufficient sporting benefit to outweigh the detriment caused by the loss of the playing fields resulting from the development.

3.9 In order to understand and demonstrate if this is the case, it is necessary to establish:

- What is the current use and what benefits are derived from that use?
- What is the proposed use?
- What sport-related benefits would be derived from the proposed use and how does this compare with the current use?
- What role will the proposed development have in addressing existing deficiencies?

Current Use

3.10 The playing field land at the Site currently includes two grass 11v11 youth football pitches with no floodlighting.

3.11 The football pitches are currently in use by Barnes Eagles FC for their U13 to U16 teams. The Club's primary site is Barn Elms Sports Centre, and it only uses the pitches at the Site for 4 matches per week and occasional training during the football season.

3.12 The pitches are also used by Thomson House School for sports and games once a week on Tuesdays during term time, and once a year by St Mary Magdalen Catholic Primary School for their annual sports day.

3.13 Although the playing field land is described in the Adopted Planning Brief (2011) as consisting of 2 football pitches and 1 cricket pitch, the land has not been used as a cricket pitch for many years.

3.14 The total estimated current use of the playing field land in terms of annual participants is summarised in Table 1.

Table 1: Estimated Current Use of Playing Field Land - Annual participants

Use	Estimated Total Participants Per Annum	Assumptions
Thomson School	1,950	Once a week – c. 50 pupils per session
Barnes Eagles FC – Matches	4,200	2 matches per week per pitch during 35-week football season – c. 30 participants (11v11 plus substitutes)
Barnes Eagles FC – Training	1,050	Occasional training during 35-week football season (2 sessions per week – 15 participants per session)
St Mary Magdalen School	250	Annual sports day – whole school
Total	**7,450**	

3.15 Given the limited carrying capacity of grass playing pitches, there is little or no scope to increase the number of participants within the current configuration. Significant additional use would have a detrimental impact on the quality and playability of the pitches.

3.16 It is conceivable that if the condition of the pitches is 'good' rather than 'standard' they would each have a carrying capacity of 3 matches per week which would increase the total annual participants by c. 2,100 to c. 9,550, but this would be the maximum threshold of users that can currently be achieved.

Proposed Use

3.17 The Application includes the following in terms of sports facilities:

- 3G youth football pitch (64m x 100m) with floodlights (120lux or 200lux)
- 4 court sports hall meeting Sport England specifications (34.5m x 20m x 7.5m)
- Activity hall / studio (150m^2)
- Multi-use games area (26.5m x 36.3m)
- Changing provision including male, female and staff change.

3.18 Table 2 shows an estimate of the potential capacity of the sports facilities included in the proposal in terms of participants per annum using the following assumptions:

- 3G pitch benefits from floodlighting
- Facilities are available for community use from 5pm to 9pm on weekdays during term time (39 weeks per annum).
- Facilities would primarily be used for after-school activities between 4pm and 5pm on weekdays during term time. Community use between the hours of 4pm and 5pm on weekdays during term time will be at the discretion of the school
- Facilities are available for community use from 9am to 9pm on weekdays outside of term time (11 weeks per annum)
- Facilities are available for community use from 9am to 9pm on Saturdays
- Facilities are available for community use from 9am to 8pm on Sundays and Public / Bank Holidays

- MUGA does not benefit from floodlighting
- MUGA is available for community use during daylight hours from 5pm to 9pm on weekdays, from 9am to 9pm on Saturdays and from 9am to 8pm on Sundays and Public / Bank Holidays during term time (39 weeks per annum) – an average of c. 28 hours per week across the year
- MUGA is available for community use during daylight hours from 9am to 9pm Monday to Saturday and from 9am to 8pm on Sundays and Public / Bank Holidays outside of term time (11 weeks per annum) – an average of c. 67 hours per week across the year
- All community use sessions are hourly with the exception of the 3G pitch where 2-hour match equivalent sessions have been used, albeit it is common practice for 3G pitches to be hired on an hourly basis
- All students at the secondary school (1,500 pupil capacity) use at least one of the sports facilities on site at least once a week during term time.

3.19 Table 3 also shows the potential capacity of the facilities if the opening hours were extended to a 10pm closure on weekdays and weekends.

3.20 It should be noted that the availability of the facilities for community use outside of school hours would not preclude the secondary school from reserving the use of the facilities during these times for extra-curricular activities. Usage by the school between the hours of 4pm to 9pm or 10pm on weekdays during term time has not been distinguished from usage by the community in the estimated capacity calculations in Tables 2 and 3.

Table 2: Estimated capacity of Application B Sports Facilities - Users per annum. Earlier closing times

Facility	Estimated number of users per session	Term Time capacity	Non-Term Time capacity	Total
Opening Hours	**Weekdays (Term Time): 4pm – 9pm** **Weekdays (Non-Term Time): 9am – 9pm** **Saturdays: 9am – 9pm** **Sundays and Public / Bank Holidays: 9am – 8pm**			
3G Youth Football Pitch	22	20,592	10,043	**30,635**
4 Court Sports Hall	10	18,720	9,130	**27,850**
Activity Hall / Studio	20	37,440	18,260	**55,700**
MUGA	10	12,480	7,392	**19,872**
Total Use outside of School Hours	**n/a**	**89,232**	**45,793**	**134,057**
School Use	n/a	58,500	n/a	**58,500**
Total Use	**n/a**	**147,732**	**45,793**	**192,557**

Table 3: Estimated capacity of Application B Sports Facilities - Users per annum. Later closing times

Facility	Estimated number of users per session	Term Time capacity	Non-Term Time capacity	Total
Opening Hours	**Weekdays (Term Time): 4pm – 10pm** **Weekdays (Non-Term Time): 9am – 10pm** **Weekends: 9am – 10pm**			
3G Youth Football Pitch	22	24,024	11,011	**35,035**
4 Court Sports Hall	10	21,840	10,010	**31,850**
Activity Hall / Studio	20	43,680	20,020	**63,700**
MUGA	10	12,480	7,392	**19,872**
Total Use outside of School Hours	**n/a**	**102,024**	**48,433**	**150,457**
School Use	n/a	58,500	n/a	**58,500**
Total Use	**n/a**	**160,524**	**48,433**	**208,957**

3.21 Table 2 shows that the sports facilities included in the Application could accommodate up to **192,557** attendances per annum. The capacity may even be slightly higher as school use would most likely be more frequent that 1 use per student per week. If longer opening hours were to be put in place, this potential capacity would increase to **208,957** attendances per annum.

3.22 It should be noted that these calculations show capacity rather than projected use and include some school usage, including after-school sessions between the hours of 4pm and 5pm on weekdays during term time The facilities would be unlikely to experience full occupancy levels, but in an area of high demand it would be reasonable to expect occupancy levels of c. 65% of community use hours for the MUGA, c. 75% of community use hours for the studio and sports hall and c. 80% of community use hours for the 3G pitch.

Table 4 and Table 5 show the capacity of the facilities if only community use is considered. The same assumptions as provided in 3.18 and 3.19 have been applied but only capacity during the community use hours shown has been considered.

3.23 Table 4 is based on a 9pm closure on Monday – Saturday and 8pm on Sundays, whilst Table 5 shows the capacity if opening hours were extended until 10pm.

Table 4: Estimated Community Use capacity of Application B Sports Facilities - Users per annum. Earlier closing times

Facility	Estimated number of users per session	Term Time capacity	Non-Term Time capacity	Total
Community Use Hours	**Weekdays (Term Time): 5pm – 9pm** **Weekdays (Non-Term Time): 9am – 9pm** **Saturdays: 9am – 9pm** **Sundays and Public / Bank Holidays: 9am – 8pm**			
3G Youth Football Pitch	22	18,447	10,043	**28,490**
4 Court Sports Hall	10	16,770	9,130	**25,900**
Activity Hall / Studio	20	33,540	18,260	**51,800**
MUGA	10	10,920	7,392	**18,312**
Total Community Use	**n/a**	**79,677**	**44,825**	**124,502**

Table 5: Estimated capacity of Application B Sports Facilities - Users per annum. Later closing times

Facility	Estimated number of users per session	Term Time capacity	Non-Term Time capacity	Total
Community Use Hours	**Weekdays (Term Time): 5pm – 10pm** **Weekdays (Non-Term Time): 9am – 10pm** **Weekends: 9am – 10pm**			
3G Youth Football Pitch	22	19,734	11,011	**30,745**
4 Court Sports Hall	10	17,940	10,010	**27,950**
Activity Hall / Studio	20	35,880	20,020	**55,900**
MUGA	10	10.920	7,392	**18,312**
Total Community Use	**n/a**	**84,474**	**48,433**	**132,907**

3.24 Table 4 shows that the sports facilities included in the Application could accommodate significant community use of up to **124,502** attendances per annum. The capacity may even be slightly higher as additional community use could be accommodated between 4pm and 5pm on weekdays during term time at the school's discretion. If longer opening hours were to be put in place, this potential capacity would increase to **132,907** attendances per annum, as shown in Table 5.

3.25 Two options for floodlighting of the 3G pitch have been tested and are acceptable. The applicant's preference is to proceed with 120lux at this stage. This level of lighting would still be suitable for evening use for training purposes and for matches at lower levels of competition. This should not materially affect overall potential capacity levels of the pitch in terms of users as the majority of evening use at a community facility would be for training purposes rather than competitive matches.

Sport-related benefits

3.26 There are number of sport-related benefits associated with the development of the sports facilities included in the Application.

3.27 The most significant sport-related benefit associated with the Application is the increased user-capacity of the new facilities compared with those currently in place. There is capacity for up to an additional **183,007** users per annum if the 3G pitch has the benefit of floodlighting to facilitate evening use – an increase of **1,916%**. This would increase to up to an additional **199,407** users per annum (**2,088%**) with longer opening hours.

3.28 This includes an additional community-use capacity of up to 124,502 users per annum or 132,907 users with longer opening hours.

3.29 The proposal also has the benefit of providing facilities for a significantly increased range of sports, including:

- 3G football pitch
  - Football – 11v11, 7v7, 5v5 and training
  - Rugby training
- 4 court sports hall
  - Badminton
  - Gymnastics
  - Futsal
  - Fencing
  - Table tennis
  - Indoor football (5v5)
  - Volleyball
  - Handball
  - Indoor Basketball
  - Indoor Netball
  - Indoor cricket nets
- Activity Hall / Studio

- Dance
- Yoga / Pilates
- Aerobic / Fitness / Exercise classes

- MUGA
  - Outdoor Basketball
  - Outdoor Netball
  - Tennis.

3.30 The proposed range of indoor facilities and hard-wearing outdoor facilities would be available for year-round use, and their use is not weather dependant as is the case with natural grass pitches.

3.31 The 3G football pitch can still be used for both training and matches but has a far greater carrying capacity than the grass pitches and can be used even in poor weather, significantly decreasing the risk of fixture cancellations. The inclusion of floodlights would also substantially increase the hours of use of the football facilities.

3.32 The users of the facilities will also benefit from significantly improved changing provision as part of the new school facilities compared with the poor quality changing provision that is currently within the pavilion for the existing playing fields.

Addressing Deficiencies

3.33 A number of new facilities are included as part of the Applicant's proposal, the development of which will help to address existing deficiencies in sports provision.

3.34 In relation to 3G AGPs there is a currently shortfall of four full size 3G pitches in LBRuT. The 2015 Playing Pitch Strategy found that there is a recommended need for at least 5 full size 3G pitches, whereas currently there is only one. Specifically, in the Richmond Analysis Area there is a need for three 3G pitches where currently there are none.

3.35 **The development of a 64m x 100m floodlit 3G pitch available for community use on the current playing field site would make a significant contribution towards addressing this deficiency in 3G pitch provision, reducing the shortfall in LBRuT to 3 pitches, and in the Richmond Analysis Area specifically to 2 pitches.**

3.36 The need for a sand-dressed AGP surface suitable for hockey was also considered for the sake of completeness. LBRuT's 2015 Playing Pitch Strategy found that there are 6 AGP's suitable for hockey within LBRuT – 5 of which are suitable for competitive play. There are 4 hockey clubs within LBRuT and in addition, St Mary's University fields 3 senior teams in a mid-week league. Spare capacity has been identified at 2 hockey sites and the Strategy found that existing provision meets current club demand. There is no identified need for additional hockey provision in LBRuT.

3.37 An Indoor Sports Facility Needs Assessment was produced for LBRuT in 2015 which included an assessment of sports hall provision in the borough. This was informed by a Sport England Facilities Planning Model run (2014) which concluded that the level of satisfied demand for sports halls in LBRuT is 90%, meaning that one in ten of the Borough's residents who wish to access a sports hall are unable to do so. This is primarily due to insufficient capacity both inside and outside the borough.

3.38 The Assessment has also found that LBRuT's wide network of voluntary sports clubs and their strong working relationship with the Council's Sport and Fitness service has developed

a strong club base and productive sports development activity which is resulting in strong demand for court space on a regular basis, potentially to the exclusion of pay and play or more casual users.

3.39 Overall, the Assessment concludes that additional court space would be in demand and that the areas most in need of additional provision are in the north and east of the borough, where new facilities currently being proposed elsewhere in the borough will have minimal impact.

3.40 **The development of an additional 4 court sports hall built to meet Sport England Specifications on this site would make a significant contribution towards addressing the deficiency in sports hall provision in the north and east of the borough.**

3.41 **The provision of an additional activity hall will also add to the flexibility of the sports facilities overall allowing the 4 court hall to accommodate team sports activities, whilst the activity hall can accommodate users with lesser space requirements.**

3.42 Multi-use games areas (MUGAs) were not included for consideration in either the Playing Pitch Strategy or Indoor Sports Facility Needs Assessment produced for LBRuT in 2015. They were, however, included in the Borough's Sport, Open Space and Recreation Needs Assessment updated in March 2008.

3.43 This Needs Assessment found that most facilities were located in the West of the Borough and there is some evidence of unmet demand in the Ham and Petersham, East Twickenham / Richmond / Kew and Barnes areas.

3.44 The Assessment also found there were high levels of use of floodlit netball facilities with clear evidence of unmet demand which would most likely continue to rise due to an increasing younger population and the Council's promotion of youth sports participation. Lack of floodlighting and of suitable ancillary facilities were also raised as key issues.

3.45 Although this assessment has not been updated as part of the 2015 sports facility assessments, it would be fair to assume that, unless significant additional provision has been developed in the last 10 years, the borough is deficient in MUGA provision, particularly floodlit provision with access to ancillary facilities.

3.46 **The development of additional MUGA provision on this site would help to address this ongoing deficiency in MUGA, and specifically netball, provision in the borough. The MUGA would also be serviced by ancillary facilities through the school.**

3.47 Consultation has been undertaken with a number of National Governing Bodies (NGBs) for a range of indoor sports. The following NGBs confirmed that they would support the development of additional sports hall space in this area of the borough given the lack of local provision and difficulties experienced by local clubs in securing access to sports hall facilities, particularly at peak times:

- Badminton England
- British Fencing
- British Gymnastics
- England Handball
- England Netball
- London Volleyball Association.

3.48 Letters / emails form the above organisations confirming their support have been provided in Appendix A.

3.49 The development proposals include a total of 667 additional residential units. Based on LBRuT's average number of persons per household (2.34) this equates to approximately 1,560 additional residents. Using Sport England's Sports Facilities Calculator, this can be used to estimate the demand for additional sports facilities which will be generate by this increase.

3.50 This will create demand for an additional 0.44 badminton courts and 0.05 artificial grass pitches.

Summary

3.51 Table 6 provides a summary of the key features of the Application with specific reference to the requirements of Sport England's Policy Exception E5 – *"The proposed development is for an indoor / outdoor sports facility of sufficient benefit to outweigh the detriment caused by the loss of the playing field."*

Table 6: Summary of Key Features of Application with regard to SE Policy Exception E5

	Key Features
Proposed vs Current Use	Capacity to accommodate total of c. 193k uses per annum – including c.125k community use visits Increase of c. 183k uses (1,916%) compared with current use Could increase to 208k visits per annum (increase of 199k – 2,088%) with extended opening hours. This would include c. 133k community use visits
Sports -Related Benefits	Increased capacity in terms of users per annum Significantly increased range of sports accommodated Indoor and hard-wearing facilities available for year-round and poor weather use 3G pitch accommodates training and matches and has significantly increased carrying capacity. Full size pitch provision means matches can be played and current users can be accommodated Improved changing and ancillary provision
Addressing Deficiencies	3G pitch deficiency – 1 full size pitch Sports hall deficiency – 4 court sports hall and activity hall MUGA deficiency – 1 basketball court size
Other Benefits	Community park provision Better urban design – enclosing open space.

4. Proposed Community Use

4.1 The sport and leisure provision included as part of the Secondary School development in Application B is all proposed for use by the school, and the wider community outside of the school's core hours of use.

4.2 Community use of the sports hall, activity hall, MUGA and 3G pitch would be secured through a Community Use Agreement between the School and the Council as well as other

relevant parties as applicable (e.g. Landowner, Local Education Partnership, Barnes Eagles FC etc.).

4.3 This would secure management, access and pricing arrangements for use of the facilities by the community. A draft version of this community use agreement, to be further developed, finalised and agreed between the relevant parties has been included Appendix B of this document.

4.4 The draft community use agreement includes provision for arrangements to be made between a Management Committee and Partner Club. This would allow a Partner Club to secure preferential access to the facilities at a discounted rate.

4.5 A number of clubs have expressed an interest in using this facility to supplement their existing arrangements, particularly for training purposes. The Applicant has made sustained efforts throughout the process to engage Barnes Eagles FC as the incumbent club, and preferential access to the facilities has been offered. The Applicant awaits the commitment of Barnes Eagles to this arrangement and is willing to engage further with them as required.

5. Accommodating Existing Use

5.1 The primary use of the existing playing fields is for football matches and occasional weekday evening training for the U13-U16 teams of Barnes Eagles FC.

5.2 Given the existing shortfall of grass football pitches locally, there are limited alternative locations for this existing use.

5.3 The Application allows for the possibility of some or all of this current activity continuing on the redeveloped site, as the 64m x 100m floodlit 3G pitch would have the capacity to accommodate the c. 4 matches per week that currently take place on the site as well as occasional training.

5.4 Preferential access to the 3G pitch at a community rate comparable with similar local provision can be secured for Barnes Eagles FC through a Community Use Agreement with the School as set out above.

5.5 Other grass pitch provision in the area has also been explored at a high level using available information from the 2015 Playing Pitch Strategy. It is understood that these findings are being updated in early 2018, but neither the draft findings of this update have not been made available to the Applicant by the Council or the FA. Grass pitch provision in the area which could provide an alternative or additional venue for Barnes Eagles is summarised below based on the information available to the Applicant.

5.6 **Barn Elms Playing Fields** is the primary site currently in use by Barnes Eagles FC. The Playing Pitch Strategy (2015) found that their football pitches are currently overplayed but that the quality and maintenance of the existing provision appears to be able to absorb the existing level of overplay. Therefore, there may be scope to further increase the carrying capacity of this high quality provision with further investment in drainage and maintenance improvements.

5.7 **Old Deer Park** has 2 adult football pitches with spare capacity identified by the Playing Pitch Strategy. The site is c.1.2 miles from the current site and could provide an alternative venue for Barnes Eagles FC. The Strategy identifies that opportunities to improve the changing provision should be explored. *This is a potential alternative site for Barnes Eagles FC given its relative proximity and that there is spare capacity identified.*

5.8 **Palewell Common** currently has 3 x adult, 1 x 9v9 and 4 x 7v7 good quality football pitches with identified spare capacity. This site is c. 1.4 miles from the current site and could provide

an alternative venue for Barnes Eagles FC, albeit this would be subject to the agreement of the incumbent club (Sheen Lions FC) or facility operator and agreement on fixture scheduling etc. *This is a possible alternative site for Barnes Eagles FC given its relative proximity and that there is spare capacity identified, albeit the presence of an incumbent club may raise practical difficulties.*

5.9 **Sheen Common** currently has a standard adult pitch which is available but is not in use. This site is c. 1.3 miles from the current site and could provide an alternative venue for at least some of the 4 match equivalent sessions currently used at the Stag Brewery site by Barnes Eagles FC. The Playing Pitch Strategy identifies that quality should be improved if possible. *This is a potential alternative site for Barnes Eagles FC.*

6. The University of Westminster Sports Ground and Kings House Sports Ground are located across the river from the current site in the London Borough of Hounslow. Both sites include football pitches available for hire as part of their facility mix. The current level of availability at these facilities is unknown as they were not considered as part of the LBRuT Playing Pitch Strategy, and LB Hounslow does not appear to have an up to date playing pitch strategy. *These are potential alternative sites for Barnes Eagles FC, although their current capacity levels are unknown.* Summary

6.1 There is a shortfall of grass football pitch provision locally, and the loss of the existing playing fields cannot be justified on the basis that they are surplus to requirements. However, the proposal provides substantial sporting benefits which should provide sufficient benefit from a sporting perspective to outweigh the detriment caused by the loss of the existing playing fields.

6.2 This has been demonstrated through the following:

- a comparison between the current and proposed uses which has shown the potential for significantly increased users per annum
- a review of the sports-related benefits the proposal which include more usage, more sports, more year-round use and more flexible facilities
- a review of the deficiencies being addressed by the proposal including 3G pitches, Sports Halls and MUGAs
- other benefits including community park provision.

6.3 The Application proposes that the sport and leisure provision is made available for community use outside of the school's core hours of use and that this use, and potential arrangements with a Partner Club, are secured through a Community Use Agreement. The Applicant has sought to engage with Barnes Eagles FC as the incumbent club and has made an offer of preferential access. The Applicant awaits the club's commitment on this matter.

6.4 Alternative venues for the current users of the playing fields on the site, Barnes Eagles FC, have also been explored at a high level. A review of the site-specific recommendations of the LBRuT Playing Pitch Strategy has shown that there are sites locally that have football pitches with spare capacity.

6.5 In SLC's view, the proposal is of significantly greater sporting benefit to the community than the existing provision and should meet the requirements of Sport England's Policy Exception E5 on this basis.



April 2019

Appendix A – Correspondence with NGBs for Indoor Sports

Badminton England

The Sport, Leisure and Culture Consultancy (SLC)
2nd Floor
3 Boltro Road
Haywards Heath
West Sussex
RH16 1BY

RE: NGB Consultation: Sports Facility Developments at Stag Brewery, Mortlake

Dear Laura

As discussed I am writing in relation to the above proposed sports facility development. This is a facility that we would like to support and engage with in terms of badminton development.

Our own current mapping shows that there is the following within one mile of the proposed development:

AFFILIATED CLUBS

- Feathers Badminton Club

OTHER FACILITIES

- Chiswick School – 5 courts, hosts Feathers Badminton Club
- Shene Sports & Fitness Centre, 4 courts – unaware of badminton provision at this facility
- Bank of England Sports Centre. 6 courts – unaware of badminton provision at this facility

I would therefore suggest that there is still scope for an improved provision by engaging with the development particularly around junior provision in the area – a key part of our Discover Badminton strategy. As a result of this strategy we are seeing increased demand through the schools engagement work especially around Primary age children with our new Racket Pack programme. Hence there is a potential increase in demand on community facilities.

It is therefore an area that has potential for increased growth and we would be hopeful the new proposed facility could help cater for this.

Kind regards

Lee Ward
Senior Relationship Manager, South
leeward@badmintonengland.co.uk

British Fencing

From: Josef Thomas [mailto:josef.thomas@britishfencing.com]
Sent: 16 October 2017 14:20
To: Laura Froshaug <laura@slc.uk.com>
Subject: Re: NGB Consultation: Sports Facility Developments at Rowley Lane, Barnet and Stag Brewery, Mortlake

Hi Laura,

Thanks for sending this through.

British Fencing would be happy to support any additional sports facilitates that would be a suitable size for fencing pistes.

As mentioned on our call, unfortunately we do not have the resource for local level insight as we all have national roles so could not comment on the impact it would have in terms of participation.

The development is also just up the road from our Elite Training Centre which offers a wide range of fencing opportunities within the community and beyond.

Many thanks,

Josef

Josef Thomas | Development Officer - Clubs and Regions (England)
British Fencing, 1 Baron's Gate, 33-35 Rothschild Road, London W4 5HT
M: +44 (0) 7736 451654 T: 020 8742 3032
www.britishfencing.com | Twitter: @Explorefencing

British Gymnastics

Hi Anna,

Thanks for the recent phone call about these projects. I can confirm that British Gymnastics still support the development of these projects as discussed and noted below.

Thanks,

Neil Moulster
Facilities Manager

British Gymnastics
More than a sport

Governing Body of the Year | BT Sport Industry Awards 2016 Winner

T. 0345 1297129
M. 07581064980
W. british-gymnastics.org

Ford Hall, Lilleshall National Sports Centre, Newport, Shropshire, TF10 9NB
Registered in England. Company Limited by Guarantee Registration No. 1630001 VAT No. 100166672

From: Anna Dalton [mailto:anna@slc.uk.com]
Sent: 07 August 2017 15:48
To: Neil Moulster <neil.moulster@british-gymnastics.org>
Subject: Facility Developments - Rowley Lane, Barnet and Stag Brewery, Mortlake

Hi Neil

Thank you for taking the time to discuss the Maccabi Rowley Lane Sports Ground (Barnet) and Stag Brewery (Mortlake) developments this afternoon.

Please find attached the letter of support that Carina Brown sent us in relation to the Rowley Lane development proposals in October 2016. The letter recognises the need for additional sports hall provision in the area and identified a number of local club who could benefit from a new facility in the area.

If you are able to review the attached, and confirm by return that the content of the letter is still applicable, and the continued support of British Gymnastics for the development that would be much appreciated.

In relation to the Stag Brewery development in Mortlake, I understand that the primary concern for British Gymnastics from a facility perspective in London is identifying potential sites for dedicated gymnastics venues, but that additional sports hall provision would increase capacity, particularly for entry level gymnastics in the area.

Gymnastics is facing capacity issues across the country, and a school sports halls with community use agreements will be able to help address this capacity issue through provision of entry level gymnastics, which has limited specific facility or equipment requirements.

British Gymnastics is aware that the Richmond Gymnastics Association is looking for a site for a dedicated facility at the moment, but that this development may have the potential to serve as a satellite facility for this and other local clubs.

Please let me know if you have any questions or further information you can share with us, or if we have misunderstood any of the above.

If you are able to confirm that this is a fair representation of your position, and the in principle support of British Gymnastics for the developments as facilities which will provide increase capacity to meet demand for gymnastics in their local areas, that would be much appreciated.

Kind regards

Anna

Anna Dalton

Senior Consultant

STRATEGY
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M: 07730 565553 T: 01444 459927

www.slc.uk.com

anna@slc.uk.com

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England Handball

Great to speak to you earlier today.

I can confirm that your email below notes our support of the development in its current form for recreational handball, but would be of greater value if there was space for a court 20m in width.

We look forward to hearing further developments when appropriate

Kind regards

Stacey

Stacey Andrews

National Partnerships Manager | Mobile 07794498122 I E-mail Stacey.andrews@englandhandball.com

The Halliwell Jones Stadium, Winwick Road, Warrington WA2 7NE

Website www.englandhandball.com I Twitter @englandhandball I Facebook https://www.facebook.com/englandhandball

Get all your Handball equipment at the EHA shop and know the profits will be reinvested in the sport we love.

From: Anna Dalton [mailto:anna@slc.uk.com]
Sent: 22 August 2017 11:48
To: stacey.andrews@englandhandball.com
Subject: Stag Brewery Development - Mortlake, Richmond

Hi Stacey

Thank you for taking the time to discuss the proposed development of the Stag Brewery site in Mortlake, Richmond with me earlier.

As I understand it, there is a severe shortage of sports halls which can accommodate a court suitable for competitive handball in London. Although there are 15-20 competitive clubs in London, there are only 3 sports halls large enough to accommodate competitive matches, all of which are in East London.

The sports hall proposed as part of this development is not of a sufficient size to accommodate a handball court suitable for competitive matches at present, and as such would only be suitable for recreational handball and / or training.

As always in London, additional sport hall provision is welcome given the overall shortage of facilities, but from a handball perspective, this facility would be of significantly greater value if its width could be increased by c. 2m which would allow it to accommodate a competitive handball court of some description in an area where there is a severe lack of similar facilities.

If you are able to confirm by return that this is the case, and that England Handball would support additional sports hall provision in this area, although a facility with increased width would be of much greater value to you, that would be much appreciated.

Kind regards

Anna

Anna Dalton

Senior Consultant

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M: 07730 565553 T: 01444 459927

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anna@slc.uk.com

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England Netball

Our Ref: Mortlake – Richmond

Sophie Johnson
1-12
Old Park Road
Hitchin
Herts
SG5 2JR

28th August 2017

Dear Anna

PROPOSED NETBALL FACILITY DEVELOPMENT in Richmond

I am writing in support of your application to develop indoor netball courts at the Stag Brewery site in Mortlake. I can confirm that we have been involved with development of the project and are keen to ensure that the new facilities meet the requirements for community level netball activity.

England Netball has an ambition to achieve 10:1:1.

10	Grow participation in the game by an average of 10,000 participants per annum.
1	Deliver a 1st class member and participant service.
1	Establish England Netball as the number 1 team in the world by winning the World Netball Championships.

The new netball courts in Richmond will assist England Netball to achieve growth of netball in the local community. This we hope will ensure sustained use of the venue over the long term by local clubs, England Netball and potentially schools for the following netball programmes and activities:-

- Back to Netball
- Netball in the City
- Junior Clubs

England Netball fully supports the submission of this bid and is committed to ensuring that netball is developed at this new venue. Please let me know the outcome of the bid when it is known and contact me for further information if required.

Yours sincerely,

Sophie Johnson
Netball Development Community Coach

ENGLAND NETBALL
T: 07872407213
Email address Sophie.johnson@englandnetball.co.uk
www.englandnetball.co.uk

London Volleyball Association

Anna,

Yes this is a fair reflection of our discussion.

Charlie Orton
020 7402 6279
Chairman
London Volleyball Association
www.londonvolleyball.org.uk

On 22/08/2017 14:44, Anna Dalton wrote:

Charlie

Thank you for taking the time today to discuss the proposed development at the Stag Brewery site in Mortlake, Richmond.

As discussed, there is insufficient sports hall provision in the area in general. There are two major volleyball clubs operating in the area, Richmond Volleyball Club and IBB Polonia. The proposed sports hall is of insufficient size to meet their requirements - IBB Polonia, for example, currently uses an 8 court hall in Brentford Fountain Leisure Centre and attracts c. 150-400 people to matches. The sports hall, however, would be sufficient to accommodate training or junior level volleyball.

If you are able to confirm that this is a fair reflection of what was discussed with regard to this development proposal by return that would be much appreciated.

Regards

Anna

Anna Dalton

Senior Consultant

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M: 07730 565553 T: 01444 459927

www.slc.uk.com

anna@slc.uk.com

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Appendix B

Appendix 8

MICHAEL GRUBB STUDIO



Stag Brewery, Mortlake

Lighting Masterplan

For Reselton Properties

February 2018

PROJECT TEAM

CLIENT	**Reselton Properties Ltd** 28-30 The Parade St Helier Jersey, JE1 1EQ
ARCHITECTS	**Squire & Partners** The Department Store 248 Ferndale Road London, SW9 8FR
LANDSCAPE ARCHITECTS	**Gillespies** 1 St John's Square London, EC1M 4DH
DAYLIGHT/SUNLIGHT CONSULTANT	**eb7** Studio 1 63 Webber Street London, SE1 0QW
LIGHTING CONSULTANT	**Michael Grubb Studio Ltd** Bryanstone Road Bournemouth Dorset, BH3 7JE

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1.0 ANALYSIS

1.1 INTRODUCTION

"Lighting is decisively important when considering the experience of an external environment after dark. The making of a place is directly influenced by interplay of light and space, light and form, light and surfaces, light and texture, light and colour and most importantly, light and human activity".

Michael Grubb Studio has been appointed by Reselton Properties Ltd to review, consult and advise on all relevant lighting design issues associated with the proposed development of Mortlake Stag Brewery.

Michael Grubb Studio is an independent lighting design consultancy, specialising in exterior lighting schemes that are sensitive to their surrounding environments. We are not linked to any individual supplier or manufacturer, which means we give unbiased expert advice based on the most appropriate technologies, techniques and best practice.

This document has been developed in conjunction with the client, design team and with the projects long-term objectives in mind. The intention of this strategy is to identify a clear set of guiding principles that will be used to guide future lighting schemes. Doing so will ensure a cohesive lit environment across the development after dark, it will also add character, improve wayfinding, improve safety, reduce energy consumption and support surrounding habitats and ecology.

This strategy has been specifically developed to ensure that the environmental impact of artificial light is minimised. The ILP guides and resources regarding Light Pollution have been adopted and will be adhered to. This includes reducing light pollution, minimising energy and also mitigating unwelcome impacts on flora, fauna and the waterways.



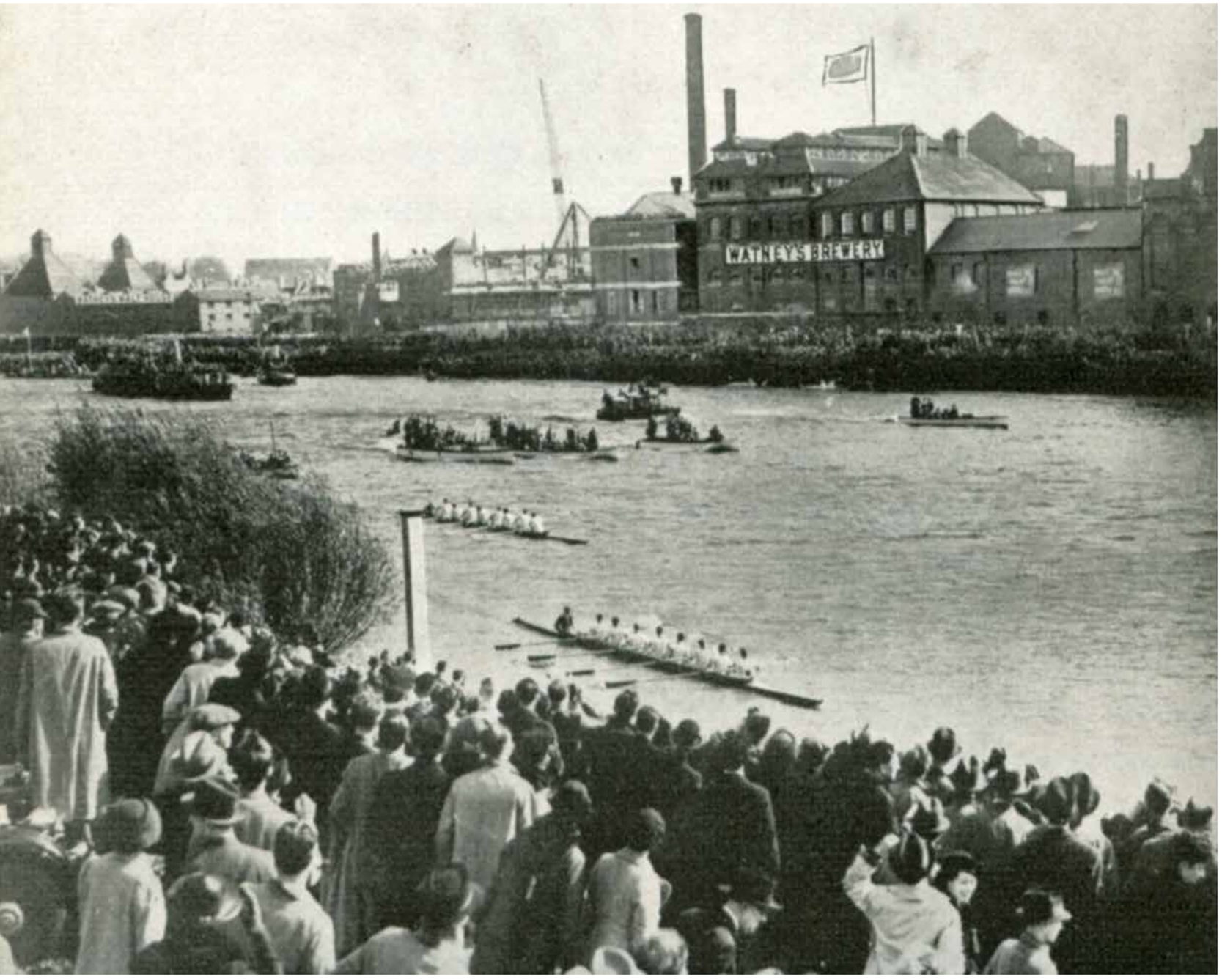
1.2
CONTEXT

Reselton Properties Limited, represented by Dartmouth Capital, is developing plans for a mixed-use scheme for Mortlake's Stag Brewery site, London, UK.

The Stag Brewery Redevelopment is an emerging masterplan that will create a new vibrant village with a view to deliver a new heart for the Mortlake neighbourhood through regeneration.

The site is located along the edge of the River Thames with good connections to both Chiswick Bridge and Mortlake Rail Station.

Existing factories and industrial buildings will be replaced with a mixed use development comprising units for commercial retail frontages, an office building, residential apartments, new entertainment centres, extra care facilities, a nursing home, health facilities and a school.



1.3 HISTORY

Mortlake is a suburban district of the London Borough of Richmond upon Thames on the south bank of the River Thames between Kew and Barnes. For many centuries it had village status and extended far to the south, to include East Sheen and part of what is now Richmond Park. Its history was economically one of malting, brewing, farming, watermen and a great tapestry works.

According to Domesday Book (1086) the manor and parish of Mortlage (by which name Mortlake was then known). The manor belonged to the Archbishops of Canterbury until the time of Henry VIII, when it passed by exchange to the Crown. From the early part of the 17th century until after the English Civil War,

Mortlake was celebrated for the manufacture of tapestry, founded during the reign of James I at the Mortlake Tapestry Works.

Mortlake was reduced by 732 acres when Richmond Park was created by Charles I in 1637. Other parishes also lost smaller amounts of land to the new deer park.

Since 1845, the Oxford and Cambridge Boat Race has had its finish point at Mortlake, marked by the University Boat Race stone just downstream of Chiswick Bridge. Several other important rowing races over the Championship Course also either start or finish at the stone.

In the 1840's, Charles James Philips and James Wigan acquired Mortlake Brewery, which had existed since the 15th century. In 1889 the brewery was acquired by James Watney & Co., which in 1898 became Watney Combe & Reid after acquiring Messrs. Combe Delafield and Co. and Messrs. Reid and Co. When Watney's Stag Brewery in Victoria, London, was demolished in 1959, the name became officially applied to Mortlake Brewery. The brewery became part of Scottish Courage, briefly part of Heineken and was then divested to Anheuser-Busch Europe Ltd as it produced the company's Budweiser pale lager.

In December 2015, Reselton purchased the site and in 2016 consultation regarding the future of the Stag Brewery got underway.

1.4
VISION

The Stag Brewery will be home to many people whilst also a place to work, shop, dine, play and relax.

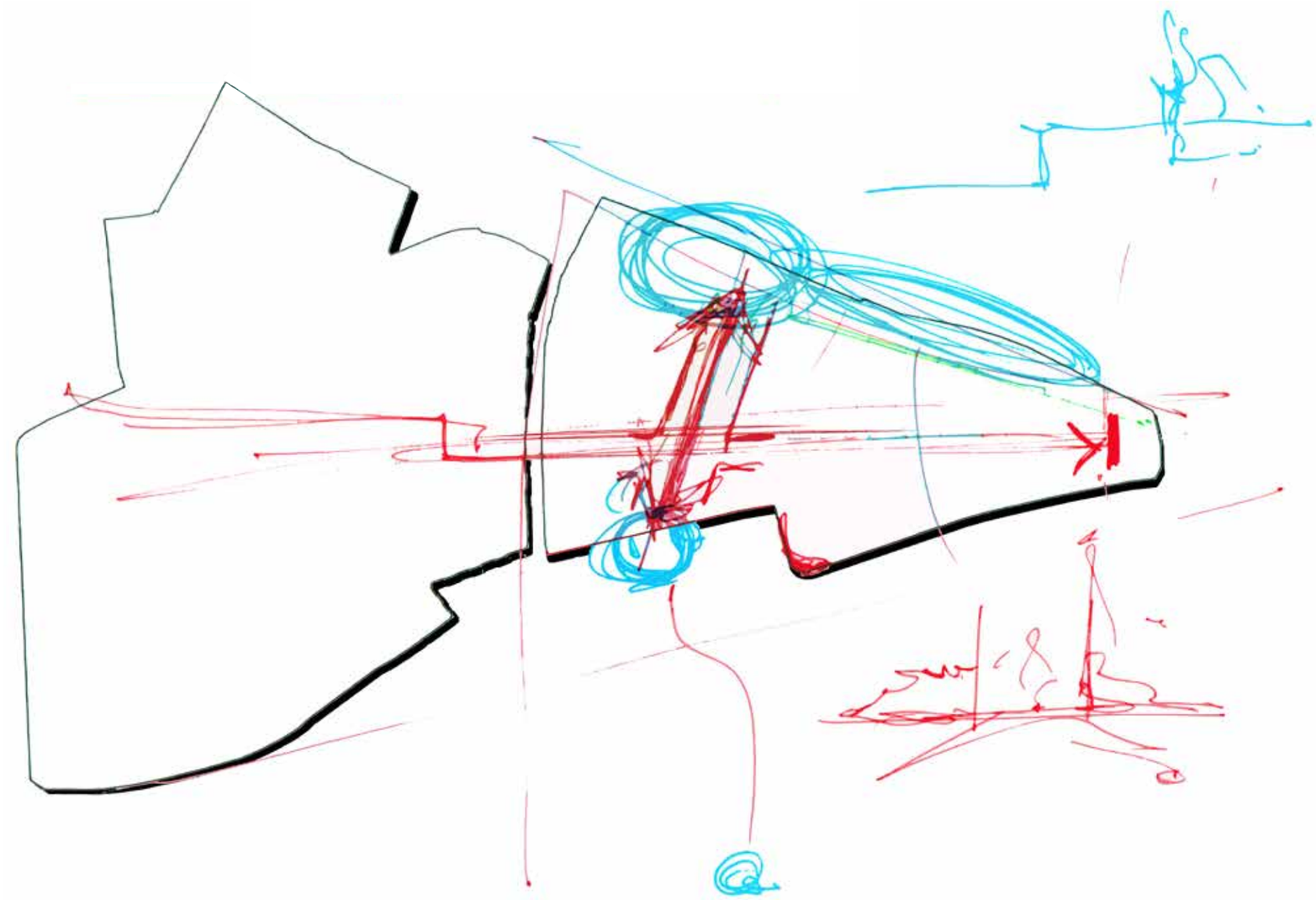
The site will boast open green spaces and views across the River Thames – all of which will help define the development as a destination in its own right and in turn, will create a vibrant night time economy.

Light will be used to help create focal points and a sense of place after dark, which will also help reinforce a sense of community and security.

It is envisaged that the Linear Park, Maltings Plaza and the River Terrace will be vibrant and active during the evening. Al fresco dining will help to activate these areas which will in turn create a positive perception and enhanced security. Street lighting will be used to support both shopping and outdoor dining by providing an appropriately low-key backdrop that supports an outdoor dining experience.

The well-being of residents will be promoted both through;
light - helping to encourage exercise and play outdoors and through **darkness**, reinforcing a closeness to nature, whilst helping to avoid light trespass and disturbance to sleep.

2.0 STRATEGY



2.1
LIGHTING STRATEGY

The purpose of this Lighting Strategy is to help create a unique lit environment for Mortlake Stag Brewery. This will be achieved by enhancing both the character of the surrounding buildings and the newly proposed landscape.

The primary goals of this Lighting Strategy are:

- To create a cohesive lit environment after dark;
- To use lighting to develop a character and identity for the site;
- To establish a visual hierarchy of the lighting to assist wayfinding;
- To protect and support surrounding habitats;
- To use appropriate levels of light with respect to security and safety without over-lighting;
- To minimise light pollution, glare and flicker;
- To generate a low energy solution that is easy to maintain;

It is envisaged that the Lighting Strategy will be implemented over 2 - 3 phases. With this in mind, this strategy document establishes key strategic principles that will help guide future lighting proposals, whilst always ensuring a cohesive aesthetic after dark.

2.2 SITE SURVEY /PHOTOGRAPHY

Michael Grubb Studio (the lighting consultant) undertook a site survey assessment on the evening of 12 September 2017. The purpose of the survey was to review and record existing lighting conditions during twilight hours and after dusk.





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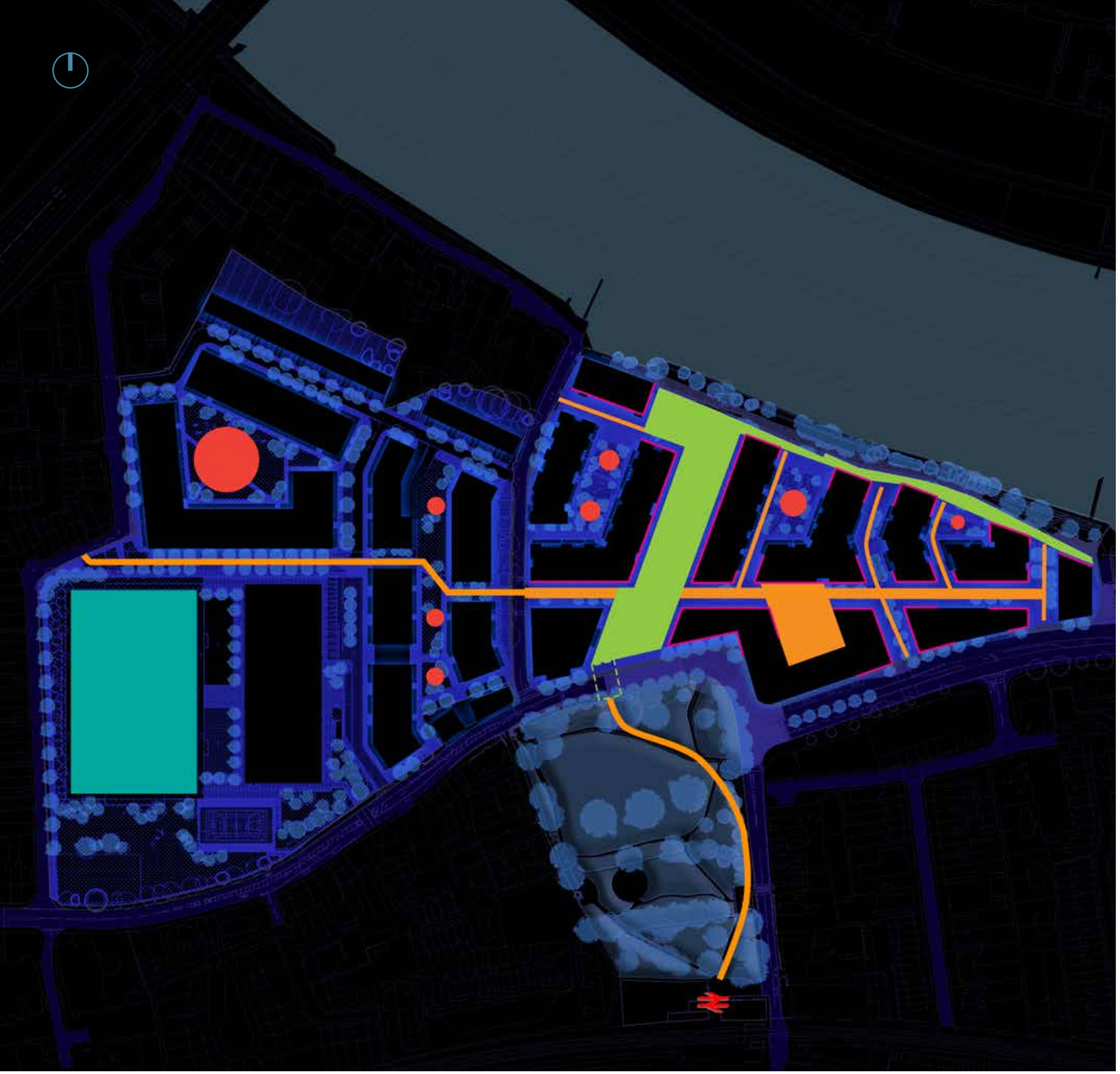
2.3
EDGES

The majority of the site is surrounded by highways, with residential properties and historic Stag Brewery buildings adjacent to these routes.

The River Thames towpath route runs parallel to the north of the East Development. This is separated by a retaining flood wall, which will be refurbished and retained in part and replaced by new flood defence protection works. The towpath is included within the planning application boundary.

Ship Lane is an adoptable highway that runs north through the centre of the site, creating East and West plots.

- Hard Edge
- Adopted Highway
- Boundary Edge
- Existing Towpath (light sensitive area)



2.4
EVENING USE

The development will be accessible to the public 24/7.
This includes the residential communal gardens, the River Terrace and all associated routes and spaces. However, there will clearly be areas that are more active than others after dark. The Lighting Strategy looks to create a cohesive lit environment, which supports the operational needs of these areas, whilst providing added character and enhanced wayfinding through the site.

Primary Use

- Mortlake Green Gateway
- Linear Park, including Cinema, Retail, Bar and Restaurants.
  Also main connection through site.
- Maltings Plaza, destination and flexible space for special events.
- The River Terrace, for Bar & Restaurant use.

Secondary Use

- Thames Street, East - West connection
- Pedestrian routes to river towpath
- Residential 'communal' gardens
- Bottleworks Square
- Existing park, Mortlake Green, for pedestrian movement from Mortlake Rail Station into site.

Sports Field

- The sports field will be available for community use / hire during evenings.

High Level

Medium Level

Low Level

Sports Field
(*used on certain days/hours of the year)

Retail/Restaurant Frontages

2.5 GATEWAYS, VISTAS & NODES

Gateways are the thresholds at which people enter the site.

Vistas promote the ability to see elements of the mental map, encouraging movement and familiarity with the site.

Nodes are 'strategic spots' that form final or interim destinations. They help provide guidance and create structure across the site at night.

Gateways will be warm and welcoming. Layers of light will combine, with ambient and architectural lighting working in harmony to add character and interest. Ambient 'warm white' light will be used to provide safe levels of illumination to the various routes and spaces. Accent lighting will then be added to highlight architecture and key landscape features. This approach will provide depth and interest as well as define the various spaces by providing enhanced way-finding after dark.

Vistas towards key nodes and landmarks should be controlled in terms of the balance of light and dark and the location of lighting equipment. Doing so will actively protect and promote adjoining nodes.

The positive illumination of architectural and man-made features terminating vistas along routes will also help to make people feel secure and confident when navigating the area after nightfall.

Nodes include structures, landscape areas, meeting places and key intersections of paths. Lighting to such nodes must consider the nature of activities within the space and how the lighting can create an appropriate ambience within them. Lighting to vertical surfaces will make them identifiable from afar. This will aid way-finding, provide confidence and heighten the perception of security.

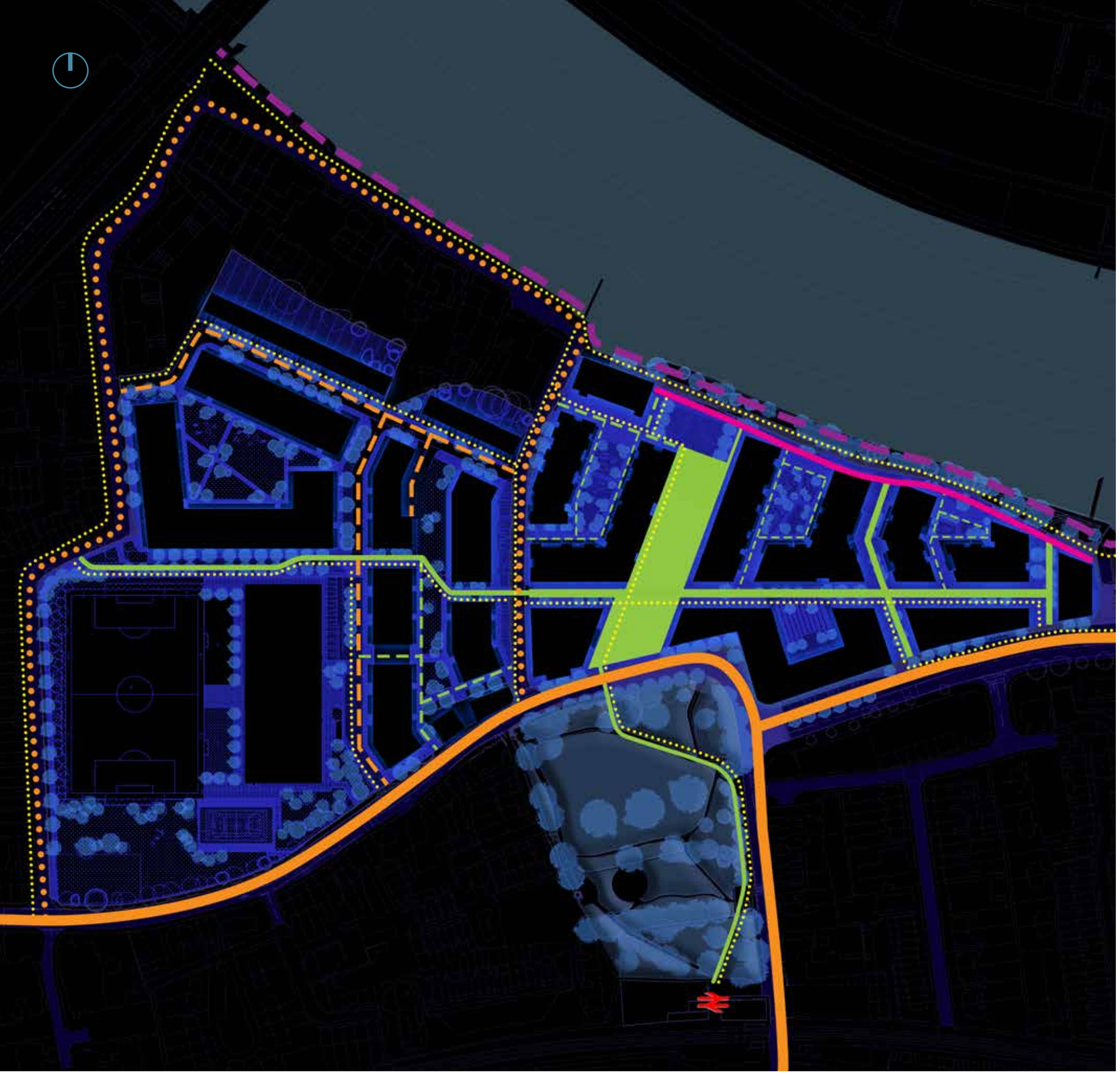
- Primary Gateway
- Secondary Gateway
- Vistas
- Nodes

2.6 ROUTES

Routes have been considered with regard to their intended users, whether these are pedestrians, cyclists, motorists or any combination of the three.

On vehicular routes, horizontal illumination with good uniformity will be important to ensure that the roadway and its junctions with the pavement are visible and that the lighting does not cause visual distraction.

Lighting to pedestrian paths must be designed to support human scale, aid way-finding, provide good facial recognition and to promote a sense of character.



- Highway Primary
- Highway Secondary
- Pedestrian Primary
- Pedestrian Secondary
- Cycle Route
- River Terrace Route
- Existing Towpath

2.7 SPACES

The external environment is open to the public 24/7, with certain areas being more active than others after dark.

Entrance Plaza and Linear Park will act as a gateway to the site, hosting a variety of restaurants, bars and retail stores coupled with good links to the cinema. In addition, both the River Terrace and Bottleworks Square will also be destinations for those visiting at night.

Maltings Plaza will provide the backdrop for festivals and other temporary events throughout the year. It is therefore, imperative that the setup is flexible, easy to control and maintain.

Gateways into the Residential Courtyards will need to be warm and welcoming, with the internal spaces providing a tranquil quality for those surrounding properties.

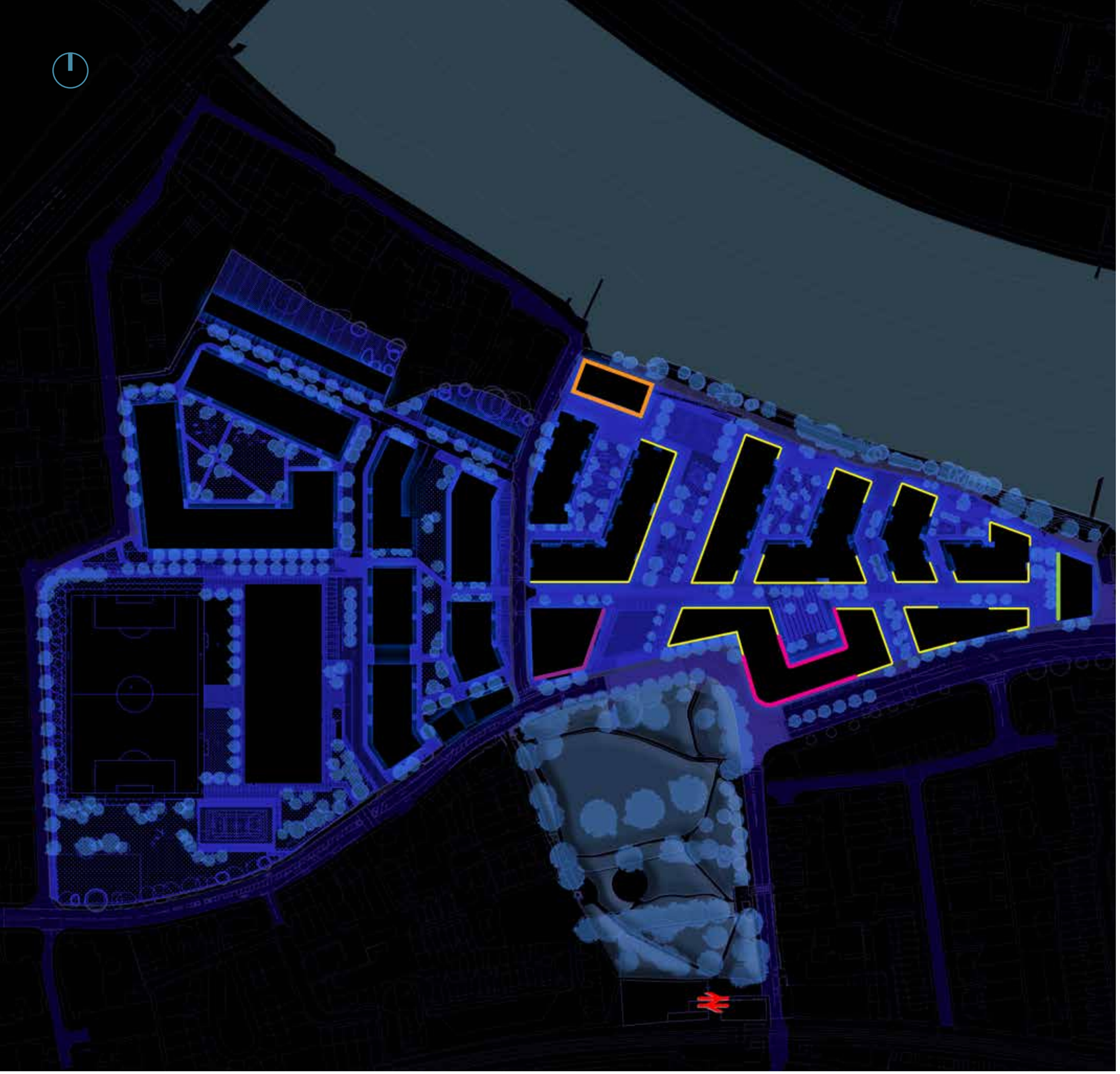
It is our intention that all Play Spaces will be lit.

- Public Open Space (including community park)
- Residential Courtyards
- Residential Gateway
- Play Space
- Park Gateways
- Sports Field (*used on certain days/hours of the year)

2.8
ARCHITECTURAL LIGHTING

Architectural lighting will add depth and interest to the site after dark.

Certain buildings / facades have been selected based on their contribution towards wayfinding, place making and heritage. It is important to note however, that at this stage, only detailed elements are being considered.



TIER ONE

- Maltings Building
- Cinema

TIER TWO

- The Bottleworks Hotel & Bottleworks Square
- Rowing Club

TIER THREE

- Commercial Facades (Retail / Bars & Restaurants)

3.0 LIGHTING PRINCIPLES

3.1 SITE WIDE

This Lighting Strategy will help to ensure that an appropriate atmosphere is created to reinforce a strong sense of place whilst remaining balanced and visually integrated with the surrounding environment. Psychologically, light will play an important role in influencing the manner in which people perceive and behave in the development after dark.

Lighting within the site needs to fulfil a range of requirements for various uses and people. This includes both commercial and residential use, along with the cinema and the various bars and restaurants that will be visited by those travelling into the development by night. It is therefore imperative that lighting enhances the character of the site, aids way-finding and improves the overall visitor experience.

Lighting is also required to meet the specific requirements for both personal and wider security and through its contribution to the prevention of crime. This is a complex area as good lighting cannot prevent crime - rather it can help reduce the fear of crime. It can also support other measures such as surveillance.

A range of 'overarching' lighting design principles have been developed for the project and are relevant to all areas of the Stag Brewery site. These are as follows:

1. Safe & Secure Environment
2. Accessibility
3. Way-finding
4. Sustainability
5. Protecting Surrounding Ecology
6. Light Pollution, Flicker & Glare
7. Operational Requirements
8. Luminaires & Lamp Sources
9. Approach to Colour Temperature
10. Heritage
11. Use of Colour
12. Lighting Standards & Guidelines

3.2 SAFE & SECURE ENVIRONMENT

A primary function of the lighting will be to provide adequate levels of illumination to enable people to see in the absence of natural light.

The extent to which people need to see after dark will vary from area to area, with some requiring high levels of visual acuity whilst others should enable just a basic understanding of scale and the ability to identify a safe path through a space.

Flooding a space with light does little to improve the perception of a safe and secure environment after dark, it instead creates a negative and unwelcoming environment that results in minimal use. Within the residential settings low levels of light will be important in maintaining a sense of security and privacy.

Creating an environment that feels secure will largely depend on ensuring that spaces are legible, appear well maintained and do not inhibit adaptation of the eye through excessive contrast and glare.

Facial recognition is important for CCTV operation and must be considered, however, this should not dictate the lit environment. A more constructive approach would be to create an environment that combines both horizontal and vertical illumination.

3.3 ACCESSIBILITY

The accessibility of the site during the hours of darkness is a key issue.

The design of artificial light must support the various needs of those visiting and inhabiting the neighbourhood after dark. This includes people with visual impairments, wheelchair users, the young, the elderly and those with special needs.

Supporting a highly accessible after-dark environment will include avoiding excessive contrasts, avoiding direct and reflected sources of glare, avoiding shiny, mirror-like surfaces at pedestrian level, controlling shadow and limiting potentially confusing upward lighting.

3.4 WAYFINDING

Lighting to architectural and landscape features will enable people to form a 'mental map' of the Stag Brewery site and inform the way in which they experience and remember it.

After dark (including winter mornings, afternoons, late evenings and night-time) many of these visual signs can disappear from view and leave residents and, in particular, visitors feeling disorientated and uncomfortable.

For example, it can become difficult to understand both the scale and boundaries of spaces and to identify safe routes after dark, which can heighten feelings of unease and insecurity. After nightfall it will be largely left to artificial light and preserved natural darkness to 'edit' the visual landscape to render some elements more prominent whilst allowing others to visually recede. This balance between light and dark will help to reinforce a collective 'map' or 'image' of Stag Brewery and support orientating around it, with a view to improve the enjoyment and image of the development.

It should be noted that creating a legible after-dark environment will predominantly rely on achieving an appropriate balance of light and dark on vertical rather than horizontal surfaces as these are the surfaces that help to describe the scale and layout of built and natural forms and help draw views through to particular locations.

3.5 SUSTAINABILITY

The extent and manner with regard to the use of light will become a very visible symbol for the development's sustainability credentials.

Light is a highly visible form of energy use that not only exploits the earth's precious natural resources but also creates unwanted impacts such as light pollution. The amount of light, its distribution and direction and the manner in which it is delivered and controlled must all be carefully designed. Over-lighting and light pollution (particularly light trespass) must be avoided.

Light levels will be minimised when and where possible but without compromise to safety and security.

Efficient light sources, control gear and luminaire optics will help to focus light onto the desired surfaces, whilst defined areas of unlit public realm - i.e. the River Thames - will ensure that a connection to nature and the night sky is clearly promoted.

The preservation of darkness will also play an important social role, helping to protect privacy and, alongside the considered selection of light sources, helping to support well-being by minimising light trespass and disturbances to circadian rhythms.

3.6 PROTECTING SURROUNDING ECOLOGY

Artificial lighting can cause disturbance to ecological systems because animals, insects and plants can all be affected adversely. For this reason, the lowest appropriate amount of light should be used to achieve the needs of the various routes and spaces. Lighting should also be controlled with minimal light spilling upwards. Additional glare control accessories should be used where appropriate. Uplighting within the courtyard is acceptable, but should be designed on a human scale with light focused on the lower levels of the building façades only. Lighting beyond this is unnecessary and could prove problematic for local habitats.

Artificial night lighting harms species directly by triggering unnatural periods of attraction or repulsion which can lead to disruptions in reproductive cycles by fixation, disorientation or by interfering with feeding and sustenance. Light can also have an effect on the life of plants as well as on the animals that use plants for feeding or nesting.

Many studies show that different species of birds are affected by certain wavelengths of light in different ways. Where rare and protected species are known to exist, research should be undertaken to establish whether the intensity of artificial light or specific wavelengths of light should be minimised generally or at specific times of the evening/year to help protect species.

It should be noted that sky glow can disrupt local biodiversity as well as distant ecosystems.

Light levels within the site will vary depending on use and location, especially with regards to protecting surrounding ecology along the river edge. Light level guidance has therefore been provided and is fully detailed in Chapter 3 of this document.



3.7
LIGHT POLLUTION, FLICKER & GLARE

All efforts should be made to minimise light pollution. Particular attention should be paid where light spill could have a detrimental effect on ecology. The following principles should be applied to ensure light pollution is kept to an absolute minimum:

- Lighting will be carefully focused once installed, Lockable luminaires will be used, where possible, to ensure that they are not accidentally refocused during servicing and maintenance;

- Provision should be made for louvers, cowls, snoots, and other accessories that control upward light spill and reduce glare or light trespass.

In addition to the above, each lighting scheme should comply with both the ILP Guidance Notes for the Reduction of Light Pollution and the CIBSE SLL Lighting Guides for The Outdoor Environment.













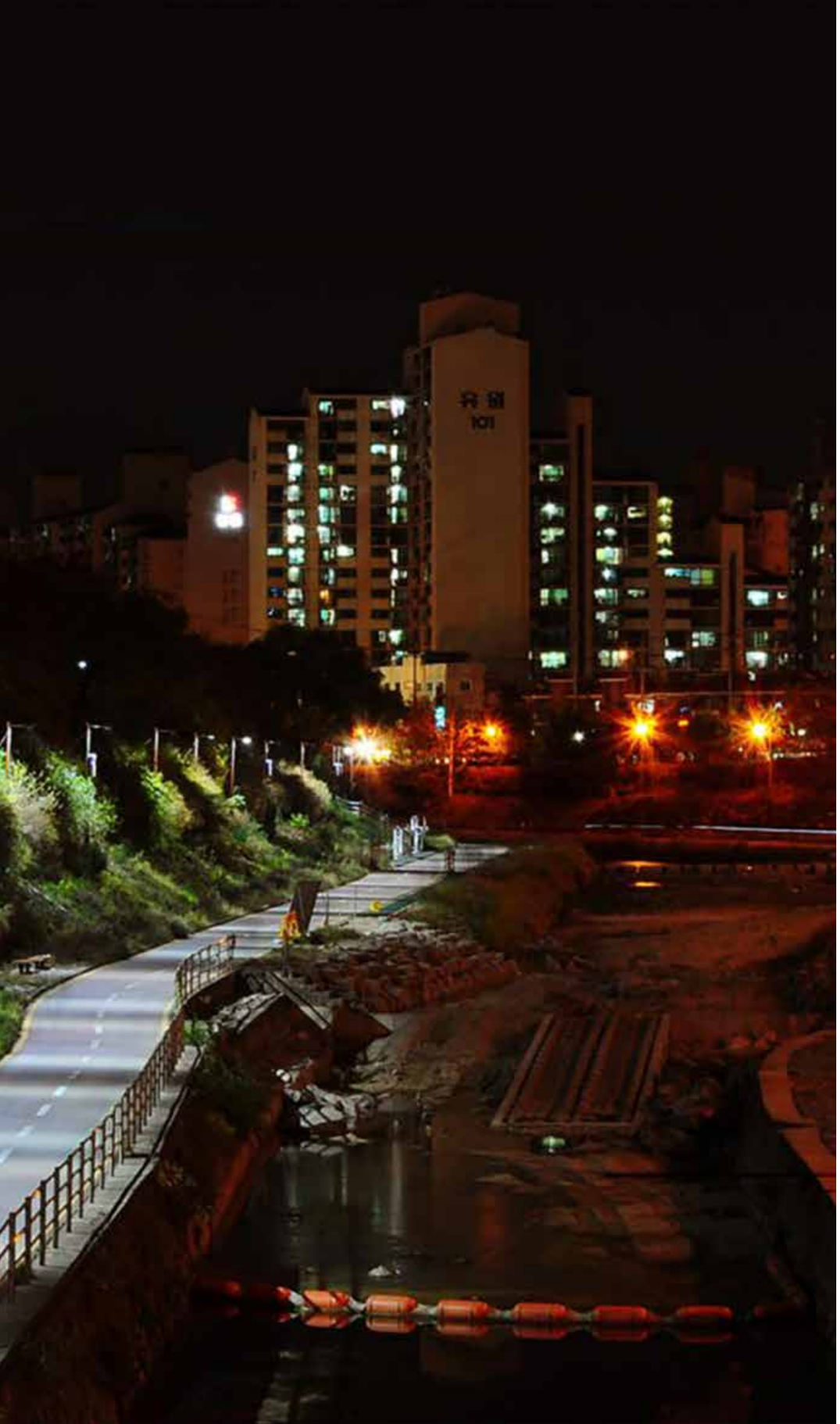
3.8 OPERATIONAL REQUIREMENTS

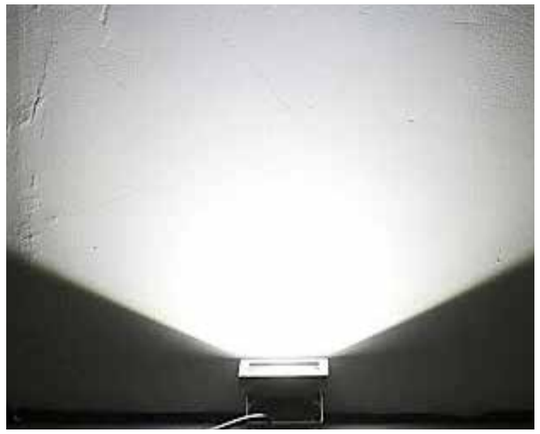
The controls of luminaires will have a significant impact on the sustainability and environmental impact of the project, especially as it concerns the amount of energy that the equipment uses.

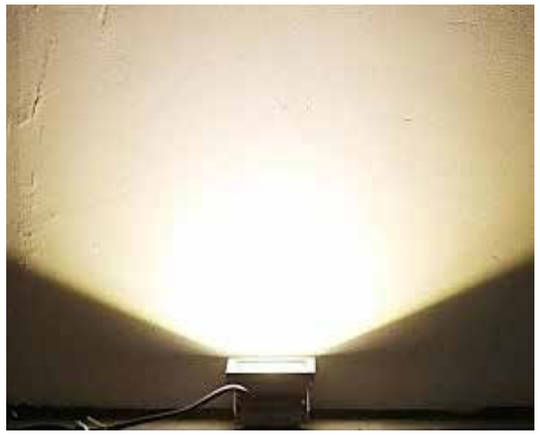
The simplest and most cost effective way to control a luminaire is to switch it on or off. Although dimming may be a solution, it is much more complex, costly, requires more equipment and some types of lamp do not dim effectively.

Switching systems have to be controlled by some form of input. The input can be an automatic input that is triggered by either ambient light levels (daylight falling below a certain level or rising above a level), by the presence or lack of activity (presence detectors or similar devices), by time (a time switch) or by a combination of all of these inputs.

Amenity lighting will remain operational between dusk and dawn. Feature lighting will be switched off at curfew (midnight). This simple philosophy allows the lighting control to expand through each of the design phases, for all areas of the site.







3.9
LAMPS & LUMINAIRES

As part of the development of individual lighting schemes, consideration must be given to the types of lighting equipment selected as well as their mounting locations, materials, the longevity of their finishes and the types of light sources utilised. This will ensure minimal disruption to day and night-time activities when the installation needs maintenance or replacement.

Lighting equipment should be as discreet as possible. Where possible all lighting equipment will be hidden from view, where this is not possible all lighting will be detailed in such a way that it complements its immediate environment.

A reduced palette of luminaires and light sources is proposed as this will help simplify maintenance regimes. See Chapter 4: Lighting Strategy for full details.

Lighting must be designed to the prevailing best practice and, in general, to European and British Standards and Regulations. Individual lighting schemes should utilise long life, efficient light sources and control gear to help minimise long term maintenance and energy costs. In all cases the aim is to provide suitable amenity, ensure ease of adaptation, limit excessive contrast and avoid potential problems of over-lighting and glare.

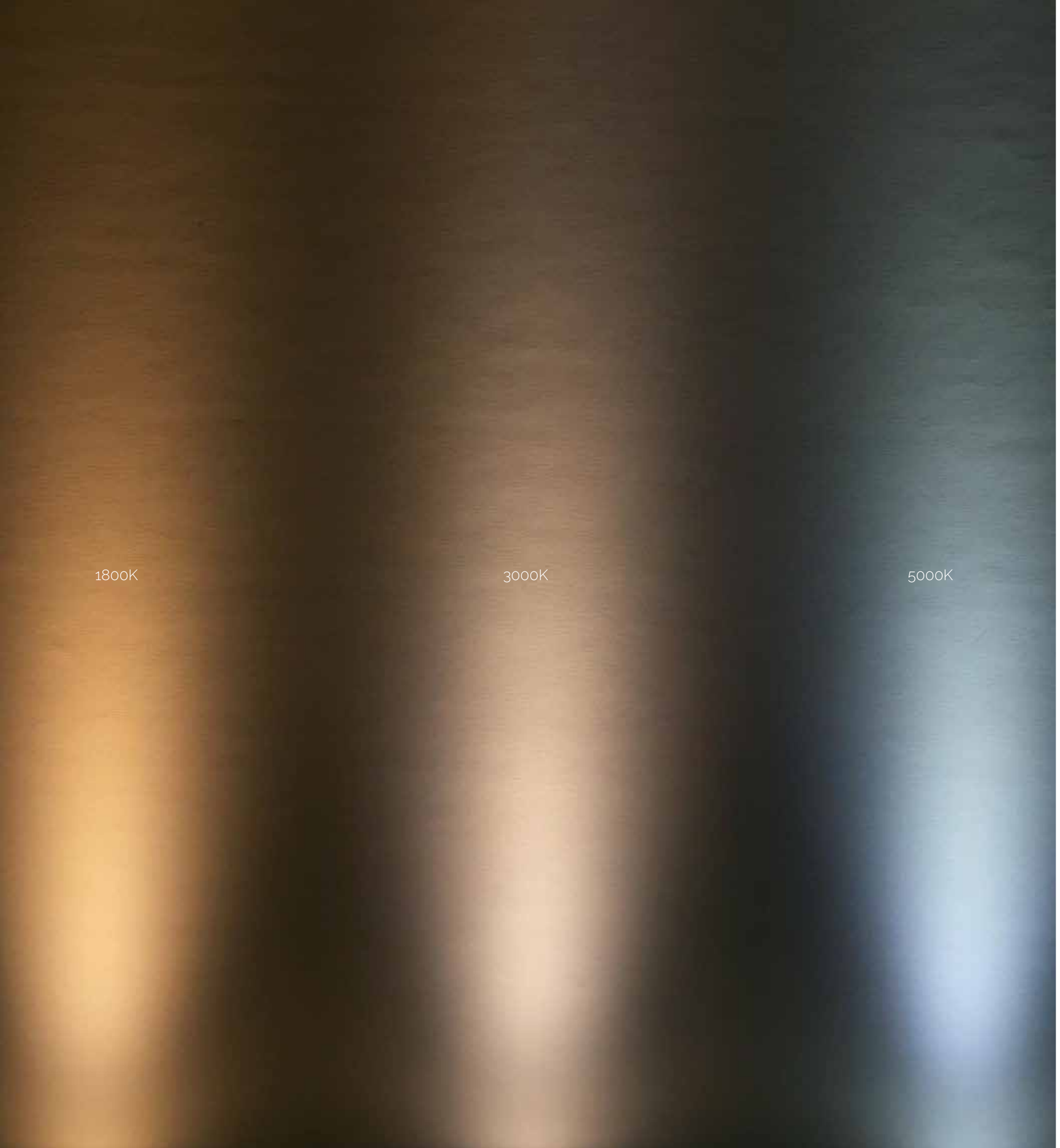
LED Technology is proposed for all areas of the site. Colour temperature of LED lamps with vary dependant on location and use.

3.10
COLOUR TEMPERATURE

Colour temperature describes the coolness or warmth of light. The lower the number in degrees Kelvin, the warmer the appearance of the light. For example, 1800K light has a warm appearance, similar to candlelight, while 5000K light is very cold looking.

Many of our town and cities are now lit in cold white light, which can result in uninviting, unpleasant and underused spaces.

The general principle for the Mortlake Stag Brewery site is to use only warm white light, with a colour temperature of 2700-3200K, for all pedestrian routes and spaces. This simple approach will help create a warm and inviting environment after dark.



3.11 HERITAGE

The Maltings building, the former bottling plant and hotel are all identified as Buildings of Townscape Merit (BTM). The new lighting scheme must respect the heritage of these buildings and do everything to ensure that they are preserved for future generations.

These buildings will outlive even a 50-year LED Lighting scheme so it's imperative that the building fabric is respected, physical damage avoided and visual impact considered. External lighting to reinforce a building's patterns can increase the appreciation of architectural details. Crosslighting, uplighting and backlighting should all be considered, although uplighting must be limited and well controlled to avoid light pollution. The approach should be to illuminate selected architectural and sculptural features such as pediments, columns, portico or niches, rather than illuminating the whole building / structure.

It is essential that all luminaires are inconspicuous, easy to install and maintain, and respectful of the historic fabric. Even though a lighting design may give the desired effect at night, if the floodlights cannot be effectively hidden from view or disguised, the scheme must be rethought.

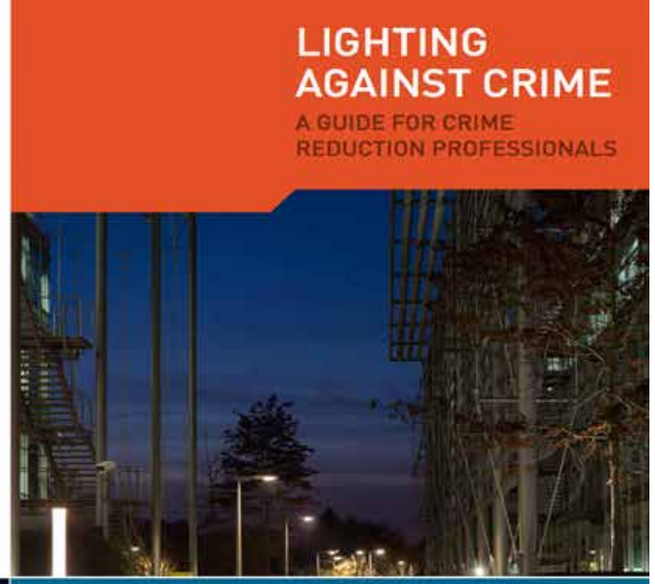
Proposed lighting schemes must follow English Heritage guidelines for 'Exterior Lighting of Historic Buildings'.

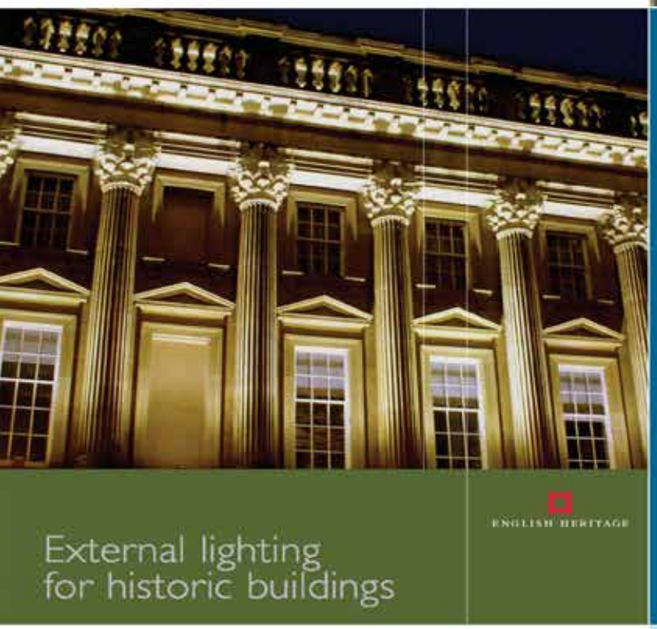
3.12
USE OF COLOUR

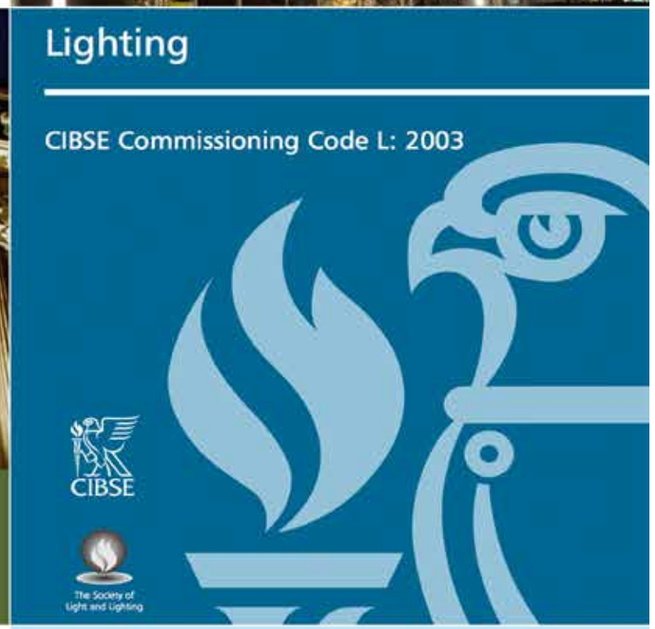
The use of coloured light can be dramatic when used effectively, but it can also dominate and distract.

Coloured light has a low Colour Rendering Index (CRI) and so it is hard to see colours accurately. This has implications for security (CCTV) and the recognition of objects, such as signage. For this reason coloured lighting will be restricted to architectural components, hard landscaping features and light-art interventions only. Even then, the use of colour needs to be relevant to the environment and justified.

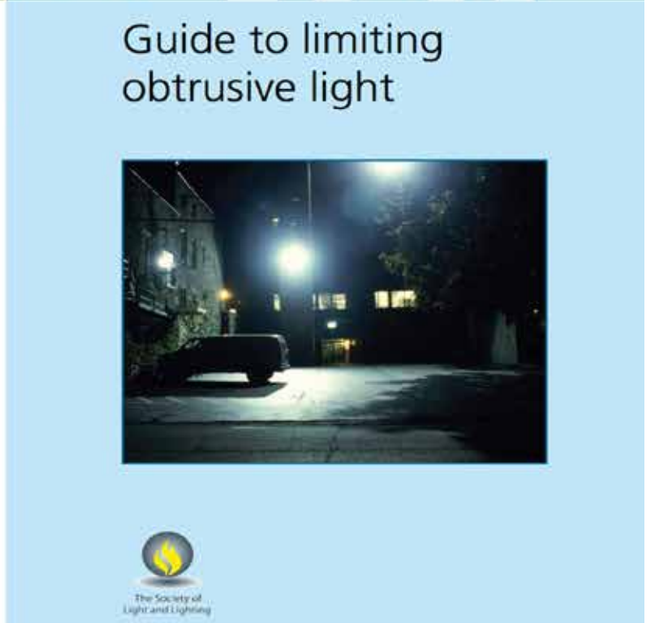












3.13 STANDARDS & GUIDELINES

This Lighting Strategy adheres to current British and European Lighting Standards coupled with the existing adopted highway standards. Examples include, PD CEN/TR 13201-1:2004, BS EN 13201- 2:2003, BS EN 12464-2:2007 and BS 5489:2013.

Whilst this Lighting Strategy prescribes lighting criteria from set standards, it is well established in the field of urban lighting that solely fulfilling such requirements will not necessarily lead to a satisfactory lighting solution.

A purely functional, quantitative approach to lighting can lead to a design that is bland and overly utilitarian, placing the emphasis firmly on the immediate visual task and relegating spatial experience to a secondary consideration.

Creating an after-dark environment that enhances safety, security and accessibility does not necessitate high light intensities and strong horizontal illuminance, but rather the selective illumination of key surfaces, forms and details. The illumination of vertical surfaces, whether they be natural (e.g. trees) or man-made (e.g. architectural and landscape features) will be critical in revealing the proportions and boundaries of spaces within Mortlake Stag Brewery after dark. Even soft lighting to vertical surfaces can greatly increase the legibility and perceived brightness of a space, whilst providing visual interest and creating character. Lighting to vertical surfaces can also help to provide diffuse reflected light to peoples' faces, helping to aid facial recognition and further heighten perceptions of security.

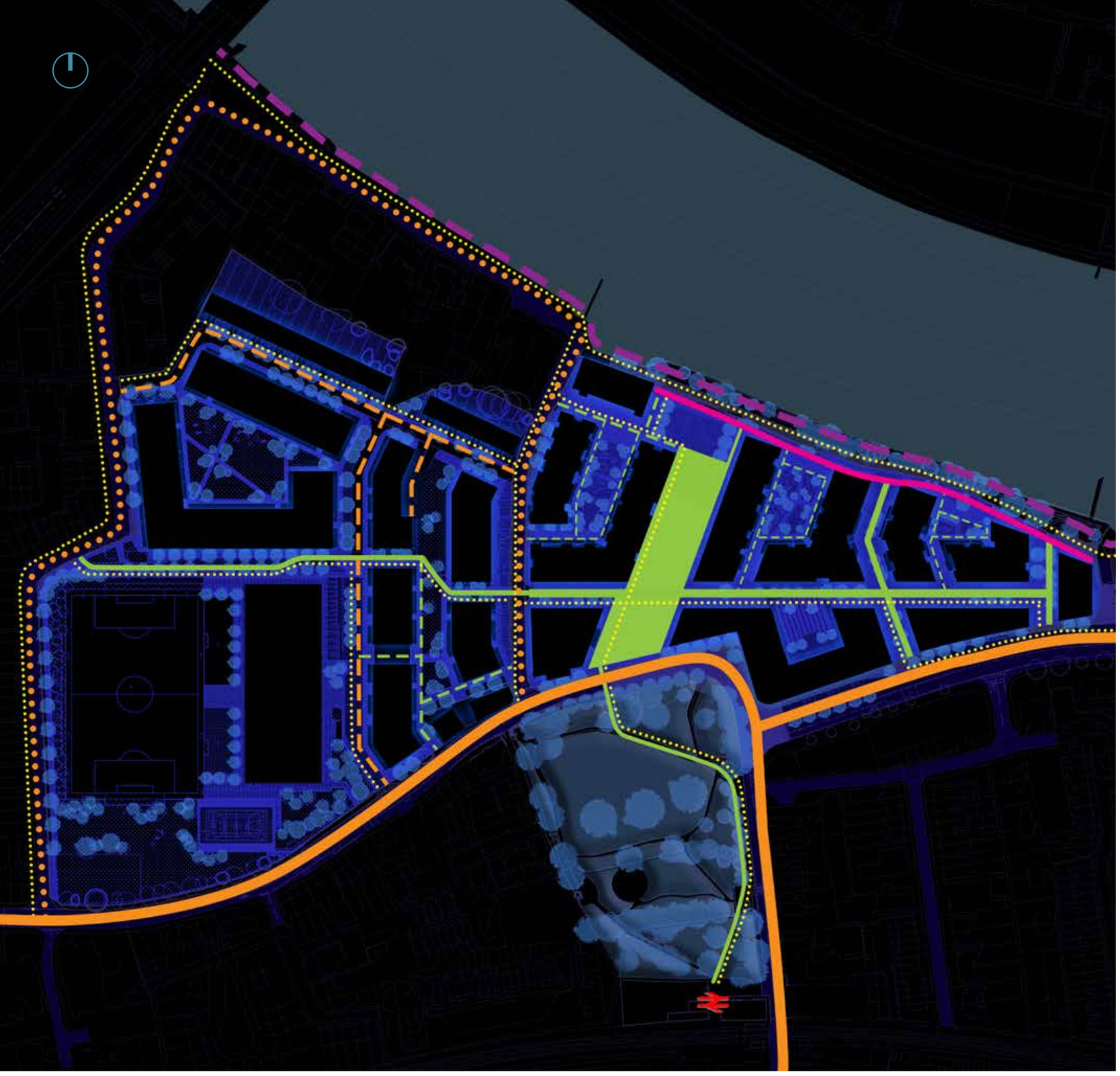
4.0 MASTERPLAN

4.1 MASTERPLAN

Lighting has been configured according to use after dark. This approach ensures that visitors subconsciously understand the various spaces, buildings and adjoining routes. To help achieve this a lighting hierarchy has been developed, with emphasis placed on elements that contribute most in terms of wayfinding and added character.

The Stag Brewery development will be a predominantly residential neighbourhood with retail / commercial areas running through the heart of the site and along the river edge. The lit environment caters for both these scenarios, with more focus and feature lighting in those commercial areas with higher footfall. Residential areas will be calmer to allow for privacy and the general well-being of residents.

The proposed lighting scheme comprises layers of light, with each layer complementing one another. The ambient (warm white) light layer is used to provide a safe and secure environment and to provide general illumination to the various routes and spaces. The accent light layer comprises additional sources of light, which will highlight key landscape features and surrounding architectural structures. The purpose of this layer is to enhance the feeling of the space and to introduce illumination to vertical surfaces. Accent lighting is proposed along key strategic routes and destinations only, such as the Linear Park, Maltings Plaza and the River Terrace for example.



4.2 ROUTES

The following lighting criteria is proposed for each route.

Highway Secondary

Lighting Class:	P3
Light Source:	LED
Colour Temperature:	3000K
Colour Rendering:	Ra85+
Lantern Mounting:	Column
Mounting Height:	5-6m

Pedestrian Primary

Lighting Class:	P3
Light Source:	LED
Colour Temperature:	2700K
Colour Rendering:	Ra85+
Lantern Mounting:	Column
Mounting Height:	12m & 4m

Pedestrian Secondary

Lighting Class:	P4
Light Source:	LED
Colour Temperature:	2700K
Colour Rendering:	Ra85+
Lantern Mounting:	Column
Mounting Height:	5-6m

River Terrace, including steps to Towpath.

Lighting Class:	P4
Light Source:	LED
Colour Temperature:	2700K
Colour Rendering:	Ra85+
Lantern Mounting:	Bollard
Mounting Height:	1m

Cycle Route

Lighting Class:	P3
Light Source:	LED
Colour Temperature:	3000K
Colour Rendering:	Ra85+

Site Boundary

ROUTES

/ SHIP LANE









Ship Lane is owned by London Borough of Richmond-Upon-Thames and is an adoptable highway. The current lighting scheme consists of concrete columns housing outdated 70W Low-Pressure SON lamp sources.

Low-pressure sodium lamps only give monochromatic yellow light and so inhibit colour vision at night, the colours of objects illuminated are also difficult to distinguish. This can be problematic for CCTV operation and can also misrepresent form and materials of the built environment. SON lamps are therefore being phased out and replaced with LED technology. LBRuT have advised that all existing columns along Ship Lane are due for replacement.

The intention is to work in conjunction with Richmond's Street Lighting Team to develop a mutually agreeable specification. This will mean matching sitewide characteristics whilst specifying highway approved products and suppliers. This includes columns by Mallatite, and the Philips Luma lantern with 3G City Touch technology.

The Street Lighting Team have provisionally suggested that Ship Lane should be lit to P3 Lighting Class.

PROPOSALS INCLUDE:

- 5-6 metre high 'Mallatite' lighting column with Philips Luma lantern (3000K) with 3G Citi Touch technology.



ROUTES

/ THAMES STREET

Thames Street is strategically very important as it provides a strong east / west connection through the heart of the develpoment. The route will be predominately used by pedestrians and cyslists, though it will allow for deliveries and servicing at certain hours of the day. Lighting must therefore enhance wayfinding whilst providing suitable levels of illumination for vechicular / operational use.

The illumination of shopfronts will heavily influence the street level experience. Individual retail, bar and restaurant tenants should be encouraged to implement high quality illuminated windows where light contributes to the overall ambience of Thames Street.

The use of building mounted lanterns should also be considered, so to reduce street clutter.

The final street lighting proposal will also need to consider the approach to Bottleworks Square and surrounding retail outlets as well as any bars / restaurants.

PROPOSALS INCLUDE:

- 6 metre high lighting columns, staggered, along both sides of the highway (and / or the possibility of building mounted lanterns).
- Uplighting of trees.

ROUTES

/ TYPICAL RESIDENTAL STREET



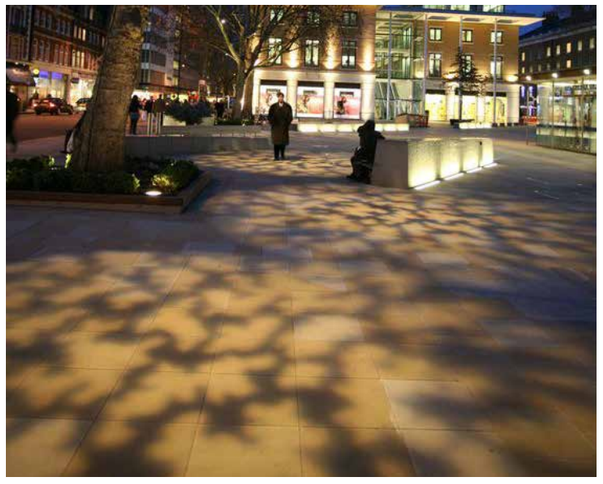
Lighting within residential areas needs to be calm and allow for both the privacy and general wellbeing of residents.

Lighting columns housing multiple spotlights will be located within the central soft landscape. Warm white light will then be projected through the tree canopy to create a soft 'dappled' ambience below.

Lighting will be optically controlled to prevent light spill into adjacent properties. Glare shields will also be used to ensure that all lamp sources are hidden from view.

PROPOSALS INCLUDE:

- 6 metre high bespoke column with multiple spotlights attached.

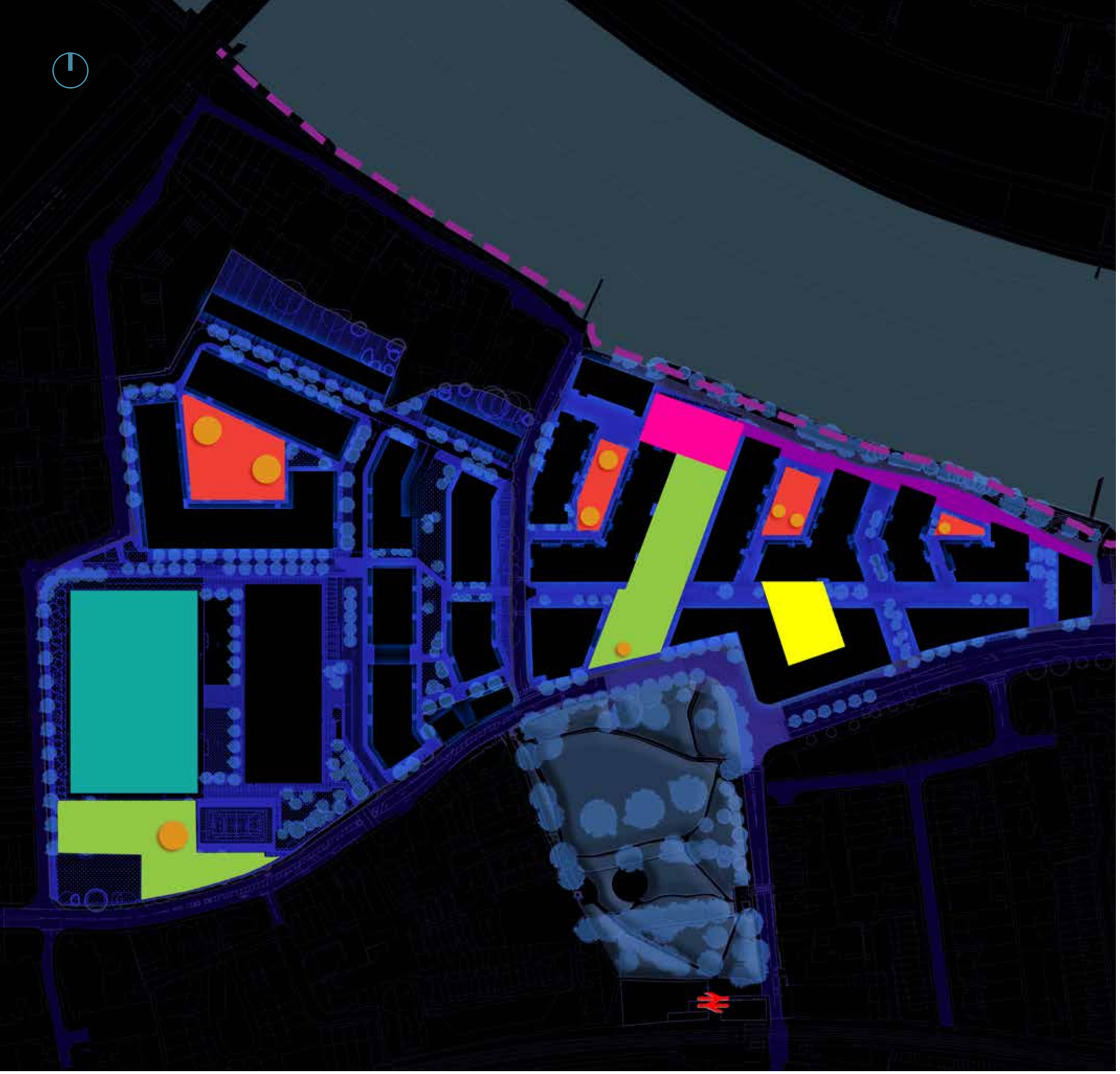




4.3
SPACES

The lighting scheme for open spaces must consider vertical illumination as an important design factor to enable horizontal illumination levels to be minimised whilst still maintaining high levels of perceived brightness and security.

Landscape lighting should be designed to assist with the overall legibility of the site and its constituent spaces as well as to assist with place-making.



- Entrance Plaza / Linear Park
- Maltings Plaza
- River Terrace
- Towpath
- Residential Courtyards
- Bottleworks Square
- Play Space
- Sports Field

SPACES

/ ENTRANCE PLAZA & LINEAR PARK



An 'architectural lighting' approach has been adopted and combines both horizontal and vertical illumination to key features along the route. This includes a series of 'bespoke' multi-purpose 10m lighting masts that have been introduced to support the narrative of the site and to create a positive image, aid wayfinding and add to the sense of place and memory after dark.

The masts have been located along the west side of the Linear Park as this strengthens the gateway entrance through Mortlake Green. In addition, we have proposed one to be added over the highway.

This route also connects with the Cinema, which will be beneficial for evening use. A secondary row of 4m high columns are located along the east side. We are also proposing the uplighting of trees and some low level lighting within seating, etc.

Illumination levels / lighting standards have not been applied to all areas of the Linear Park, but only to key spaces and routes that pass through it. This adopted approach ensures safety whilst respecting the residents living above ground floor level.

The illumination of shopfronts will heavily influence the street level experience. Individual retail, bar and restaurant tenants should be encouraged to implement high quality illuminated windows where light contributes to the overall ambience of the public realm.







PROPOSALS INCLUDE:

- 10 metre high 'bespoke' multi-purpose lighting columns with internally lit section, which will illuminate depending on tide heights. Each column is to include spotlights and provision for additional luminaires and infrastructure, such as gobo-projectors, festive lighting, WiFi, PA systems and banners. The intention being that these will act as wayfinding beacons between Mortlake Green and Maltings Plaza, both by day and by night.
- 4 metre high columns located along the east route, linking the Riverside Terrace.
- Architectural lighting to key facades and hard-landscape features.
- Uplighting of trees.

SPACES

/ MALTINGS PLAZA









Lighting needs to fulfill a range of requirements for various uses and people. To accommodate this, a flexible lighting scheme has been developed where lighting conditions can be easily reconfigured and adjusted. This will allow the space to be used for temporary events, festivals and other activities througout the year,

10m high decorative 'bespoke' lighting columns will signal Maltings Plaza as the final destination of the route through Linear Park.

Spotlights and gobo-projectors will be used to illuminate and animate the space after dark. Subtle projections will be used to support amenity lighting, with additional feature lighting incorporated witihin the water feature.

Additional lighting will be added to support any temporary events or festivals. All lighting will be controlled and focused on to the floor only, with no spill on to the towpath or surrounding area.

As part of the design for new lighting schemes, an infrastructure for events lighting should be considered. This may include the introduction of power supplies, data points and luminaire mounting locations. Where possible, infrastructure for events should be concealed from view as far as possible and integrated with existing structures to minimise clutter. In some cases, especially in spaces with infrequent events, a temporary infrastructure may be more appropriate.

PROPOSALS INCLUDE:

- 10 metre high 'bespoke' multi-purpose lighting columns with internally lit section, which will illuminate depending on tide heights. Each column is to include spotlights and provision for additional luminaires and infrastructure, such as gobo-projectors, festive lighting, WiFi, PA systems and banners.
- Water feature lighting.
- Lighting incorporated within steps and associated handrails.
- Uplighting of trees.
- Small power will be provided for third parties to provide additional lighting for temporary events.

SPACES

/ RIVER TERRACE & TOWPATH



The River Terrace will benefit from low levels of light. This will support both the surrounding ecology as well as the commercial operators (cafes, bars & restaurants) who will utilise the space at night.

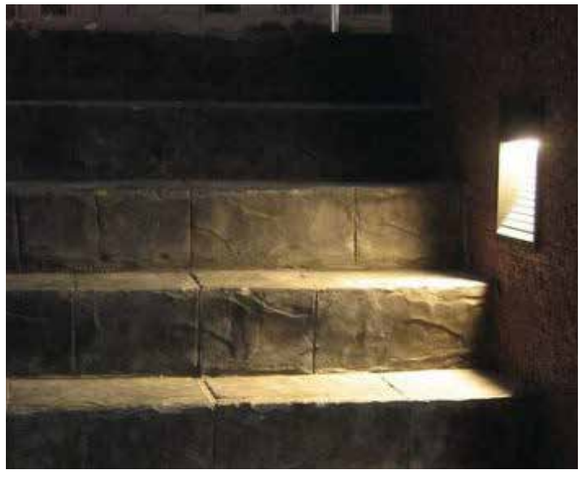
High level lighting is to be avoided as this is likely to provide glare and spill onto the river / towpath. Low level lighting will be provided by either bollards or luminaires recessed / incorporated within the retaining river wall. This approach will ensure safe levels of illumination, whilst providing a tranquil backdrop that protects surrounding ecology along the river edge.

A small amount of light will be provided to the steps that lead down to the towpath. This is required for safety reasons only. Light will be carefully focused on the step treads with no glare or upward spill.

The towpath will remain unlit.

PROPOSALS INCLUDE:

- Intergrated low level lighting or bollards.
- Low level lighting of steps







SPACES

/ RESIDENTIAL COURTYARDS



Aerial views experienced by residents in the tall buildings must be considered. The selective illumination of landscape and architectural features within Residential Courtyards, for example, can provide pleasant views for residents whilst supporting passive surveillance.

The wellbeing of residents and visitors will be promoted both through light and darkness. Light will help encourage use and provide a safe experience. Darkness will reinforce a closeness to nature and will help avoid light trespass and disturbance to sleep.

In general, all lighting should be low level, utilising bollards and landscape related lighting. Additional lighting to entrances should be added but controlled.

PROPOSALS INCLUDE:

- Low level bollards (1 metre max).
- Possible uplighting of trees.





SPACES

/ BOTTLEWORKS SQUARE



Bottleworks Square will be a tranquil and quite space by night.

Lighting will limited to routes and key landscape features only. This will include both trees and associated seating, which will be underlit with warm white light to clearly define the form and contribute to the amenity lighting.

Additional architectural lighting to surrounding facades should be considered as this will add depth and interest to the space.

The illumination of shopfronts / surrounding buildings will heavily influence the street level experience. Individual retail, bar and restaurant tenants should be encouraged to implement high quality illuminated windows where light can contribute to the overall ambience of the public realm.

PROPOSALS INCLUDE:

- 4 metre high columns around the perimeter of the square.
- Uplighting of trees.
- Architectural lighting to key facades and hard-landscape features.
- Small power will be provided for third parties to provide additional lighting if required after the curfew.







SPACES

/ PLAY AREAS

A single lighting column housing gobo-projectors and spotlights will be used to animate each of the play areas. The intention being to create a playful and dramatic look after dark - rather than just providing safe levels of illuminiation. Coloured lighting could be considered for these areas. All lighting should be switched off at the given curfew.

PROPOSALS INCLUDE:

- 10 metre high 'bespoke' multi-purpose lighting columns with internally lit section, which will illuminate depending on tide heights. Each column is to include spotlights and provision for additional luminaires and infrastructure, such as gobo-projectors, festive lighting, WiFi, PA systems and banners.









SPACES

/ SPORTS FIELD

Lighting is required to meet Sport England / FA requirements for Sports Pitch use after dark.

Lighting designs for both Class II and FA Class III have been developed, with both complying with the relevant ILP guidelines. Whilst both schemes are considered acceptable, the preference is for the FA Class lll scheme as this is deemed to be most appropriate when considering use and location.

Both lighting schemes have been designed to Sport England Outdoor Football Pitch Class guidelines and are based on 8 No 15m columns with 2 No luminaires on each column (16 No fittings in total). Luminaires for the Class ll scheme would be higher output.

The proposed luminaire (floodlight) contains an internal louvre, which limits spill in all directions as well as reducing light intensity and glare. An additional external louvre is also proposed to ensure that all efforts are made to reduce glare and light spill.

A detailed 'Sports Pitch Lighting Assessment' document has been prepared and is appended separately to this Provisional Lighting Masterplan.

4.4 ARCHITECTURE

The introduction of architectural lighting to surrounding buildings and structures will be hugely beneficial to the overall look and feel of the Stag Brewery development.

Lighting to buildings will provide depth and interest and add to the overall placemaking, which in turn, will support wayfinding and improve the general perception of the site after dark.

A tiered system has been developed, whereby Tier One is considered to be most important in terms of overall contribution to the site.

TIER ONE

- Maltings Building



TIER TWO

- Cinema
- The Bottleworks & Bottleworks Square
- Rowing Club


The Cinema


The Bottleworks

TIER THREE

- Commercial Facades (Retail / Bars & Restaurants)


Thames Street


Mortlake High Street

5.0 GLOSSARY

5.1 GLOSSARY

COLOUR RENDERING INDEX (CRI)
A scale of the colour appearance of an object under a particular light source compared to its colour appearance under a reference light source. Expressed on a scale of 1 to 100 where 100 represents the colour rendering of daylight.

COLOUR TEMPERATURE
A specification of the colour appearance of a light source, relating the colour to a reference source heated to a particular temperature, measured in Kelvin.

CONTRAST
The relationship between the luminance of an object and its background. The higher the contrast, the more likely it is an object can be seen.

GLARE
Glare causing discomfort which may impair the ability to see objects.

ILLUMINANCE
Illuminance is the quantity of light, or luminous flux, falling on a unit area of a surface.

LIGHT POLLUTION
The spillage of light into areas where it is not required.

LIGHT SPILL
This is the unwanted spillage of light onto adjacent areas and may affect sensitive receptors particularly residential properties and ecological sites.

LIGHT TRESPASS
Light that impacts on a surface outside of the area designed to be lit by a lighting installation.

LOUVRE
Assembly used to control light distribution from a luminaire.

LUMINAIRE
A lighting unit designed to distribute the light from a lamp or lamps.

LUX (LX)
Illuminance is the quantity of light, or luminous flux, falling on a unit area of a surface. It is designated by the symbol E. The unit is the lux (lx).

OPTIC
The components of a luminaire such as reflectors, refractors, protectors which make up the light emitting section.

OVERALL UNIFORMITY
Ratio of the lowest to highest road surface luminance on a set of grid points.

SKY GLOW
The brightening of the night sky caused by artificial lighting.

6.0 APPENDIX

Purpose of drawing:

Information Only

Drawing information:

1. Do not scale from this drawing
2. This drawing should be read in conjunction with the current set of luminaire specification sheets.
3. Exact luminaire locations will be confirmed prior to the commencement of works on site.
4. The number located within each reference represents the'control circuit' only. This may not be the same as the actual wiring circuit.
5. If in doubt, ASK!

Key:

- CA/1 - 4 metre high lighting column
- CA/2 - 6 metre high lighting column
- CA/3 - 10 metre bespoke lighting mast, with spotlights, gobo projectors, WiFi, CCTV and banners.
- CA/4 - 6 metre bespoke lighting mast, with spotlights.
- CA/5 - 15 metre high lighting column.
- BA/1 - 1 metre tall bollard.
- UA - Recessed inground uplights
- UB - Recessed inground uplights
- XA - Recessed inground uplights to water feature.
- AB/1-4 - Architectural lighting.
- LA/2 - Bench integrated linear lighting.
- LA/3 - Recessed step seating linear lighting.
- WA/1 - Recessed step luminaires.

Revisions:

MICHAEL GRUBB STUDIO

Project:

Stag Brewery

Drawing:

Provisional Lighting Layout for Planning Full Site

Client:		Scale:
Reselton Properties Ltd		**1:1000 on A1**
Drawn:	Checked:	Date:
WL	**MG**	**31st January 2018**

Drawing reference: Rev:

547-(00)-DR-EX-MP

From:	Shaun MacArthur
To:	Thatcher, Lucy
Cc:	Neil Henderson; Anna Gargan; Suzanne Robson
Subject:	RE: Addendum of D&A and Environmental Health (Noise and Light)
Date:	02 September 2019 14:49:36
Attachments:	Sports Pitch Lighting Assessment.pdf Lighting Masterplan.pdf image005.png image007.jpg image001.png image002.png image003.png image004.jpg

Dear Lucy,

By way of introduction, I am working with Neil, Suzanne and Anna on the Stag Brewery scheme.

Further to your email below the applicant has review the details requested by the suggested condition and can confirm the information requested has been previously provided within the submitted application documents (re-attached above for ease):

- A statement setting out why a lighting scheme is required, and the frequency and length of use in terms of hours of illumination during the summer and winter. See section 2.1 of submitted lighting strategy. Summer and winter times not included because the proposed pitch will be available for hire / use all year. Floodlights will be used from dusk until 11pm (latest), meaning that in the summer months they might not be used at all.
- Demonstration that recommended illuminance (the quantity of light falling on the court surface) and uniformity (minimum lighting level/average lighting level) and environmental lighting impact complies with the Sport England Design Guidance Note- Artificial Sports Lighting Updated guidance for 2012 Lighting calculations are contained within the appended assessments and are based on Sport England Document and ILP Guidance Notes for Obtrusive Light 2011 (see Sports Pitch Lighting Assessment).
- A site survey showing the area to be lit relative to the surrounding area, the existing landscape features together with proposed landscaping features to mitigate the impacts of the proposed lighting. See section 4 of submitted lighting strategy.
- Details of the make and catalogue number of any luminaires/floodlights. See section 4.2 of submitted lighting strategy and the submitted Sports Pitch Lighting Assessment.
- Size, type and number of lamps fitted within any luminaire or floodlight. See section 4.2 of submitted lighting strategy and the submitted Sports Pitch Lighting Assessment.
- The mounting height of the luminaires/floodlights specified. See section 4.2 of submitted lighting strategy and the submitted Sports Pitch Lighting Assessment.
- The location and orientation of the luminaires/floodlights. See section 4.2 of submitted lighting strategy and of the submitted Sports Pitch Lighting Assessment.
- A technical report prepared by a qualified Lighting Engineer or the lighting company setting out the type of lights, performance, height and spacing of lighting columns. The light levels to be achieved over the intended area, at the site boundary and for 25 metres outside it. A Sports Pitch Lighting Assessment was submitted with Application B.

Please can you review and confirm that this is sufficient to demonstrate that any proposed lighting will not cause a nuisance at this stage.

Kind regards,
Shaun

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From: Thatcher, Lucy <Lucy.Thatcher@richmondandwandsworth.gov.uk>
Sent: 28 August 2019 14:33
To: Suzanne Robson <SRobson@geraldeve.com>
Cc: Neil Henderson <NHenderson@geraldeve.com>; Anna Gargan <AGargan@geraldeve.com>
Subject: RE: Addendum of D&A and Environmental Health (Noise and Light)

Official

Suzanne – I have sent your comments for 1 and 2 below to the relevant officer. With respect to 3 , I asked in my original email I want these matters resolved prior to any recommendation. (this is also supported by Sports England). We need to demonstrate that any lighting will not cause a nuisance.

Please provide to prevent any delay.

Lucy

From: Suzanne Robson <SRobson@geraldeve.com>
Sent: 28 August 2019 08:21
To: Thatcher, Lucy <Lucy.Thatcher@richmondandwandsworth.gov.uk>
Cc: Neil Henderson <NHenderson@geraldeve.com>; Anna Gargan <AGargan@geraldeve.com>
Subject: RE: Addendum of D&A and Environmental Health (Noise and Light)

Lucy,

Thank you for sending us across the draft conditions from your EHO. We have reviewed the conditions with the client and the technical team and have the following response for each condition:

1. **Chalkers Corner** – **condition not agreed; not considered necessary.**

   The noise assessment (2018 ES and subsequent Noise Technical Notes (WIE10667-103-TN-1.1.3-Noise Summary Note dated August 2018 - appended to the May 2019 ES Addendum) predicts an **insignificant** change to existing receptors at Chertsey Court, Lower Richmond Road and Clifford Ave with all predicted change in noise level being less than 1dB. A scheme for further mitigation in respect of noise is not required to mitigate any impact from the proposed development itself (applications A, B and C) in terms of noise and the proposed condition is not necessary (including the requirement for this mitigation to be retained as approved).

Please note:

a. Low noise road surface: This is more applicable to motorways as where traffic speeds are lower than 50 km/h, traffic noise is mainly attributable to engine, transmission and exhaust noise, especially from lorries and buses. Where speeds are higher, the major component of traffic noise comes from the tyre/road interaction. A low noise surface may therefore have limited effect at this location.
b. Mechanical ventilation and glazing systems for existing properties: This can be discounted for noise as in order to qualify under the Noise Insulation Regulations, the following must apply for a duty to carry out insulation work or to make grants:
    i. The traffic noise level at one or more facades will increase by at least 1dB(A) and will be not less than the specified level of 68 dB(A) L10 (18 hour).
    ii. Noise caused or expected to be caused by traffic using the new or altered section of road will contribute at least 1dB(A) to the noise level.
    iii. The property must be within 300m of a carriageway forming part of the scheme.

2. **MUGA – <u>condition not agreed in its current form; suggested amendments proposed.</u>**

A condition to prepare a scheme to protect noise sensitive premises against noise generated from the use of the Sports Pitches and Multi Games Use Area (MUGA) is acceptable. However, compliance with a noise limit of 50dB LAeq is too prescriptive given the existing measured noise levels at Williams Lane (60dB during the day and 58dB during the evening) and Lower Richmond Road (71dB during the day and 69dB during the evening).

Additionally, the Sports England 2015 Design Guidance Note on AGPs [MUGA] states that *"Where noise from the new source (the AGP) does not exceed the existing noise climate the increase in noise will be no more than 3 decibels. This is the minimum that can normally be perceived."* On this basis, it would be reasonable to have a higher noise emission from the MUGA than 50dB LAeq at the existing receptor and for it still to be acceptable. Furthermore, the level of 50dB LAeq has been adopted by Sports England from WHO Guidelines for Community Noise –*" to avoid 'moderate annoyance' during the daytime and evening the noise level should not exceed 50 dB LAeq(T)."*

On the above, we suggest the planning condition is revised as follows:

"A scheme to protect noise sensitive premises against noise generated from the use of the Sports Pitches and Multi Games Use Area (MUGA) shall be submitted to and approved by the LPA. The scheme shall refer to the guidance contained within Artificial Grass Pitch (AGP) Acoustics - Planning Implications 2015, produced by Sports England. Where the equivalent continuous sound Level LAeq,1 hour emitted from the use of the Sports Pitches and Multi Games Use Area (MUGA) to which the application refers, as measured or predicted (1 metre from the façade adjusted to a free-field value) at a representative noise sensitive premises (residential, hospital or school) to include;

- ***Williams lane***
- ***Lower Richmond Rd***
- ***New residential dwellings within the development***

shall seek to achieve 50dB(A) LAeq,1hour and no more than the prevailing noise levels at the receptor when measured or predicted over a 1 hour period, whichever is greater. An acoustic report shall be submitted and approved in writing by the LPA before the first use of the development in order to demonstrate compliance with the condition. Hours of use for the sports facilities will be agreed in writing with the LPA."

3. **Sports lighting control scheme – <u>condition agreed.</u>**

Please could you review points 1 and 2 with your EHO and come back to us. Thank you.

Kind regards

Suzanne

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From: Thatcher, Lucy <Lucy.Thatcher@richmondandwandsworth.gov.uk>
Sent: 20 August 2019 17:34
To: Neil Henderson <NHenderson@geraldeve.com>; Suzanne Robson <SRobson@geraldeve.com>
Subject: Addendum of D&A and Environmental Health (Noise and Light)

Official

Neil / Suzanne

Following on from our meeting this afternoon, please find attached a copy of my initial notes on the D&A addendum. The issues are identified in yellow.

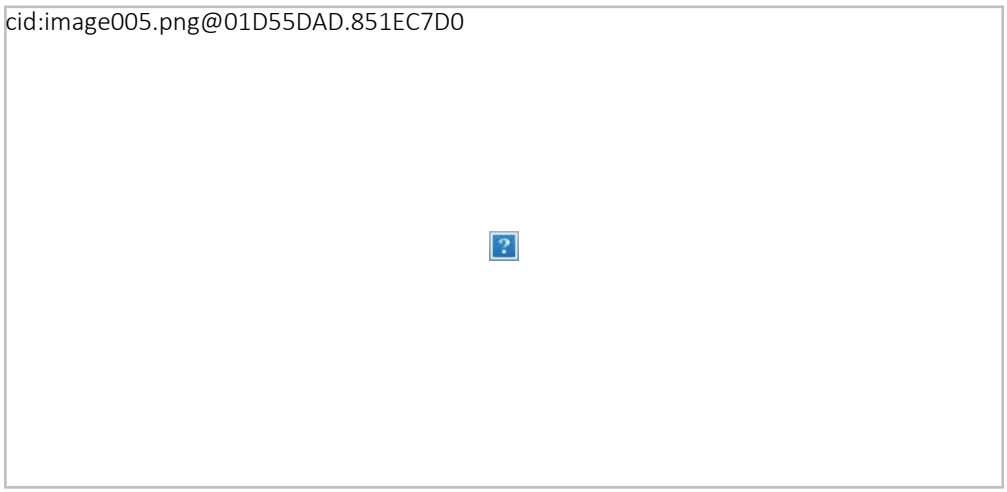
Regarding Environmental Health comments, a couple of conditions are recommended, however, these cannot be imposed because they either concern land outside your ownership and control (with no feasibility to achieving such), or the necessary requirements may not be achievable.

Therefore they all need to be addressed prior to a recommendation being made. Please provide the necessary information ASAP.

1. Reconfiguration of Chalkers Corner

Before construction of the reconfiguration of Chalkers Corners, a noise and ventilation mitigation scheme shall be submitted to and approved in writing by the local planning authority which protects residential properties on Chertsey Court and Lower Richmond Road, identified in red on the aerial photograph below, from any increase in LA10,18hr or LAMax noise levels due to road traffic noise associated with the reconfiguration of Chalkers Corner. Mitigation should include measures such as increased height to the proposed barrier, low noise road surface and the provision of mechanical ventilation and enhanced gazing

systems for qualifying properties. The scheme shall thereafter be retained as approved.



2. Sports Playing Facilities and Multi Games Use Area (MUGA) Noise Control Condition

A scheme to protect noise sensitive premises against noise generated from the use of the Sports Pitches and Multi Games Use Area (MUGA) shall be submitted to and approved by the LPA. The scheme shall refer to the guidance contained Artificial Grass Pitch (AGP) Acoustics - Planning Implications 2015, produced by Sports England and demonstrate compliance with the requirements below. Any works which form part of the scheme shall be completed in accordance with the approved details before the first use of the proposed development.

The equivalent continuous sound Level LAeq,T emitted from the use of the Sports Pitches and Multi Games Use Area (MUGA) to which the application refers, as measured (1 metre from the façade) (on the boundary of) representative noise sensitive premises (residential, hospital or school) to include;

- Williams lane
- Lower Richmond Rd
- New residential dwellings within the development

or when measured elsewhere and calculated to said locations, shall not exceed 50dB(A) LAeq,1hour at all times that the Sports Pitches and MUGA's are in use;

A commissioning acoustic test and report shall be undertaken before the first use of the development in order to demonstrate that condition above has been achieved. The results of the test shall be submitted to and approved in writing by the LPA.

Hours of use for the sports facilities will be agreed in writing with the LPA.

3. Sports Lighting Control Scheme

Artificial lighting shall not be installed until full and precise details have been submitted to and approved by the Local Planning Authority. The approved scheme shall be constructed and installed in full accordance with the approved details and shall thereafter be maintained in full accordance with the approved details.

To enable the scheme to be assessed the following information must be supplied to the LPA.

- A statement setting out why a lighting scheme is required, and the frequency and length of use in terms of hours of illumination during the summer and winter.
- Demonstration that recommended illuminance (the quantity of light falling on the court surface) and uniformity (minimum lighting level/average lighting level) and environmental lighting impact complies with the Sport England Design Guidance Note- Artificial Sports Lighting Updated guidance for 2012
- A site survey showing the area to be lit relative to the surrounding area, the existing landscape features together with proposed landscaping features to mitigate the impacts of the proposed lighting.
- Details of the make and catalogue number of any luminaires/floodlights.
- Size, type and number of lamps fitted within any luminaire or floodlight.
- The mounting height of the luminaires/floodlights specified.
- The location and orientation of the luminaires/floodlights.
- A technical report prepared by a qualified Lighting Engineer or the lighting company setting out the type of lights, performance, height and spacing of lighting columns. The light levels to be achieved over the intended area, at the site boundary and for 25 metres outside it.

Regards

Lucy Thatcher
Strategic Applications Manager (Richmond)
Serving Richmond and Wandsworth Councils

Tel: 0208 891 1411
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MICHAEL GRUBB STUDIO



Stag Brewery, Mortlake

Sports Pitch Lighting Assessment

For Reselton Properties

February 2018

Former Stag Brewery, Mortlake.

Sports Pitch Lighting Assessment Summary

Document: 547-(010)-RP-EX-LA

February 2018

Introduction

Michael Grubb Studio (the Lighting Consultant) has considered various lighting options for the Sports Pitch. The challenge being to provide appropriate levels of illumination and uniformity for Sport England / FA without over-lighting and creating excessive glare or light spill into adjacent properties.

Lighting designs for both Class II and FA Class III have been developed, with both complying to the relevant ILP guidelines. These lighting designs are detailed in the appended documents. Whilst both schemes are considered acceptable, the preference is for the FA Class lll scheme as this is deemed to be most appropriate when considering use and location.

Design & Specification

Both lighting schemes have been designed to Sport England Outdoor Football Pitch Class guidelines, which are:

- Class lll FA Standard = 120 lux ave, 0.6 Uo 60 Ra.
- Class II = 200 lux ave, 0.6 Uo 60 Ra

Both schemes are based on 8 No 15m columns with 2 No luminaires on each column. 16 No fittings in total. Luminaires for the Class ll scheme would be higher output.

The proposed luminaire (floodlight) from Phillips Lighting contains an internal louvre, which limits spill in all directions as well as reducing light intensity and glare. An additional external louvre is also proposed to ensure that all efforts are made to reduce glare and light spill.

Compliance

Lighting calculations are contained within the appended assessments and are based on Sport England Document and ILP Guidance Notes for Obtrusive Light 2011.

Lighting calculations also include 3 No. 'Observer' locations for each row of houses at 1.5m height (as this represents a person looking out the window). The Maximum Lighting Intensity Obtrusive Light towards each observer is considered acceptable and within ILP Guidelines.

Finally, it should be noted that a 'worst case' scenario approach has been taken in order to ensure a robust assessment – in reality, soft landscaping proposals around the perimeter of the school site (Application B) , especially on the western site boundary, will further protect residents from any impact relating to artificial light.

www.michaelgrubbstudio.com

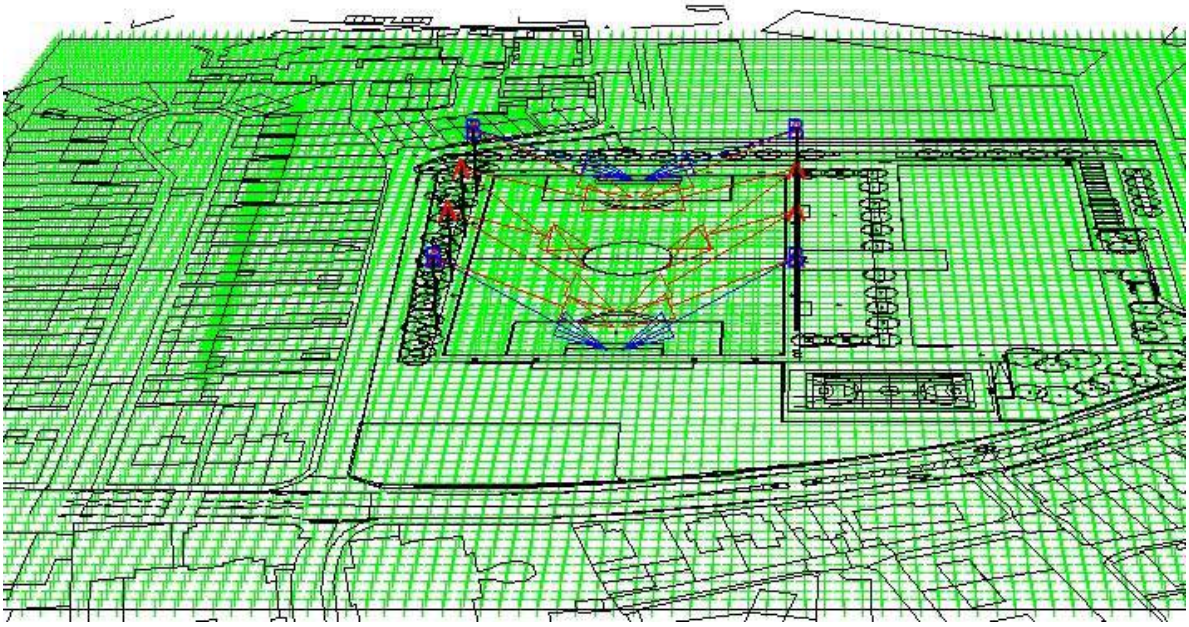
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Mortlake Stage Brewery Development

F/ball Pitch LED Ltg15m 120 Lx 0.6 U0 LO

Project code:	0400061129, D-227389
Date:	31-01-2018
Customer:	Michael Grubb Studios
Customer Representative:	Alastair Aiken
Designer:	Steve Johnston



The nominal values shown in this report are the result of precision calculations, based upon precisely positioned luminaires in a fixed relationship to each other and to the area under examination. In practice the values may vary due to tolerances on luminaires, luminaire positioning, reflection properties and electrical supply.

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E-Mail: steve.johnston@philips.com

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1. Project Description

1.1 Description

Designed to Sport England Outdoor Football Pitch Class II
FA Standard = 200 lux ave, 0.6 Uo
60 Ra

Pitch now rotated 90 degrees and new drawing layout included

MF for OptiVivision LED Sports Lighting = 0.9 MF

8 No 15m columns with 2 No luminaires on each

Luminaires are Philips OptiVision LED luminaires with Louvre
BVP525 OUT T15 100K 1xLED1940/740 A-NB/30 +LO = 4 No
BVP525 OUT T15 100K 1xLED1940/740 A-WB/30 +LO = 12 No

16 No fittings in total
GR Max claculation shown on Pitch grid

Grid points doubled to be within 5m spacing. Not placed on lines as helps Calculation result and not required for Commissioning results.

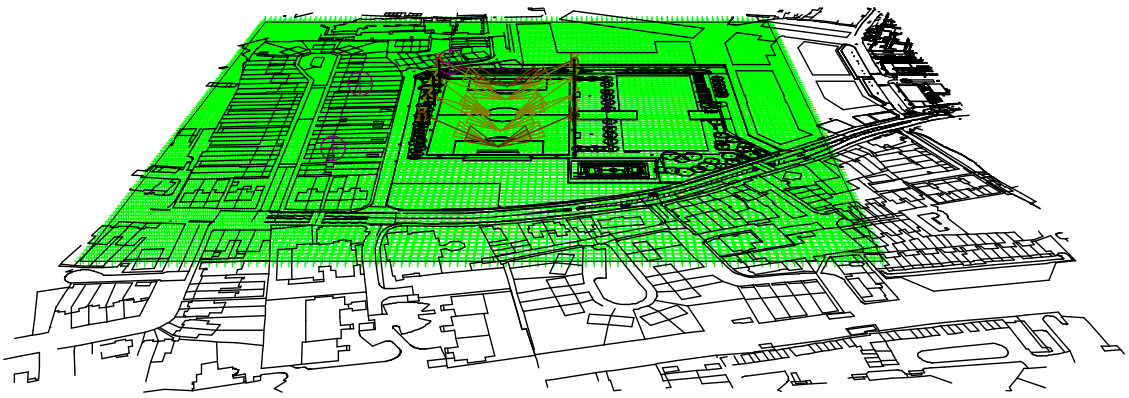
Spill Light Isocontours are shown outside Pitch Area based upon the Spill Light levels shown in Sport England Document and ILP Guidance Notes for Obtrusive Light 2011. These are 2,5,10 & 25 lux levels.
Spill lighting iso-contour results are shown with an MF of 1.0 which is worst case when newley installed.

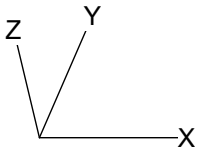
Pre Curfew Spill light through windows are E1 = 2 lux, E2 = 5 lux, E3 = 10 lux, calculation with internal louvre fitted is below 5 lux so conforms wit E2-E4 Zones. Observers at houses added @ 1.5m for Lighting Intensity Calc

Tilt angles are no higher than 68 degree peak beam.
Peak beam angle included in Tilt 90 of calculation so
68 deg peak beam tilt (38 degree Physical housing tilt as 30 deg asymmetric)

Louvres are fitted internally around each LED to reduce spill in all directions Light intensity at angles and glare reduction.

1.2 3-D Project Overview





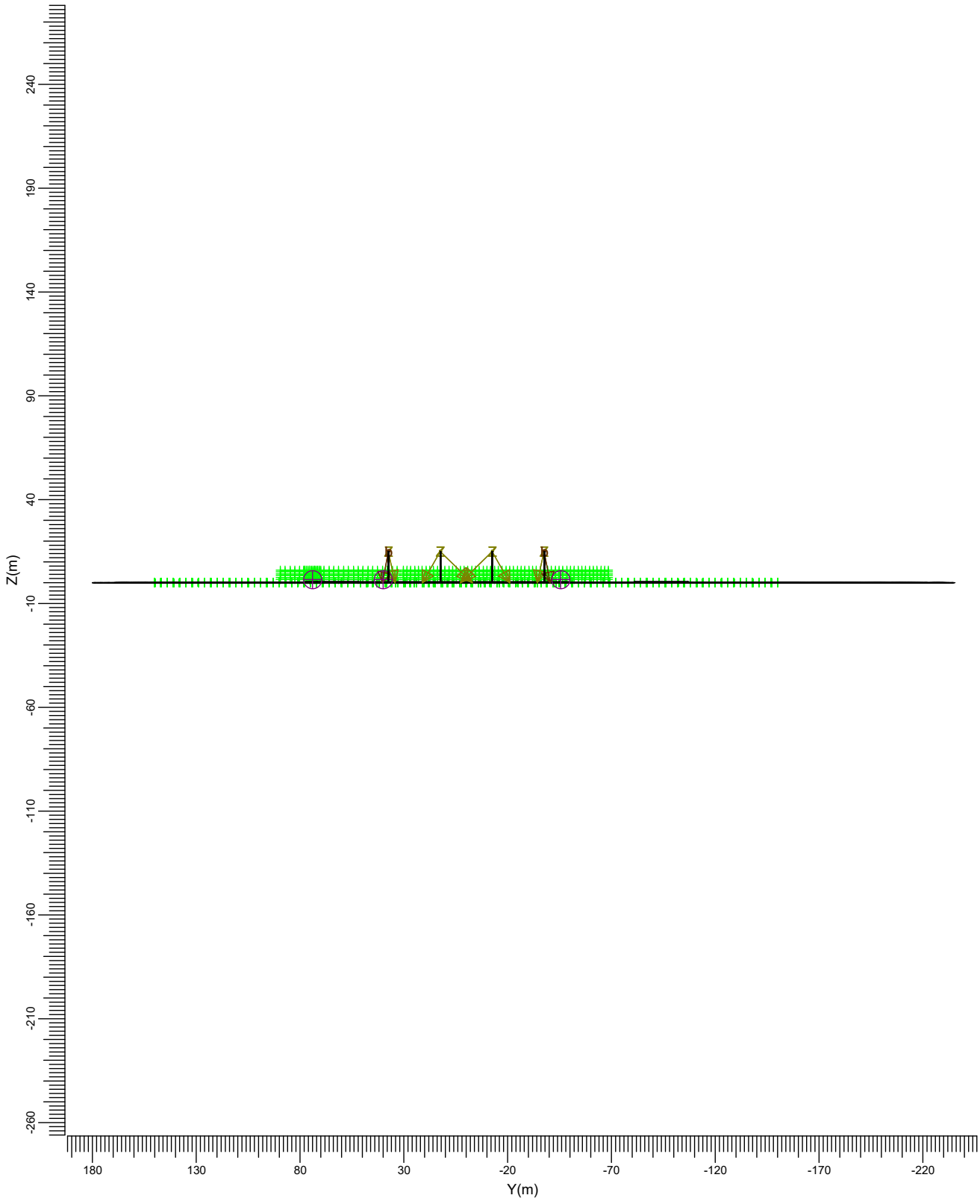
G BVP525 OUT T15 100K A-VWB/ N BVP651 T25 DW10 BL1
Z BVP515 OUT T15 100K A-WB/3 b BVP515 OUT T15 100K A-NB/30

1.3 Top Project Overview



Scale
1:2500

1.4 Left Project Overview



Scale
1:2500

2. Summary

2.1 Observer Information

Code	Observer	Position		
		X (m)	Y (m)	Z (m)
Aa	North Houses	-33.00	74.00	1.50
Bb	North West Houses	-76.00	40.00	1.50
Cc	South West Houses	-74.50	-45.50	1.50

2.2 Obstacle Information

Obstacle	Transparency (%)	Position		
		X (m)	Y (m)	Z (m)
Corner Columns	0	-34.50	-37.50	0.00
		34.50	-37.50	0.00
		-34.50	37.50	0.00
		34.50	37.50	0.00
Centre Columns	0	-34.50	-12.50	0.00
		34.50	-12.50	0.00
		-34.50	12.50	0.00
		34.50	12.50	0.00

2.3 Project Luminaires

Code	Qty	Luminaire Type	Lamp Type	Power (W)	Flux (lm)
Z	12	BVP515 OUT T15 100K A-WB/30 +LO	1 * LED1290/740	917.2	1 * 122450
b	4	BVP515 OUT T15 100K A-NB/30 +LO	1 * LED1290/740	917.2	1 * 122450

The total installed power: 14.68 (kWatt)

Number of Luminaires Per Switching Mode:

Switching Mode	Luminaire Code		Power (kWatt)
	Z	b	
Performance	12	4	14.68
Spill Ltg	12	4	14.68

Number of Luminaires Per Arrangement:

Arrangement	Luminaire Code		Power (kWatt)
	Z	b	
Centre Columns	0	0	0.00
Centre Columns plus 1m	0	0	0.00
End Columns	4	4	7.34
End Columns plus 1m	0	0	0.00
Half way line 1	0	0	0.00
Half way line 2	8	0	7.34
Half way line 3	0	0	0.00
Half way line 4	0	0	0.00

2.4 Calculation Results

Switching Modes:

Code	Switching Mode	Maintenance factor
1	Performance	0.90
2	Spill Ltg	1.00

(Il)luminance Calculations:

Calculation	Switching Mode	Type	Unit	Ave	Min	Max	Min/Ave	Min/Max	CV
Football	1	Surface Illuminance	lux	144	93	188	0.65	0.50	
Spill Ltg Grid	2	Surface Illuminance	lux						
Ev West houses @1.5m-6m	2	Surface Illuminance	lux	0.17	0.10	0.24	0.61	0.43	
Ev NWest house @1.5m-6m	1	Surface Illuminance	lux	0.11	0.06	0.19	0.55	0.33	0.311
Ev Nth houses @1.5m-6m1	1	Surface Illuminance	lux	0.39	0.22	0.75	0.55	0.29	0.281

Glare Rating for Grid of Observers:

Calculation	Switching Mode	Observer Grid	Reference Grid	Reflectance	GR-Max
GR Max for Pitch	1	Football	Football	0.25	43.9

Obtrusive Light Calculations:

Switching Mode	Observer Code	Luminaire Code	Position			Aiming Angles			Maximum Intensity (cd)
			X (m)	Y (m)	Z (m)	Rot.	Tilt90	Tilt0	
1	Aa	Z	34.50	12.50	15.00	166.07	67.00	0.00	911
1	Bb	Z	34.50	-12.50	15.00	-166.07	67.00	-0.00	643
1	Cc	Z	34.50	12.50	15.00	166.07	67.00	0.00	690

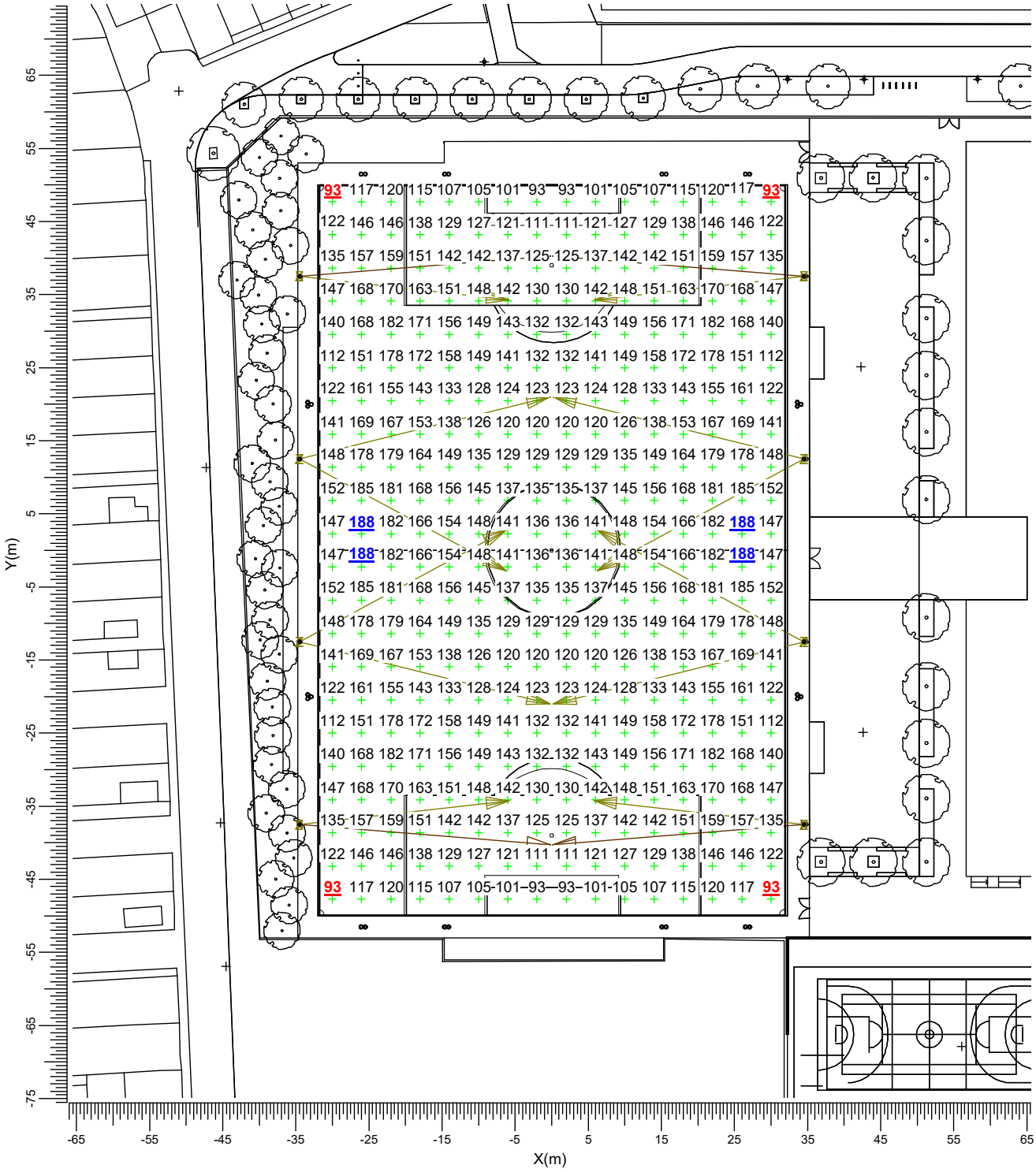
Switching Mode	ULR
1	0.00
2	0.00

3. Calculation Results

3.1 Football: Graphical Table

Performance

Grid : Football at Z = -0.00 m
Calculation : Surface Illuminance (lux)



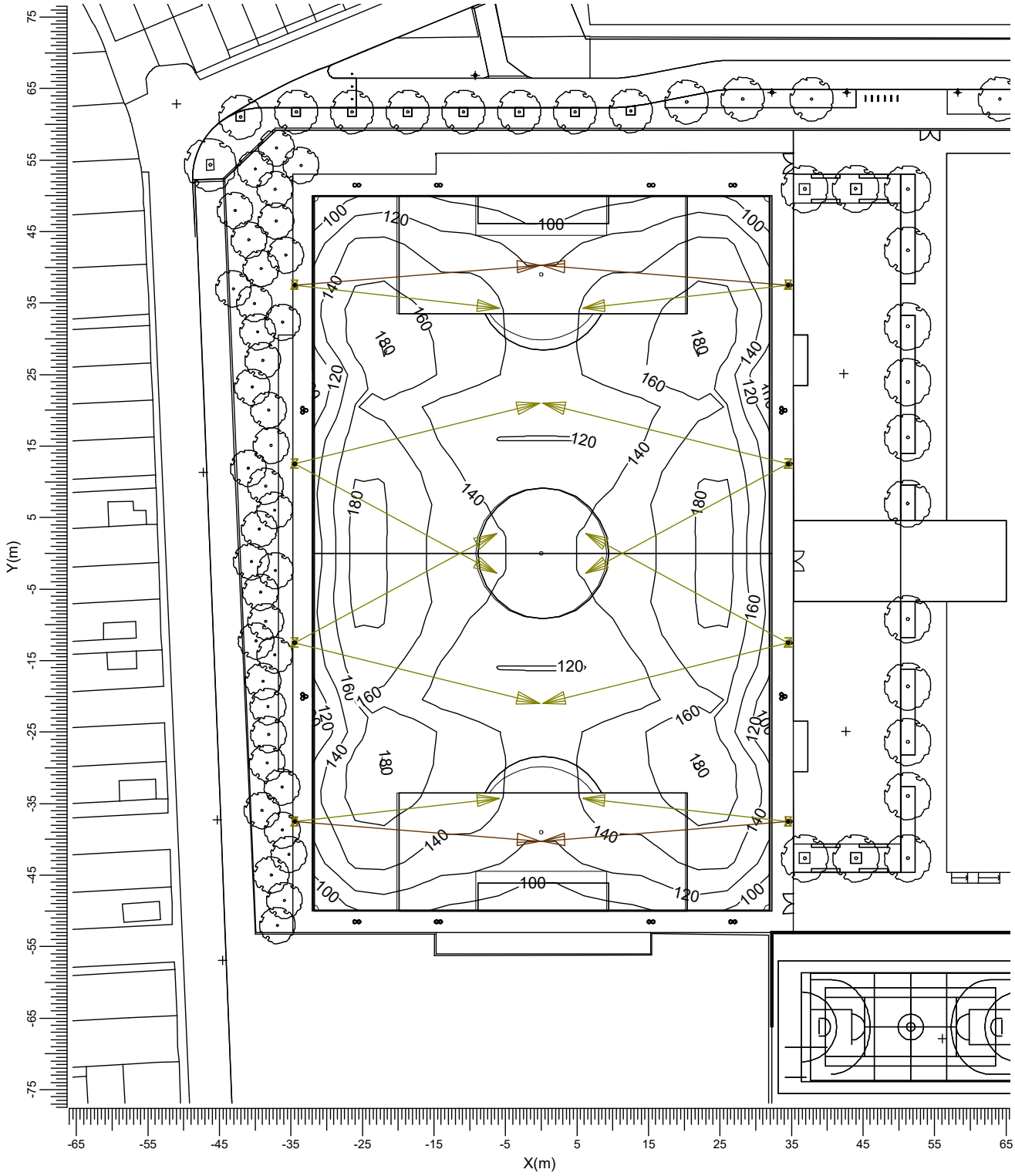
G BVP525 OUT T15 100K A-VWB/ N BVP651 T25 DW10 BL1
Z BVP515 OUT T15 100K A-WB/3 b BVP515 OUT T15 100K A-NB/30

Average	Minimum	Maximum	Min/Ave	Min/Max	Project maintenance factor	Scale
144	93	188	0.65	0.50	0.90	1:750

3.2 Football: Iso Contour

Performance

Grid : Football at Z = -0.00 m
Calculation : Surface Illuminance (lux)



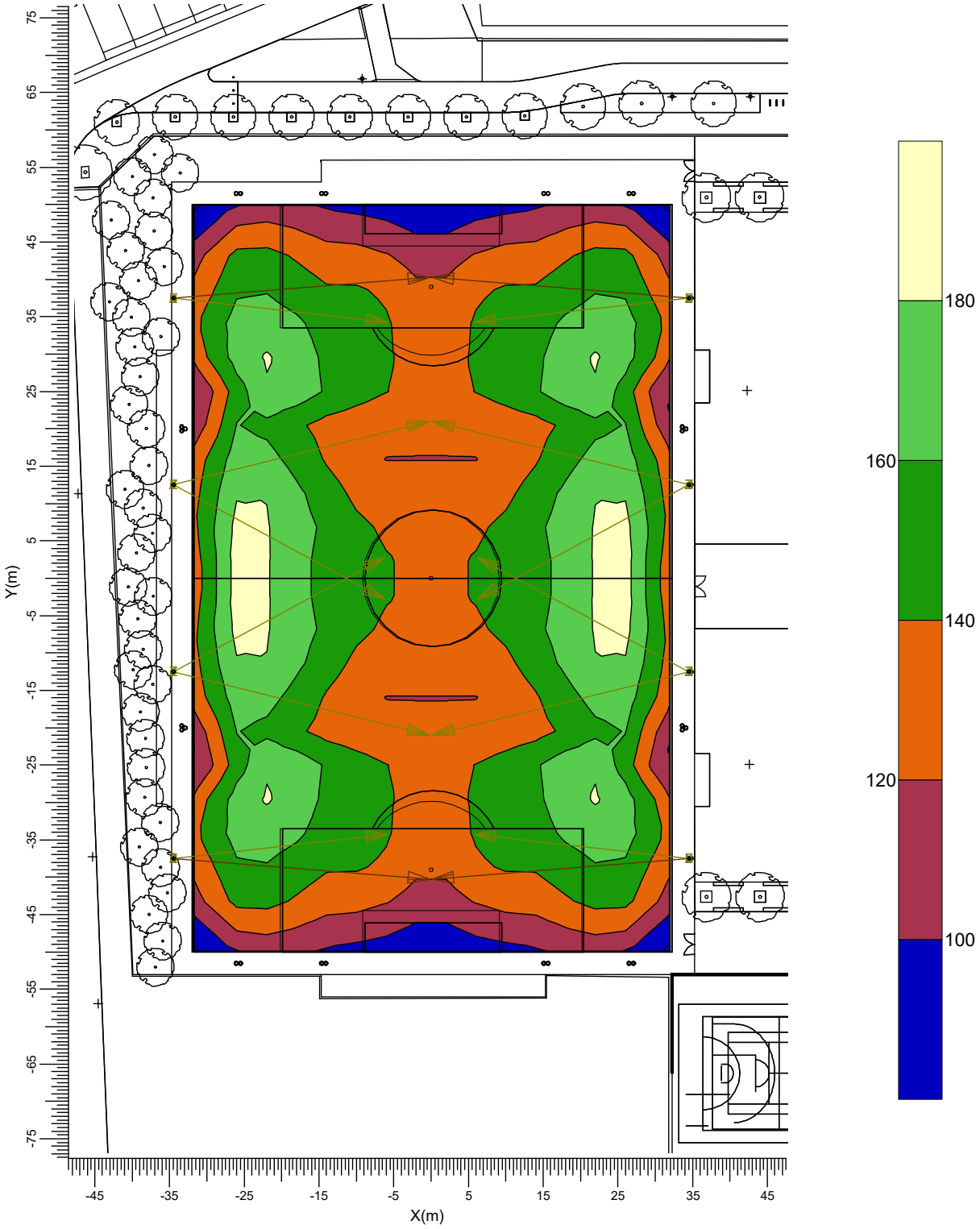
G BVP525 OUT T15 100K A-VWB/ N BVP651 T25 DW10 BL1
Z BVP515 OUT T15 100K A-WB/3 b BVP515 OUT T15 100K A-NB/30

Average	Minimum	Maximum	Min/Ave	Min/Max	Project maintenance factor	Scale
144	93	188	0.65	0.50	0.90	1:750

3.3 Football: Filled Iso Contour

Performance

Grid : Football at Z = -0.00 m
Calculation : Surface Illuminance (lux)



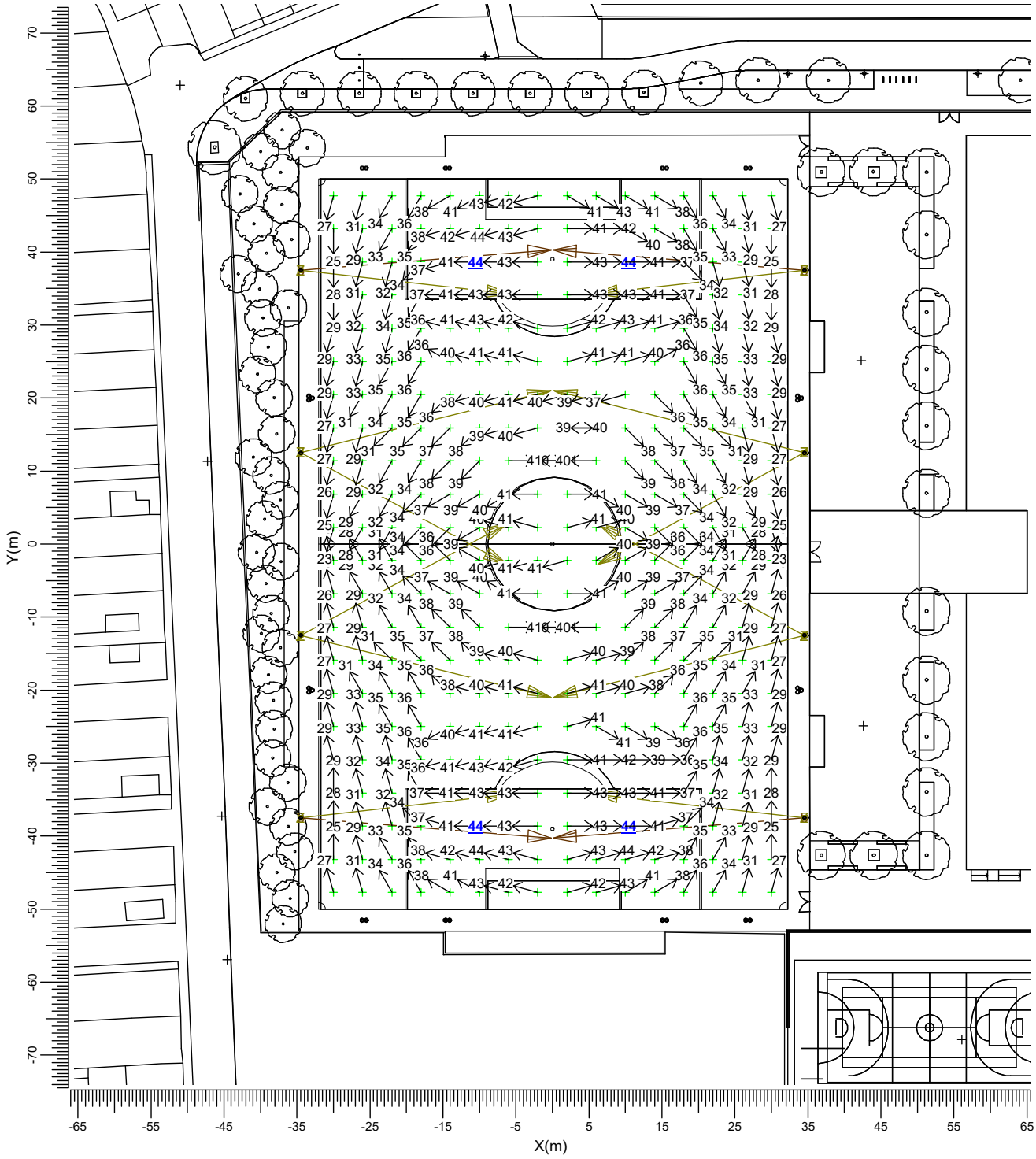
G BVP525 OUT T15 100K A-VWB/ N BVP651 T25 DW10 BL1
Z BVP515 OUT T15 100K A-WB/3 b BVP515 OUT T15 100K A-NB/30

Average	Minimum	Maximum	Min/Ave	Min/Max	Project maintenance factor	Scale
144	93	188	0.65	0.50	0.90	1:750

3.4 GR Max for Pitch: Graphical Table

Performance

Grid of Observers : Football
Calculation : Glare Rating
Grid for Background Luminance : Football (Reflectance: 0.25)
Vertical Viewing Angle : -2.0 deg



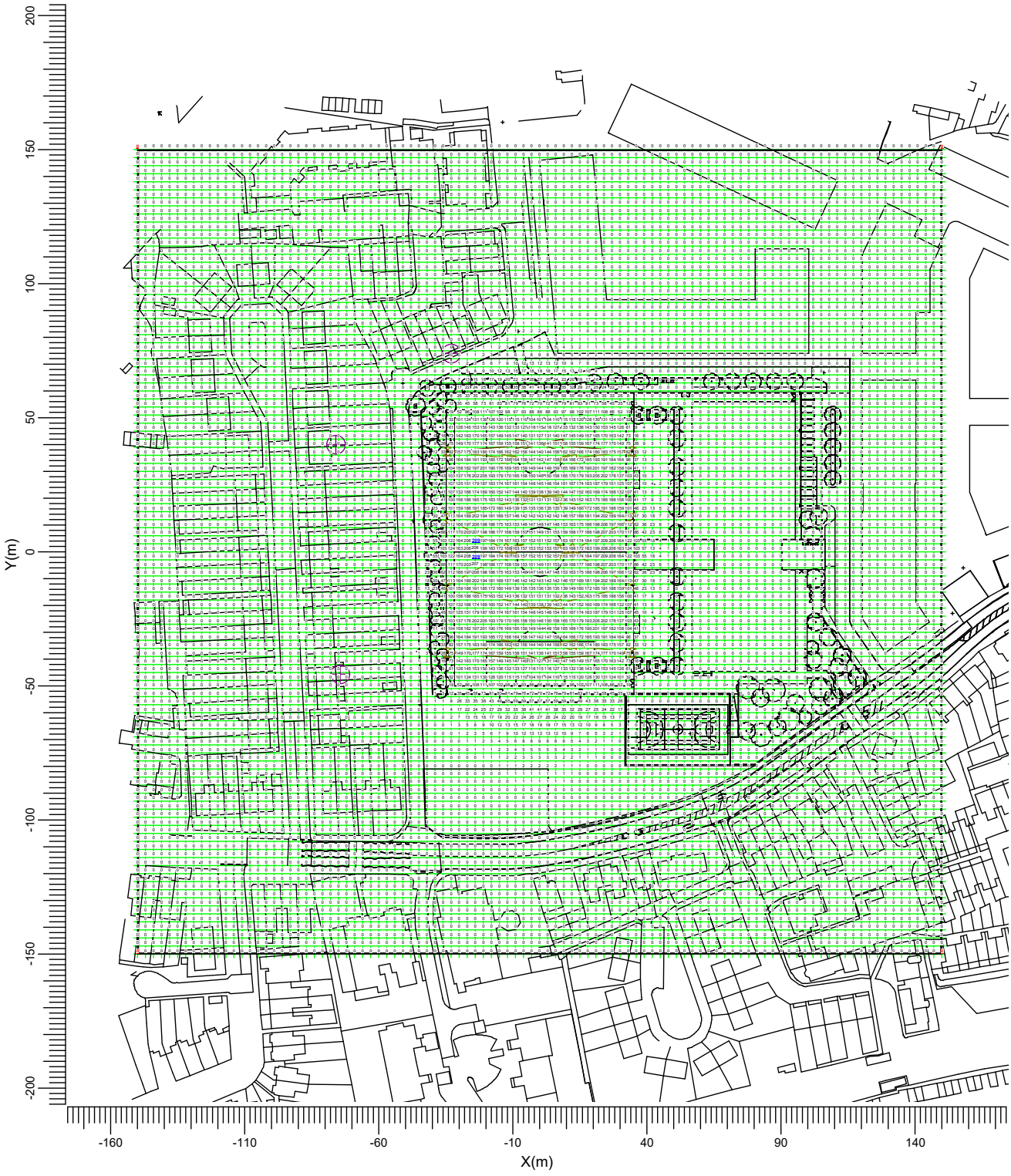
G BVP525 OUT T15 100K A-VWB/ N
Z BVP515 OUT T15 100K A-WB/3 b
BVP651 T25 DW10 BL1
BVP515 OUT T15 100K A-NB/30

Maximum	Project maintenance factor	Scale
43.9	0.90	1:750

3.5 Spill Ltg Grid: Graphical Table

Spill Ltg

Grid : Spill Ltg Grid at Z = -0.00 m
Calculation : Surface Illuminance (lux)



G BVP525 OUT T15 100K A-VWB/ N
Z BVP515 OUT T15 100K A-WB/3 b
BVP651 T25 DW10 BL1
BVP515 OUT T15 100K A-NB/30

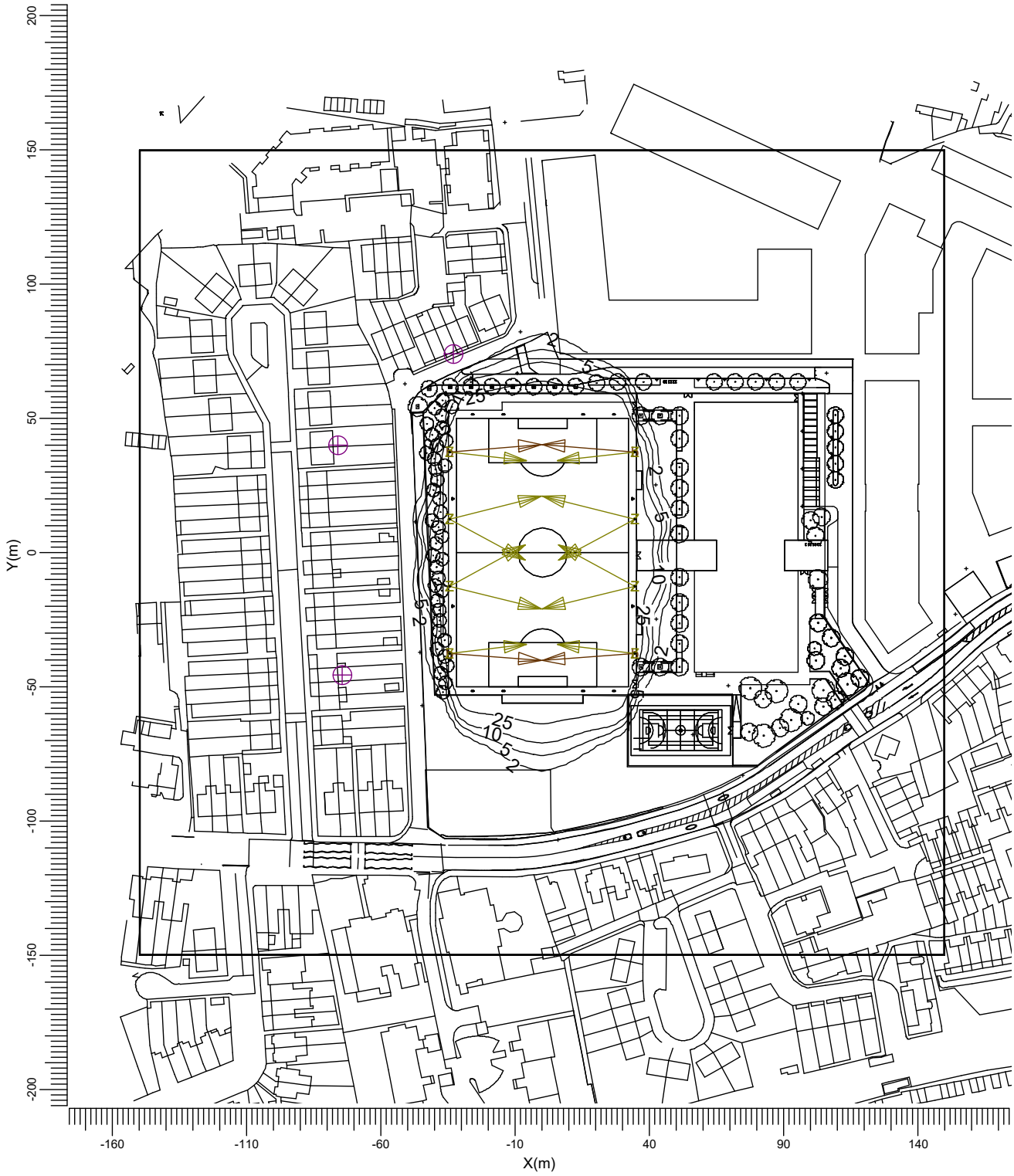
Project maintenance factor
1.00

Scale
1:2000

3.6 Spill Ltg Grid: Iso Contour

Spill Ltg

Grid : Spill Ltg Grid at Z = -0.00 m
Calculation : Surface Illuminance (lux)



G → BVP525 OUT T15 100K A-VWB/3 Z → BVP515 OUT T15 100K A-WB/3
N → BVP651 T25 DW10 BL1 b → BVP515 OUT T15 100K A-NB/30

Project maintenance factor
1.00

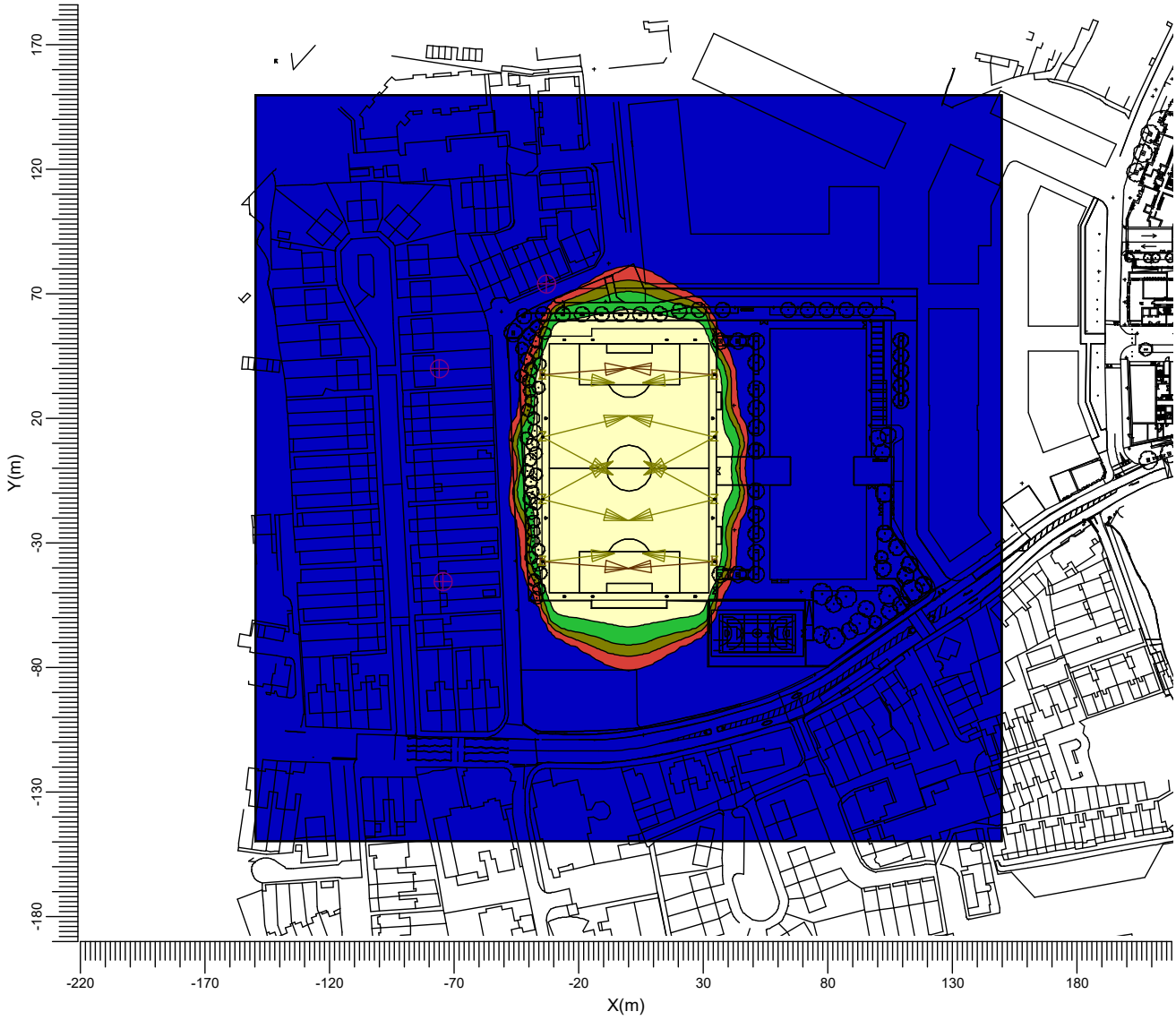
Scale
1:2000

3.7 Spill Ltg Grid: Filled Iso Contour

Spill Ltg

Grid : Spill Ltg Grid at Z = -0.00 m
Calculation : Surface Illuminance (lux)





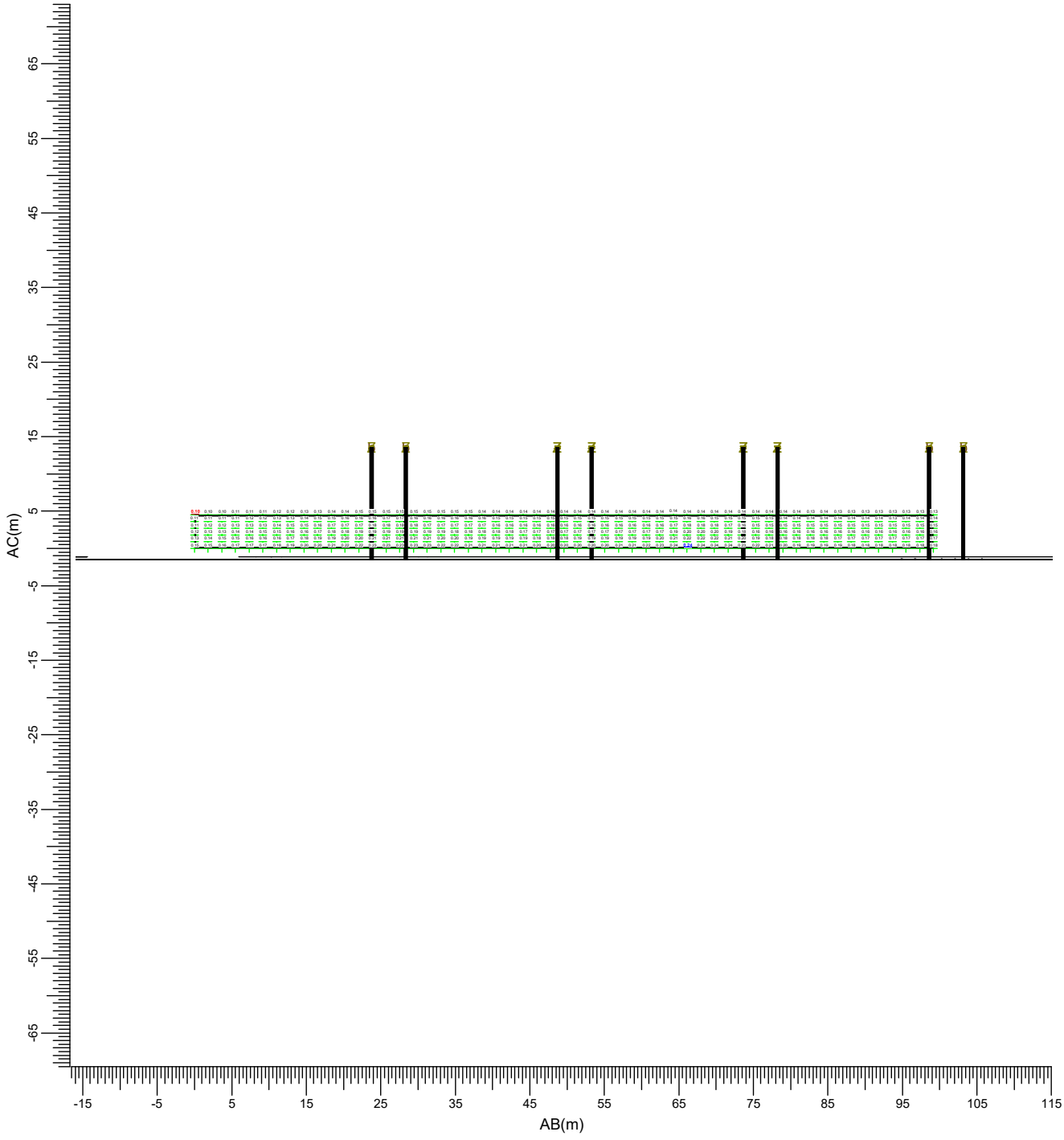
G BVP525 OUT T15 100K A-VWB/ N BVP651 T25 DW10 BL1
Z BVP515 OUT T15 100K A-WB/3 b BVP515 OUT T15 100K A-NB/30

Project maintenance factor
1.00

Scale
1:2500

3.8 Ev West houses @1.5m-6m: Graphical Table Spill Ltg

Grid : Ev West houses @1.5m-6m
Calculation : Surface Illuminance (lux)



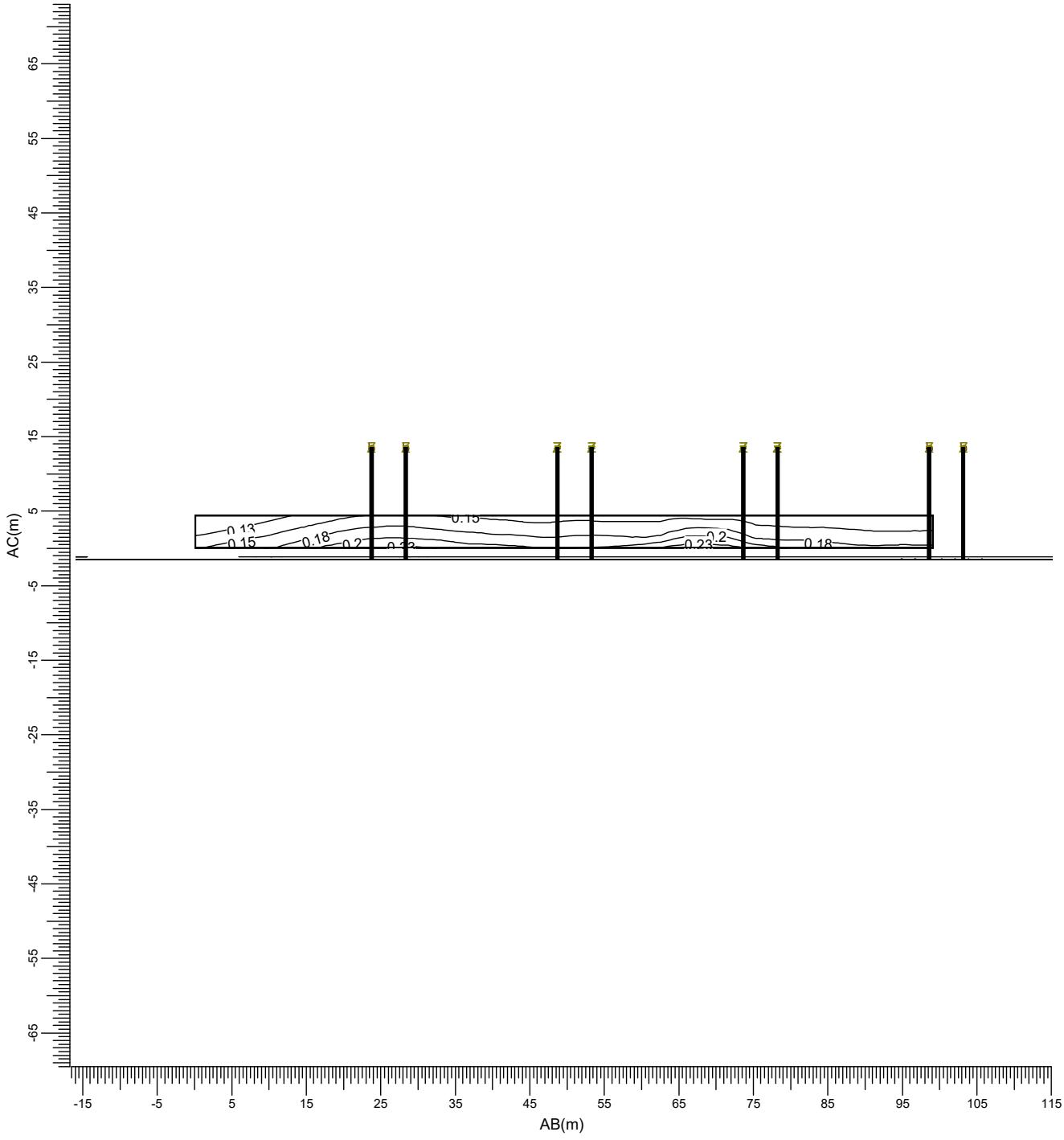
(-73.29, -68.50, 6.00) C-----D (-79.88, 30.44, 6.00)
| |
(-73.29, -68.50, 1.50) A-----B (-79.88, 30.44, 1.50)

G : BVP525 OUT T15 100K A-VWB/30 N : BVP651 T25 DW10 BL1
Z : BVP515 OUT T15 100K A-WB/30 +LO b : BVP515 OUT T15 100K A-NB/30 +LO

Average	Minimum	Maximum	Min/Ave	Min/Max	Project maintenance factor	Scale
0.17	0.10	0.24	0.61	0.43	1.00	1:750

3.9 Ev West houses @1.5m-6m: Iso Contour Spill Ltg

Grid : Ev West houses @1.5m-6m
Calculation : Surface Illuminance (lux)



(-73.29, -68.50, 6.00) C-----D (-79.88, 30.44, 6.00)
| |
(-73.29, -68.50, 1.50) A-----B (-79.88, 30.44, 1.50)

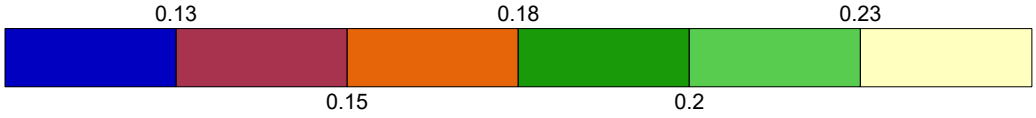
G : BVP525 OUT T15 100K A-VWB/30 N : BVP651 T25 DW10 BL1
Z : BVP515 OUT T15 100K A-WB/30 +LO b : BVP515 OUT T15 100K A-NB/30 +LO

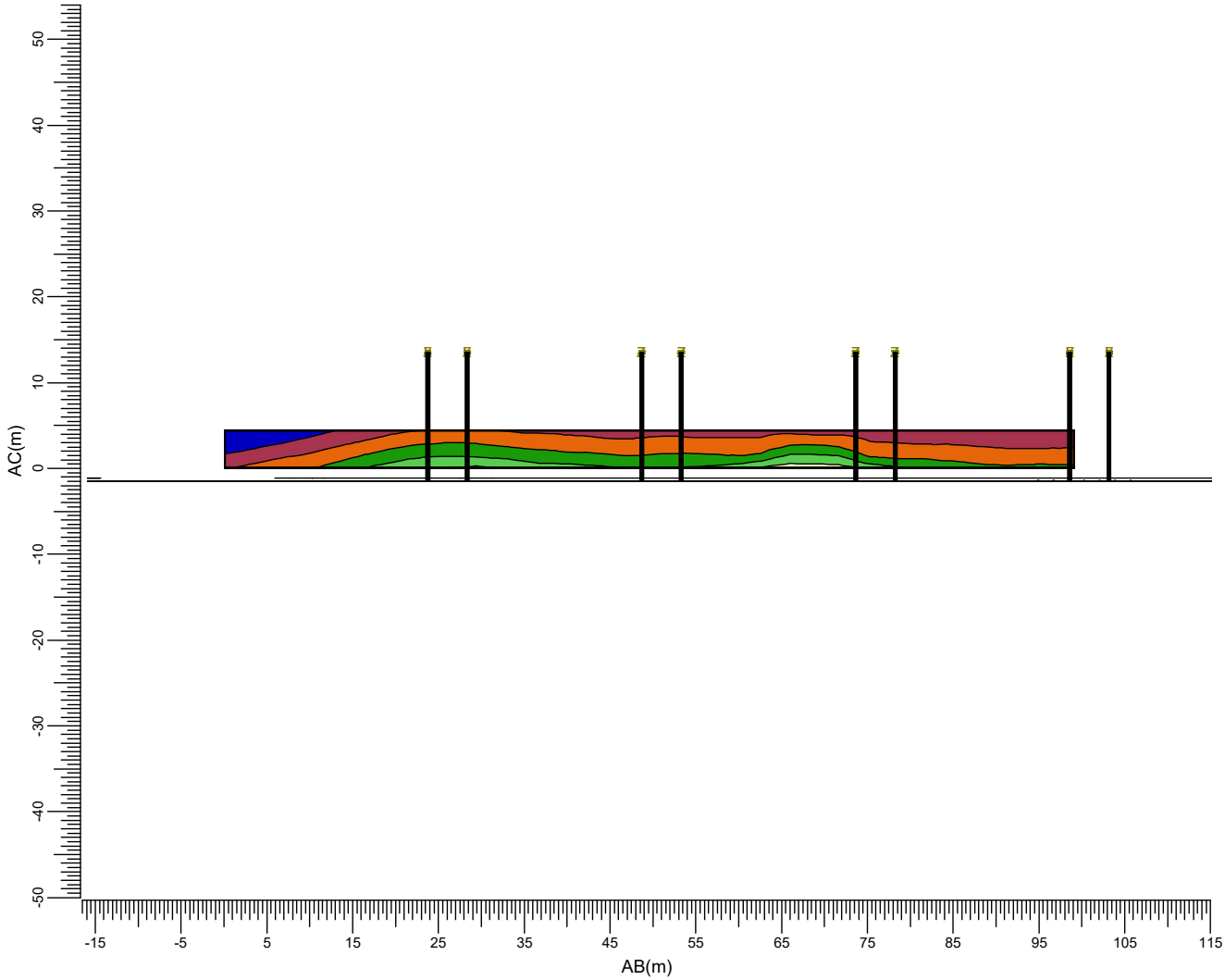
Average	Minimum	Maximum	Min/Ave	Min/Max	Project maintenance factor	Scale
0.17	0.10	0.24	0.61	0.43	1.00	1:750

3.10 Ev West houses @1.5m-6m: Filled Iso Contour

Spill Ltg

Grid : Ev West houses @1.5m-6m
Calculation : Surface Illuminance (lux)





(-73.29, -68.50, 6.00) C-----D (-79.88, 30.44, 6.00)
(-73.29, -68.50, 1.50) A-----B (-79.88, 30.44, 1.50)

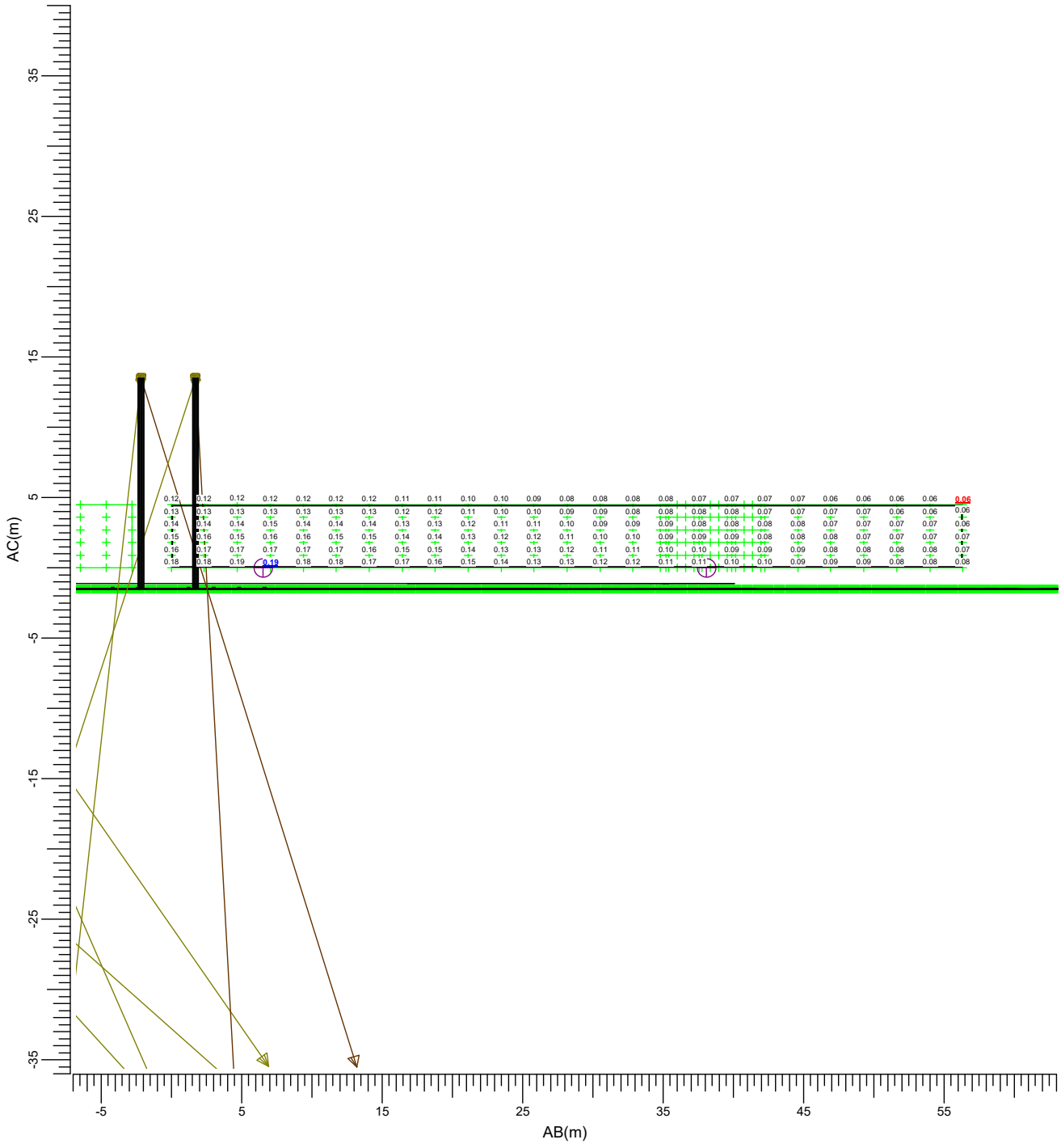
G : BVP525 OUT T15 100K A-VWB/30
Z : BVP515 OUT T15 100K A-WB/30 +LO
N : BVP651 T25 DW10 BL1
b : BVP515 OUT T15 100K A-NB/30 +LO

Average	Minimum	Maximum	Min/Ave	Min/Max	Project maintenance factor	Scale
0.17	0.10	0.24	0.61	0.43	1.00	1:750

3.11 Ev NWest house @1.5m-6m: Graphical Table

Performance

Grid : Ev NWest house @1.5m-6m
Calculation : Surface Illuminance (lux)



(-77.12, 33.38, 6.00) C-----D (-80.29, 89.63, 6.00)
(-77.12, 33.38, 1.50) A-----B (-80.29, 89.63, 1.50)

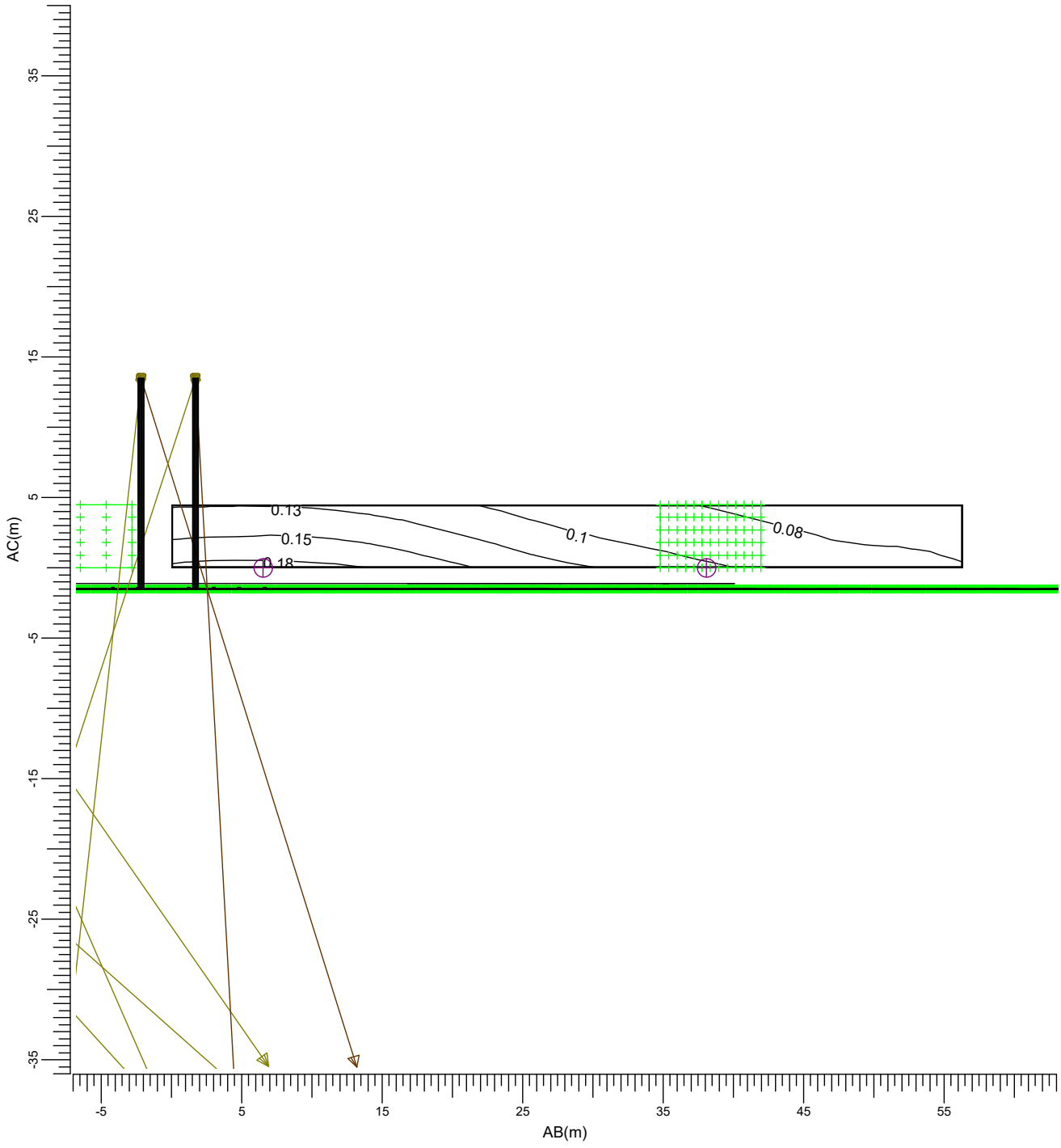
G BVP525 OUT T15 100K A-VWB/ N BVP651 T25 DW10 BL1
Z BVP515 OUT T15 100K A-WB/3 b BVP515 OUT T15 100K A-NB/30

Average	Minimum	Maximum	Min/Ave	Min/Max	CV	Project maintenance factor	Scale
0.11	0.06	0.19	0.55	0.33	0.311	0.90	1:400

3.12 Ev NWest house @1.5m-6m: Iso Contour

Performance

Grid : Ev NWest house @1.5m-6m
Calculation : Surface Illuminance (lux)



(-77.12, 33.38, 6.00) C-----D (-80.29, 89.63, 6.00)
(-77.12, 33.38, 1.50) A-----B (-80.29, 89.63, 1.50)

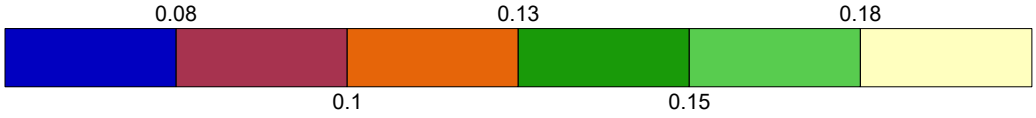
G BVP525 OUT T15 100K A-VWB/ N BVP651 T25 DW10 BL1
Z BVP515 OUT T15 100K A-WB/3 b BVP515 OUT T15 100K A-NB/30

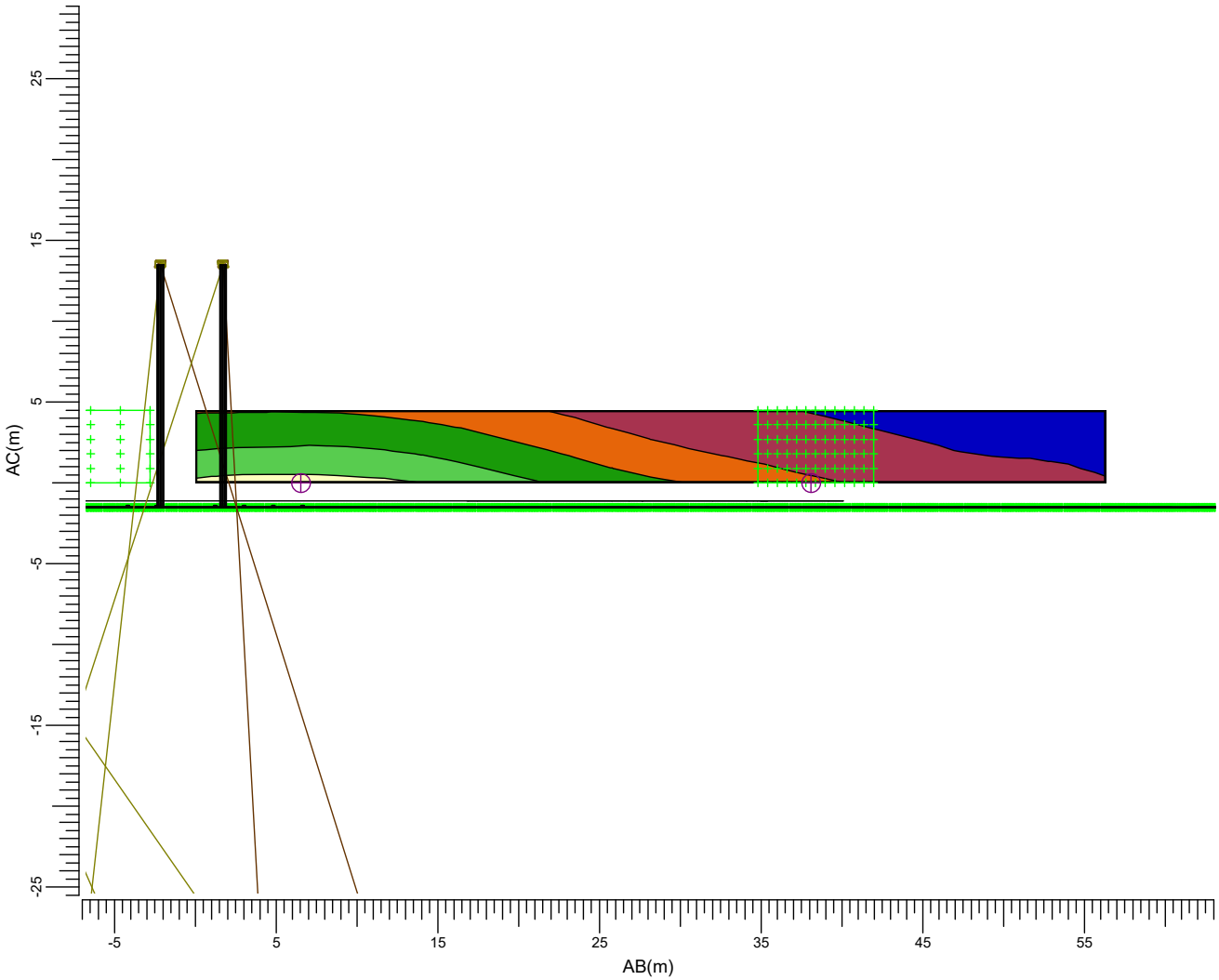
Average	Minimum	Maximum	Min/Ave	Min/Max	CV	Project maintenance factor	Scale
0.11	0.06	0.19	0.55	0.33	0.311	0.90	1:400

3.13 Ev NWest house @1.5m-6m: Filled Iso Contour

Performance

Grid : Ev NWest house @1.5m-6m
Calculation : Surface Illuminance (lux)





(-77.12, 33.38, 6.00) C-----D (-80.29, 89.63, 6.00)
(-77.12, 33.38, 1.50) A-----B (-80.29, 89.63, 1.50)

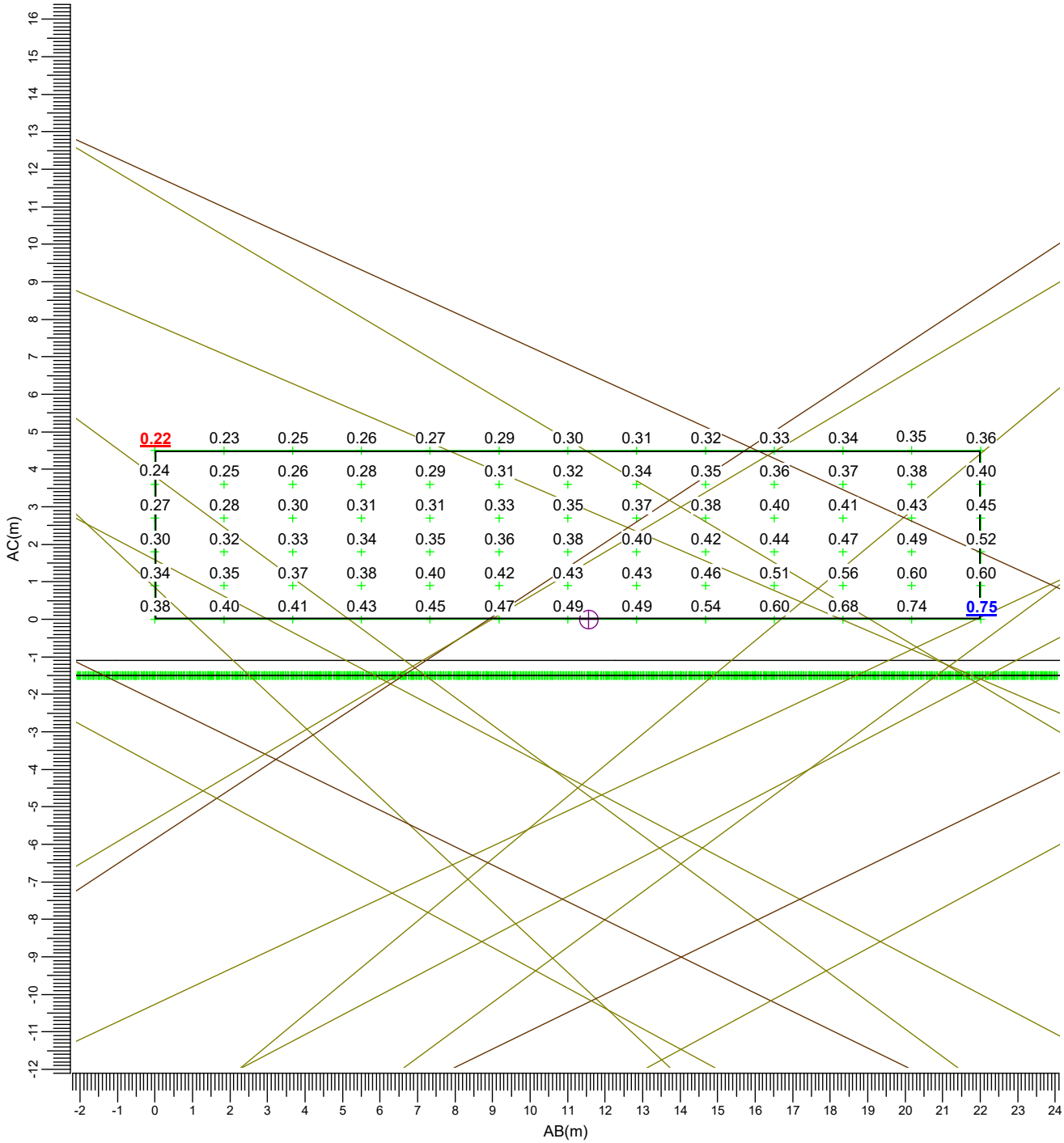
G BVP525 OUT T15 100K A-VWB/ N BVP651 T25 DW10 BL1
Z BVP515 OUT T15 100K A-WB/3 b BVP515 OUT T15 100K A-NB/30

Average	Minimum	Maximum	Min/Ave	Min/Max	CV	Project maintenance factor	Scale
0.11	0.06	0.19	0.55	0.33	0.311	0.90	1:400

3.14 Ev Nth houses @1.5m-6m1: Graphical Table

Performance

Grid : Ev Nth houses @1.5m-6m1
Calculation : Surface Illuminance (lux)



(-43.90, 70.10, 6.00) C-----D (-23.54, 78.45, 6.00)
(-43.90, 70.10, 1.50) A-----B (-23.54, 78.45, 1.50)

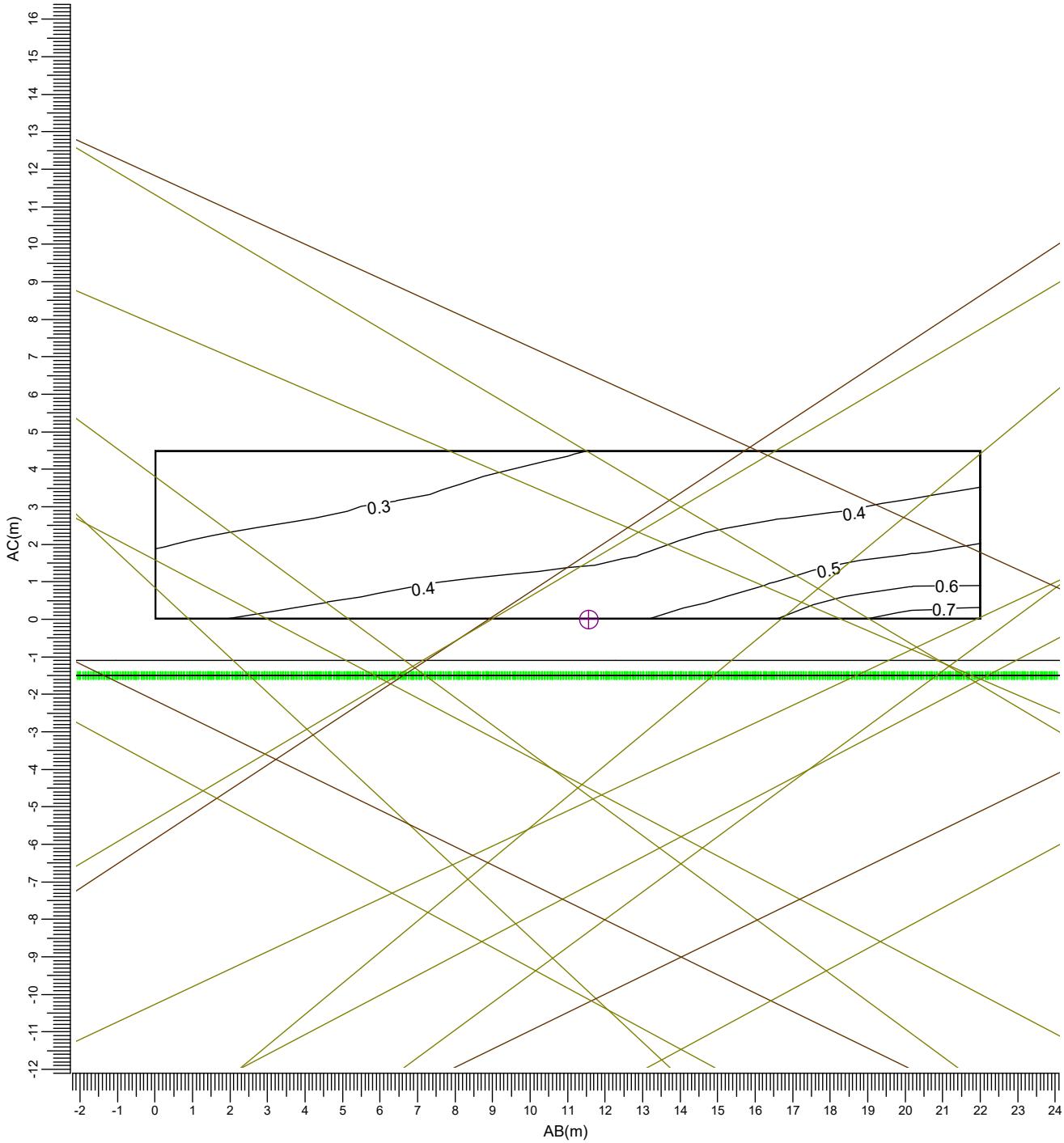
G BVP525 OUT T15 100K A-VWB/ N BVP651 T25 DW10 BL1
Z BVP515 OUT T15 100K A-WB/3 b BVP515 OUT T15 100K A-NB/30

Average	Minimum	Maximum	Min/Ave	Min/Max	CV	Project maintenance factor	Scale
0.39	0.22	0.75	0.55	0.29	0.281	0.90	1:150

3.15 Ev Nth houses @1.5m-6m1: Iso Contour

Performance

Grid : Ev Nth houses @1.5m-6m1
Calculation : Surface Illuminance (lux)



(-43.90, 70.10, 6.00) C-----D (-23.54, 78.45, 6.00)
(-43.90, 70.10, 1.50) A-----B (-23.54, 78.45, 1.50)

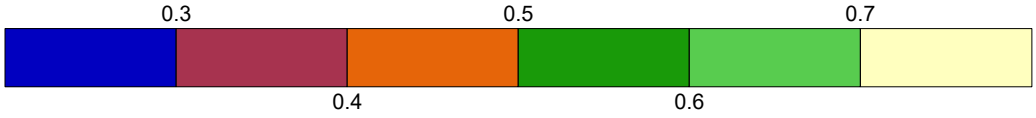
G BVP525 OUT T15 100K A-VWB/ N BVP651 T25 DW10 BL1
Z BVP515 OUT T15 100K A-WB/3 b BVP515 OUT T15 100K A-NB/30

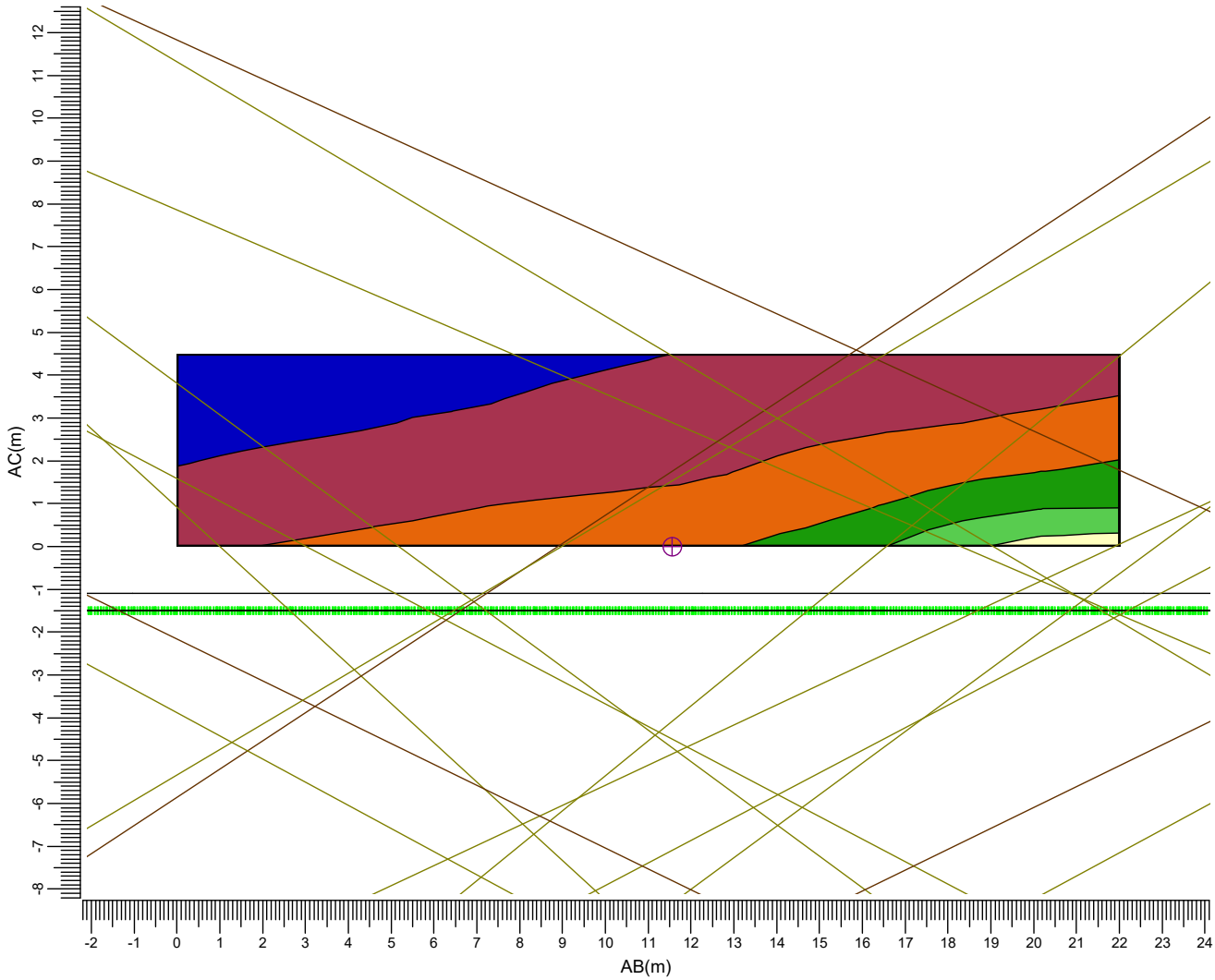
Average	Minimum	Maximum	Min/Ave	Min/Max	CV	Project maintenance factor	Scale
0.39	0.22	0.75	0.55	0.29	0.281	0.90	1:150

3.16 Ev Nth houses @1.5m-6m1: Filled Iso Contour

Performance

Grid : Ev Nth houses @1.5m-6m1
Calculation : Surface Illuminance (lux)





(-43.90, 70.10, 6.00) C-----D (-23.54, 78.45, 6.00)
(-43.90, 70.10, 1.50) A-----B (-23.54, 78.45, 1.50)

G BVP525 OUT T15 100K A-VWB/ N BVP651 T25 DW10 BL1
Z BVP515 OUT T15 100K A-WB/3 b BVP515 OUT T15 100K A-NB/30

Average	Minimum	Maximum	Min/Ave	Min/Max	CV	Project maintenance factor	Scale
0.39	0.22	0.75	0.55	0.29	0.281	0.90	1:150

4. Luminaire Details

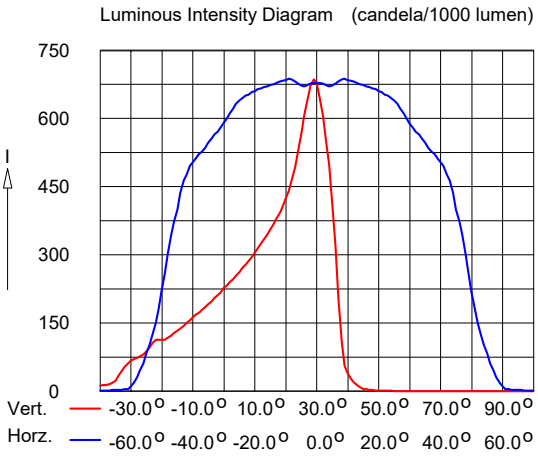
4.1 Project Luminaires

OptiVision LED
BVP515 OUT T15 100K 1xLED1290/740 A-WB/30 +LO

Light output ratios
- DLOR : 0.65
- ULOR : 0.00
- TLOR : 0.65

Ballast : N/A
Lamp flux : 122450 lm
Luminaire wattage : 917.2 W
Measurement code : LVA1409005

Note: Luminaire data not from database.

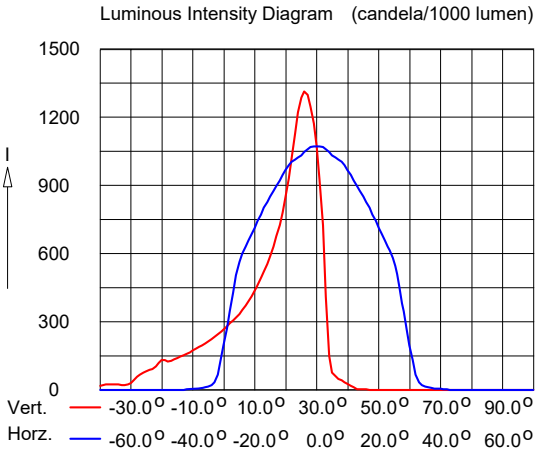


OptiVision LED
BVP515 OUT T15 100K 1xLED1290/740 A-NB/30 +LO

Light output ratios
- DLOR : 0.53
- ULOR : 0.00
- TLOR : 0.53

Ballast : N/A
Lamp flux : 122450 lm
Luminaire wattage : 917.2 W
Measurement code : LVA1409003

Note: Luminaire data not from database.



5. Installation Data

5.1 Legends

Project Luminaires:

Code	Qty	Luminaire Type	Lamp Type	Flux (lm)
Z	12	BVP515 OUT T15 100K A-WB/30 +LO	1 * LED1290/740	1 * 122450
b	4	BVP515 OUT T15 100K A-NB/30 +LO	1 * LED1290/740	1 * 122450

Arrangements:

Code	Arrangement
1	End Columns
2	Centre Columns
3	Centre Columns plus 1m
4	End Columns plus 1m
5	Half way line 1
6	Half way line 2
7	Half way line 3
8	Half way line 4

Switching Modes:

Code	Switching Mode
1	Performance
2	Spill Ltg

5.2 Luminaire Positioning and Orientation

Including Aiming Points:

Qty and Code	Position			Aiming Points			ULR	Arr.	Switching Modes	
	X (m)	Y (m)	Z (m)	X (m)	Y (m)	Z (m)			1	2
1 * Z	-34.50	-37.50	15.00	-5.87	-34.24	-0.00	0.00	1	+	+
1 * b	-34.50	-37.50	15.00	-0.11	-40.27	0.00	0.00	1	+	+
1 * Z	-34.50	37.50	15.00	-5.87	34.24	-0.00	0.00	1	+	+
1 * b	-34.50	37.50	15.00	-0.11	40.27	0.00	0.00	1	+	+
1 * Z	34.50	-37.50	15.00	5.87	-34.24	-0.00	0.00	1	+	+
1 * b	34.50	-37.50	15.00	0.11	-40.27	0.00	0.00	1	+	+
1 * Z	34.50	37.50	15.00	5.87	34.24	-0.00	0.00	1	+	+
1 * b	34.50	37.50	15.00	0.11	40.27	0.00	0.00	1	+	+
1 * Z	-34.50	-12.50	15.00	-6.21	2.81	0.00	0.00	6	+	+
1 * Z	-34.50	-12.50	15.00	-0.20	-21.01	0.00	0.00	6	+	+
1 * Z	-34.50	12.50	15.00	-6.21	-2.81	0.00	0.00	6	+	+
1 * Z	-34.50	12.50	15.00	-0.20	21.01	0.00	0.00	6	+	+
1 * Z	34.50	-12.50	15.00	6.21	2.81	0.00	0.00	6	+	+
1 * Z	34.50	-12.50	15.00	0.20	-21.01	0.00	0.00	6	+	+
1 * Z	34.50	12.50	15.00	6.21	-2.81	0.00	0.00	6	+	+
1 * Z	34.50	12.50	15.00	0.20	21.01	0.00	0.00	6	+	+

Including Aiming Angles:

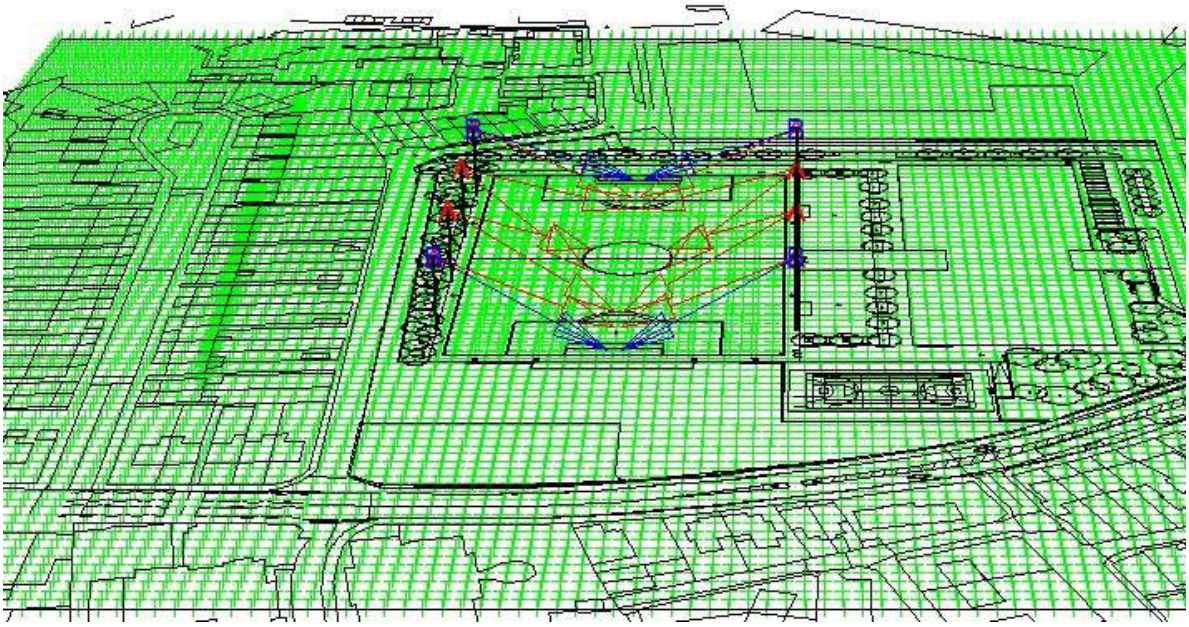
Qty and Code	Position			Aiming Angles			ULR	Arr.	Switching Modes	
	X (m)	Y (m)	Z (m)	Rot.	Tilt90	Tilt0			1	2
1 * Z	-34.50	-37.50	15.00	6.5	62.5	0.0	0.00	1	+	+

Qty and Code	Position			Aiming Angles			ULR	Arr.	Switching Modes	
	X (m)	Y (m)	Z (m)	Rot.	Tilt90	Tilt0			1	2
1 * b	-34.50	-37.50	15.00	-4.6	66.5	0.0	0.00	1	+	+
1 * Z	-34.50	37.50	15.00	-6.5	62.5	-0.0	0.00	1	+	+
1 * b	-34.50	37.50	15.00	4.6	66.5	-0.0	0.00	1	+	+
1 * Z	34.50	-37.50	15.00	173.5	62.5	-0.0	0.00	1	+	+
1 * b	34.50	-37.50	15.00	-175.4	66.5	-0.0	0.00	1	+	+
1 * Z	34.50	37.50	15.00	-173.5	62.5	0.0	0.00	1	+	+
1 * b	34.50	37.50	15.00	175.4	66.5	0.0	0.00	1	+	+
1 * Z	-34.50	-12.50	15.00	28.4	65.0	0.0	0.00	6	+	+
1 * Z	-34.50	-12.50	15.00	-13.9	67.0	0.0	0.00	6	+	+
1 * Z	-34.50	12.50	15.00	-28.4	65.0	-0.0	0.00	6	+	+
1 * Z	-34.50	12.50	15.00	13.9	67.0	-0.0	0.00	6	+	+
1 * Z	34.50	-12.50	15.00	151.6	65.0	-0.0	0.00	6	+	+
1 * Z	34.50	-12.50	15.00	-166.1	67.0	-0.0	0.00	6	+	+
1 * Z	34.50	12.50	15.00	-151.6	65.0	0.0	0.00	6	+	+
1 * Z	34.50	12.50	15.00	166.1	67.0	0.0	0.00	6	+	+

Mortlake Stage Brewery Development

F/ball Pitch LED Ltg15m 200 Lx 0.6 U0 LO

Project code:	0400061129, D-227389
Date:	31-01-2018
Customer:	Michael Grubb Studios
Customer Representative:	Alastair Aiken
Designer:	Steve Johnston



The nominal values shown in this report are the result of precision calculations, based upon precisely positioned luminaires in a fixed relationship to each other and to the area under examination. In practice the values may vary due to tolerances on luminaires, luminaire positioning, reflection properties and electrical supply.

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1. Project Description

1.1 Description

Designed to Sport England Outdoor Football Pitch Class II
FA Standard = 200 lux ave, 0.6 Uo
60 Ra

Pitch now rotated 90 degrees and new drawing layout included

MF for OptiVivision LED Sports Lighting = 0.9 MF

8 No 15m columns with 2 No luminaires on each

Luminaires are Philips OptiVision LED luminaires with Louvre
BVP525 OUT T15 100K 1xLED1940/740 A-NB/30 +LO = 4 No
BVP525 OUT T15 100K 1xLED1940/740 A-WB/30 +LO = 12 No

16 No fittings in total
GR Max claculation shown on Pitch grid

Grid points doubled to be within 5m spacing. Not placed on lines as helps Calculation result and not required for Commissioning results.

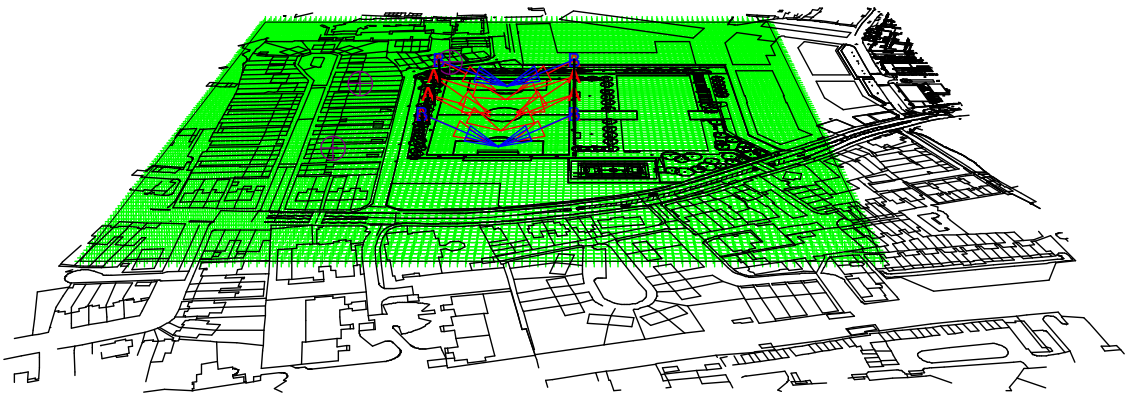
Spill Light Isocontours are shown outside Pitch Area based upon the Spill Light levels shown in Sport England Document and ILP Guidance Notes for Obtrusive Light 2011. These are 2,5,10 & 25 lux levels.
Spill lighting iso-contour results are shown with an MF of 1.0 which is worst case when newly installed. Observers at houses added @ 1.5m for Ltg Intensity

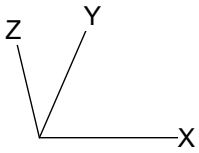
Pre Curfew Spill light through windows are E1 = 2 lux, E2 = 5 lux, E3 = 10 lux, calculation with internal louvre fitted is below 5 lux so conforms wit E2-E4 Zones

Tilt angles are no higher than 68 degree peak beam.
Peak beam angle included in Tilt 90 of calculation so
68 deg peak beam tilt (38 degree Physical housing tilt as 30 deg asymmetric)

Louvres are fitted internally around each LED to reduce spill in all directions Light intensity at angles and glare reduction.

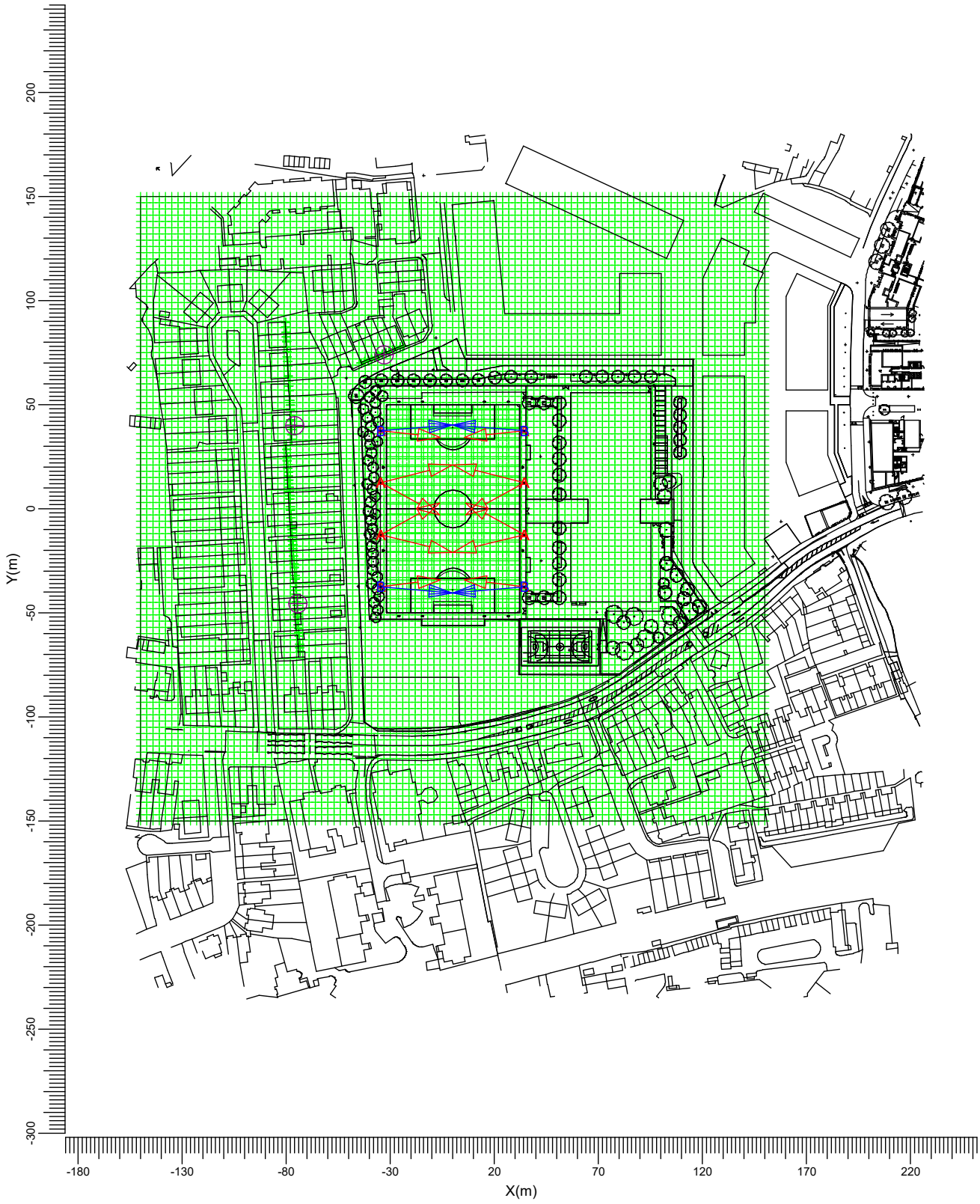
1.2 3-D Project Overview





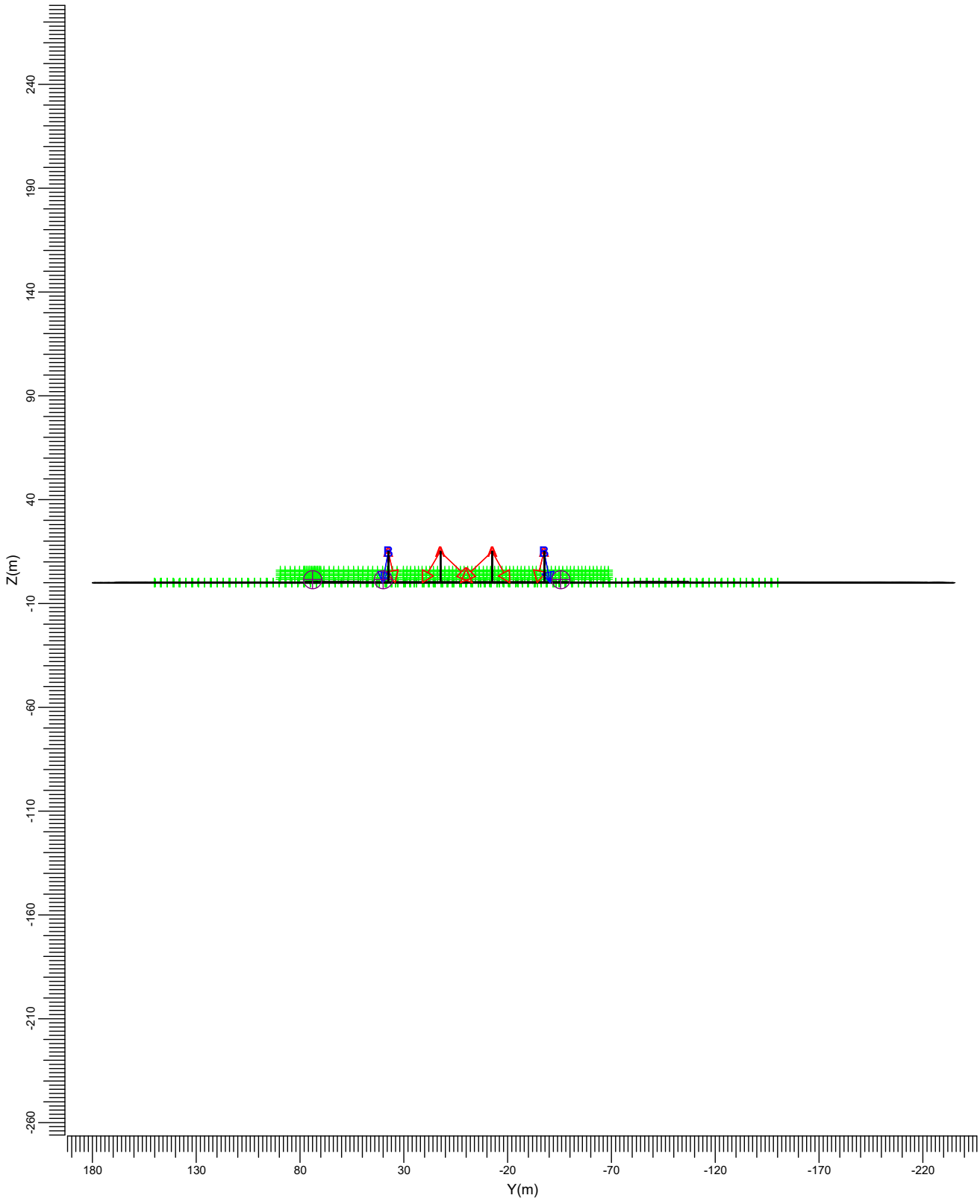
A BVP525 OUT T15 100K A-WB/3
B BVP525 OUT T15 100K A-NB/30
H BVP525 OUT T15 100K A-VWB/
O BVP651 T25 DW10 BL1

1.3 Top Project Overview



Scale
1:2500

1.4 Left Project Overview



Scale
1:2500

2. Summary

2.1 Observer Information

Code	Observer	Position		
		X (m)	Y (m)	Z (m)
Aa	North Houses	-33.00	74.00	1.50
Bb	North West Houses	-76.00	40.00	1.50
Cc	South West Houses	-74.50	-45.50	1.50

2.2 Obstacle Information

Obstacle	Transparency (%)	Position		
		X (m)	Y (m)	Z (m)
Corner Columns	0	-34.50	-37.50	0.00
		34.50	-37.50	0.00
		-34.50	37.50	0.00
		34.50	37.50	0.00
Centre Columns	0	-34.50	-12.50	0.00
		34.50	-12.50	0.00
		-34.50	12.50	0.00
		34.50	12.50	0.00

2.3 Project Luminaires

Code	Qty	Luminaire Type	Lamp Type	Power (W)	Flux (lm)
A	12	BVP525 OUT T15 100K A-WB/30 +LO	1 * LED1940/740	1375.4	1 * 183674
B	4	BVP525 OUT T15 100K A-NB/30 +LO	1 * LED1940/740	1375.4	1 * 183674

The total installed power: 22.01 (kWatt)

Number of Luminaires Per Switching Mode:

Switching Mode	Luminaire Code		Power (kWatt)
	A	B	
Performance	12	4	22.01
Spill Ltg	12	4	22.01

Number of Luminaires Per Arrangement:

Arrangement	Luminaire Code		Power (kWatt)
	A	B	
Centre Columns	0	0	0.00
Centre Columns plus 1m	0	0	0.00
End Columns	4	4	11.00
End Columns plus 1m	0	0	0.00
Half way line 1	0	0	0.00
Half way line 2	8	0	11.00
Half way line 3	0	0	0.00
Half way line 4	0	0	0.00

2.4 Calculation Results

Switching Modes:

Code	Switching Mode	Maintenance factor
1	Performance	0.90
2	Spill Ltg	1.00

(Il)luminance Calculations:

Calculation	Switching Mode	Type	Unit	Ave	Min	Max	Min/Ave	Min/Max	CV
Football	1	Surface Illuminance	lux	216	140	282	0.65	0.50	
Spill Ltg Grid	2	Surface Illuminance	lux						
Ev West houses @1.5m-6m	2	Surface Illuminance	lux	0.25	0.15	0.36	0.61	0.43	
Ev NWest house @1.5m-6m	1	Surface Illuminance	lux	0.17	0.09	0.28	0.55	0.33	0.311
Ev Nth houses @1.5m-6m1	1	Surface Illuminance	lux	0.58	0.32	1.13	0.55	0.29	0.281

Glare Rating for Grid of Observers:

Calculation	Switching Mode	Observer Grid	Reference Grid	Reflectance	GR-Max
GR Max for Pitch	1	Football	Football	0.25	44.3

Obtrusive Light Calculations:

Switching Mode	Observer Code	Luminaire Code	Position			Aiming Angles			Maximum Intensity (cd)
			X (m)	Y (m)	Z (m)	Rot.	Tilt90	Tilt0	
2	Aa	A	34.50	12.50	15.00	166.07	67.00	0.00	1366
2	Bb	A	34.50	-12.50	15.00	-166.07	67.00	-0.00	965
2	Cc	A	34.50	12.50	15.00	166.07	67.00	0.00	1034

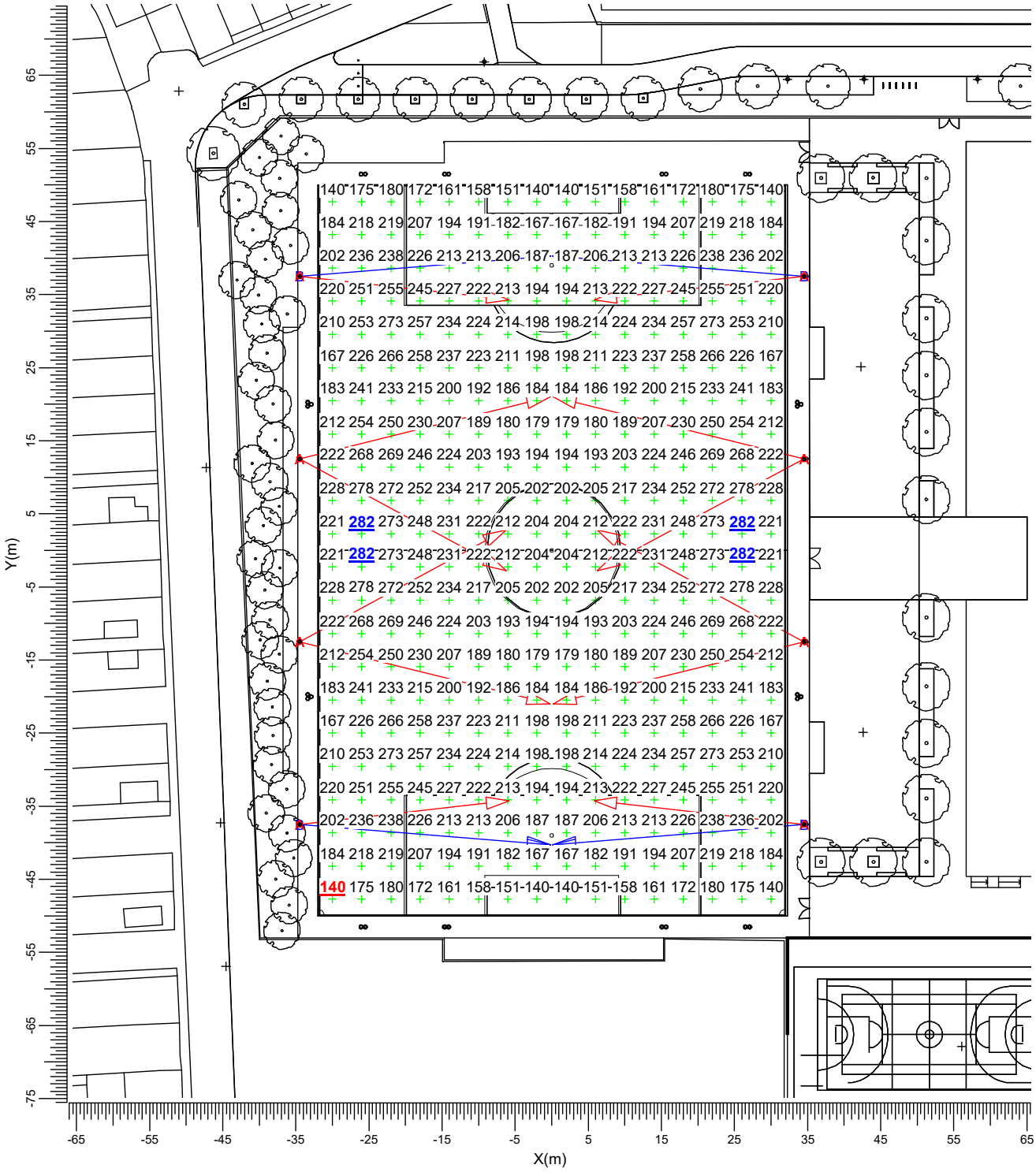
Switching Mode	ULR
1	0.00
2	0.00

3. Calculation Results

3.1 Football: Graphical Table

Performance

Grid : Football at Z = -0.00 m
Calculation : Surface Illuminance (lux)



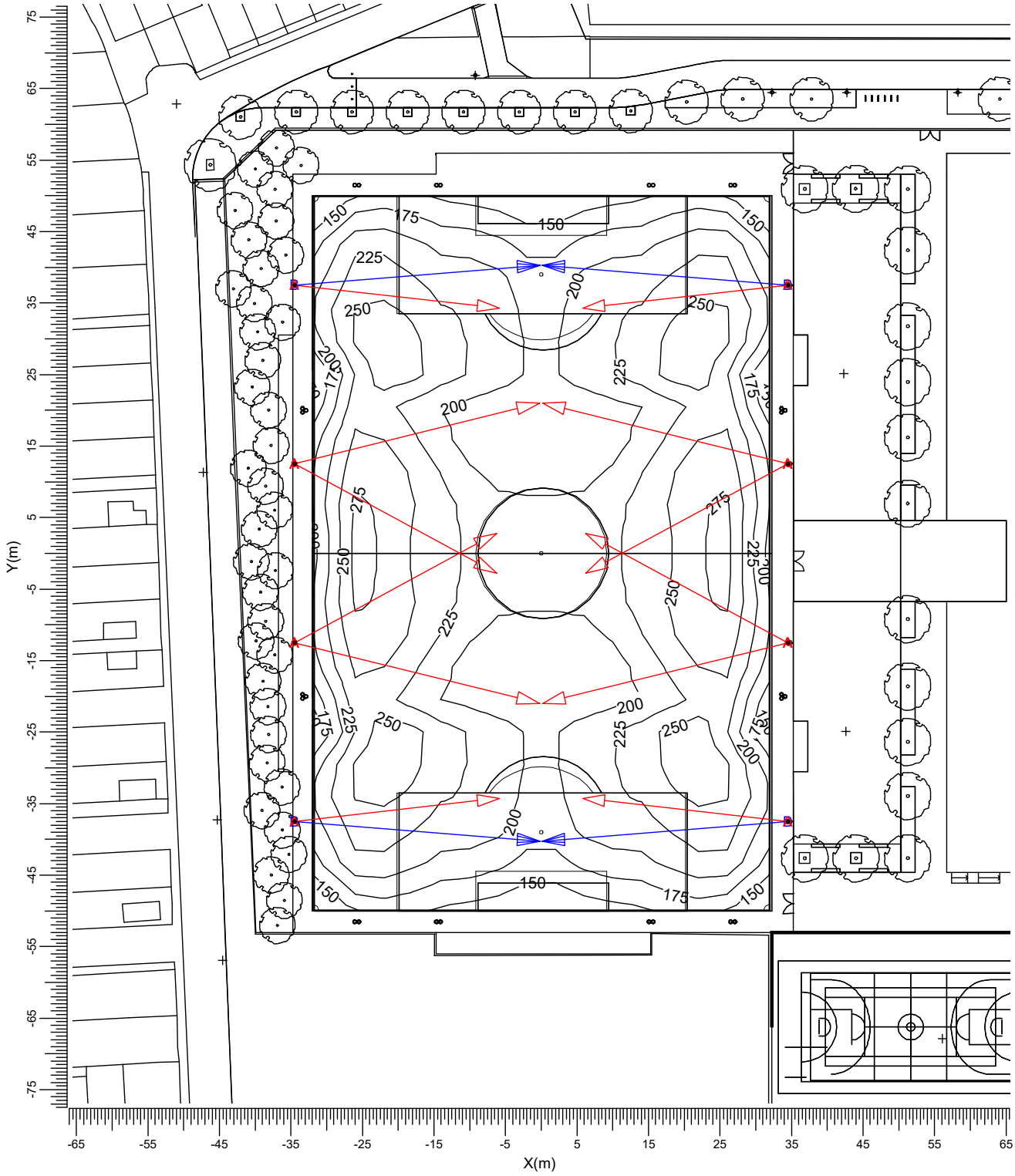
A BVP525 OUT T15 100K A-WB/3 B BVP525 OUT T15 100K A-NB/30
H BVP525 OUT T15 100K A-VWB/ O BVP651 T25 DW10 BL1

Average	Minimum	Maximum	Min/Ave	Min/Max	Project maintenance factor	Scale
216	140	282	0.65	0.50	0.90	1:750

3.2 Football: Iso Contour

Performance

Grid : Football at Z = -0.00 m
Calculation : Surface Illuminance (lux)



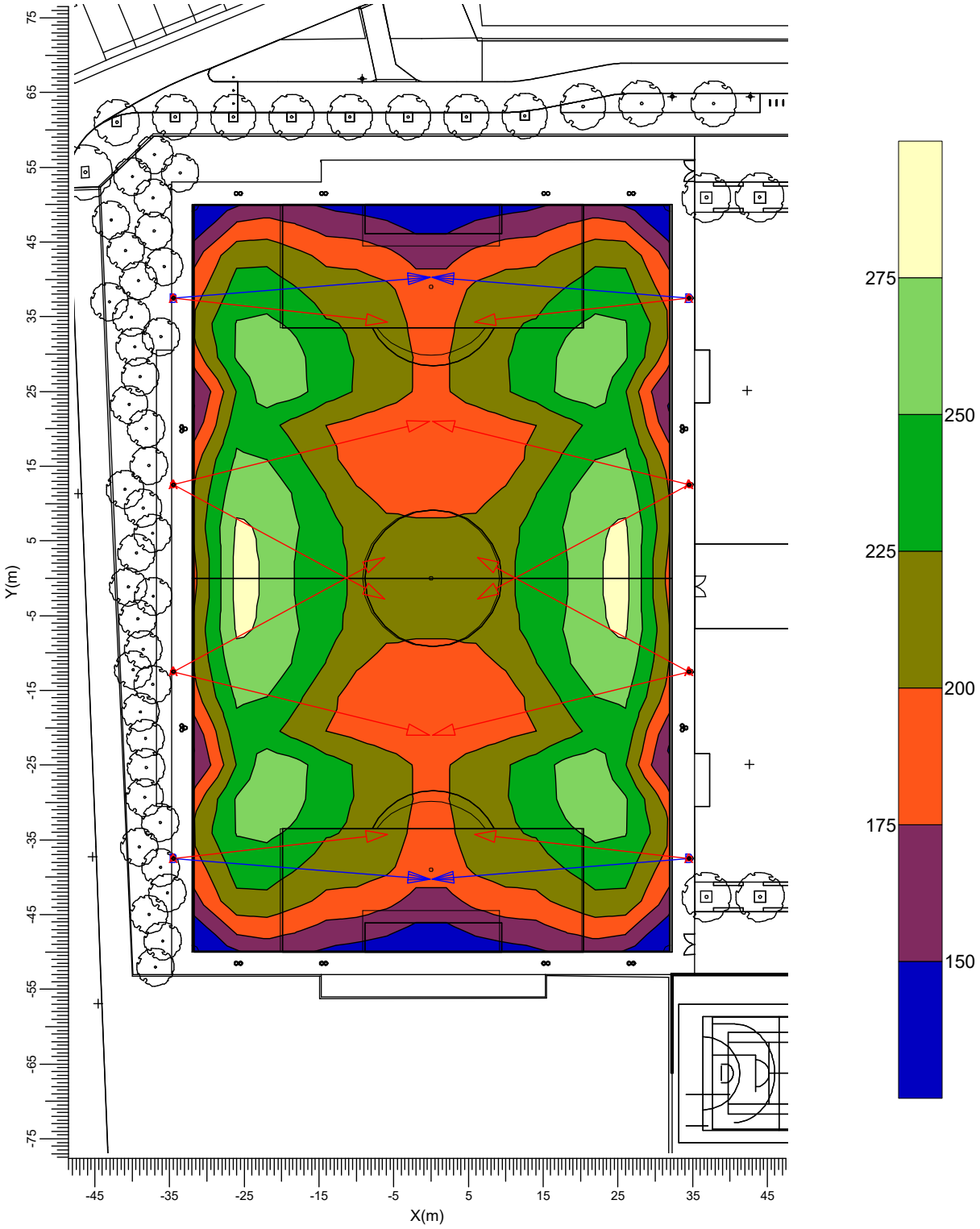
A BVP525 OUT T15 100K A-WB/3 B BVP525 OUT T15 100K A-NB/30
H BVP525 OUT T15 100K A-VWB/ O BVP651 T25 DW10 BL1

Average	Minimum	Maximum	Min/Ave	Min/Max	Project maintenance factor	Scale
216	140	282	0.65	0.50	0.90	1:750

3.3 Football: Filled Iso Contour

Performance

Grid : Football at Z = -0.00 m
Calculation : Surface Illuminance (lux)



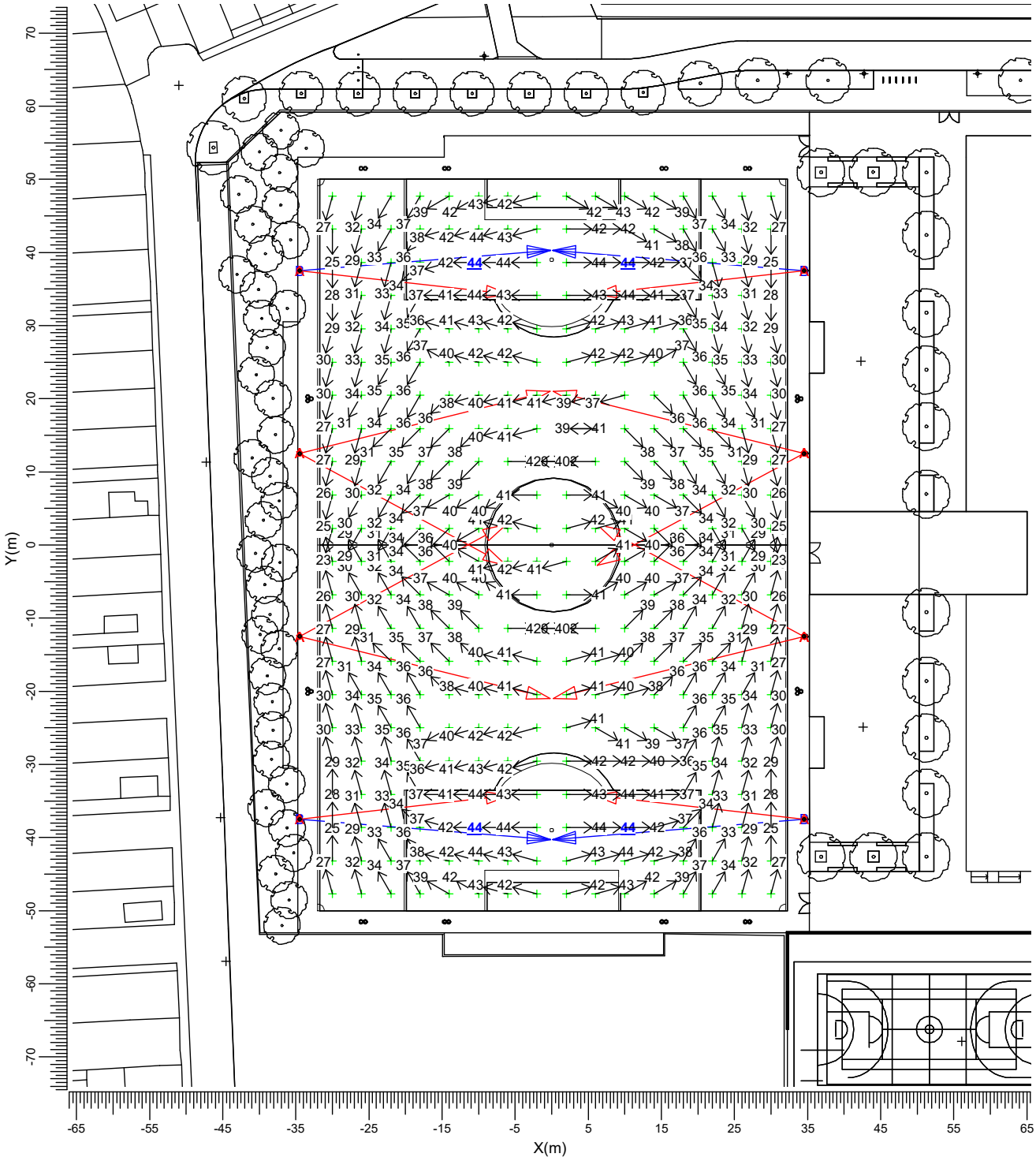
A BVP525 OUT T15 100K A-WB/3 B BVP525 OUT T15 100K A-NB/30
H BVP525 OUT T15 100K A-VWB/ O BVP651 T25 DW10 BL1

Average	Minimum	Maximum	Min/Ave	Min/Max	Project maintenance factor	Scale
216	140	282	0.65	0.50	0.90	1:750

3.4 GR Max for Pitch: Graphical Table

Performance

Grid of Observers : Football
Calculation : Glare Rating
Grid for Background Luminance : Football (Reflectance: 0.25)
Vertical Viewing Angle : -2.0 deg



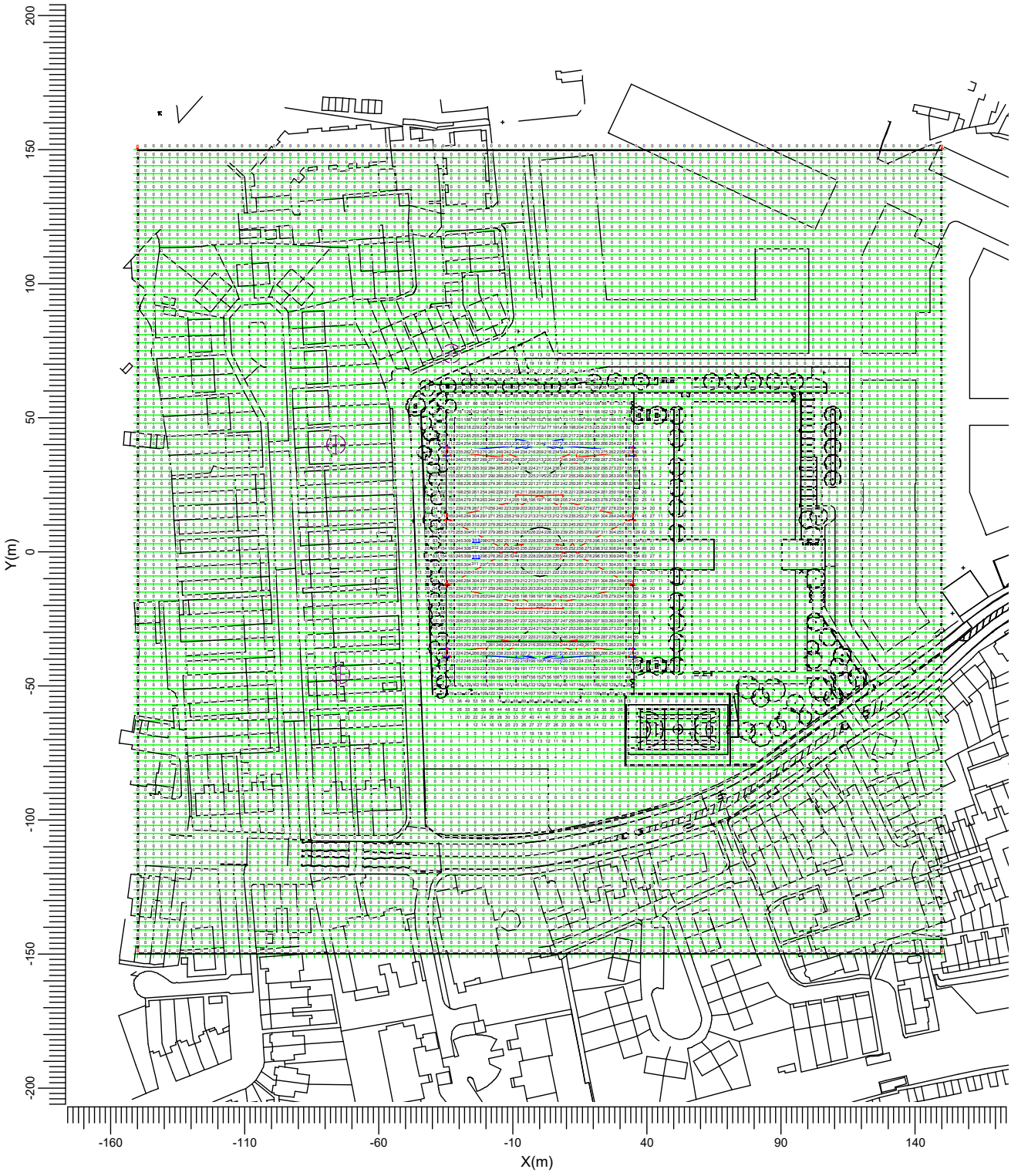
A BVP525 OUT T15 100K A-WB/3 B BVP525 OUT T15 100K A-NB/30
H BVP525 OUT T15 100K A-VWB/ O BVP651 T25 DW10 BL1

Maximum	Project maintenance factor	Scale
44.3	0.90	1:750

3.5 Spill Ltg Grid: Graphical Table

Spill Ltg

Grid : Spill Ltg Grid at Z = -0.00 m
Calculation : Surface Illuminance (lux)



A BVP525 OUT T15 100K A-WB/3 B BVP525 OUT T15 100K A-NB/30
H BVP525 OUT T15 100K A-VWB/ O BVP651 T25 DW10 BL1

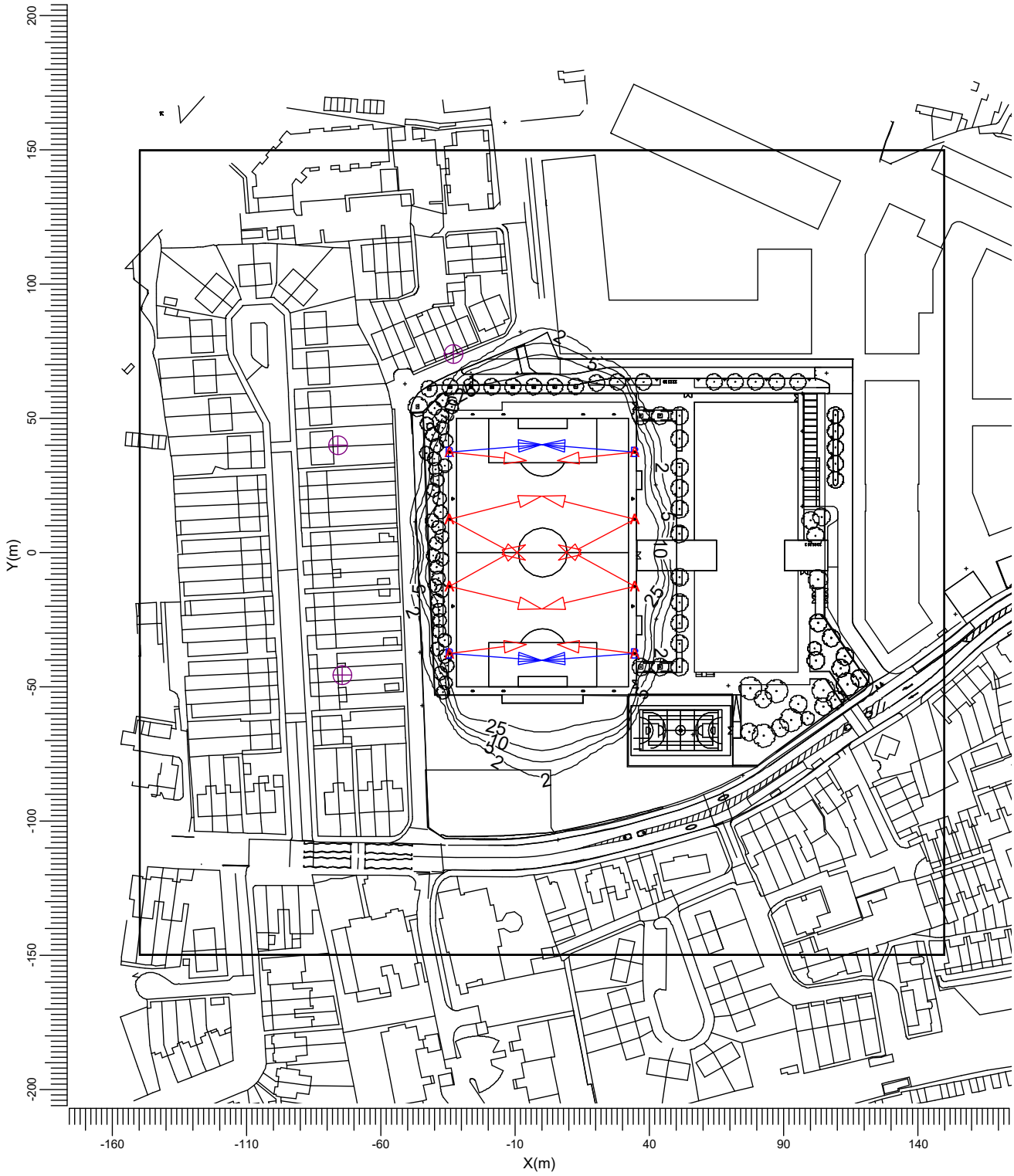
Project maintenance factor
1.00

Scale
1:2000

3.6 Spill Ltg Grid: Iso Contour

Spill Ltg

Grid : Spill Ltg Grid at Z = -0.00 m
Calculation : Surface Illuminance (lux)



A BVP525 OUT T15 100K A-WB/3 B BVP525 OUT T15 100K A-NB/30
H BVP525 OUT T15 100K A-VWB/ O BVP651 T25 DW10 BL1

Project maintenance factor
1.00

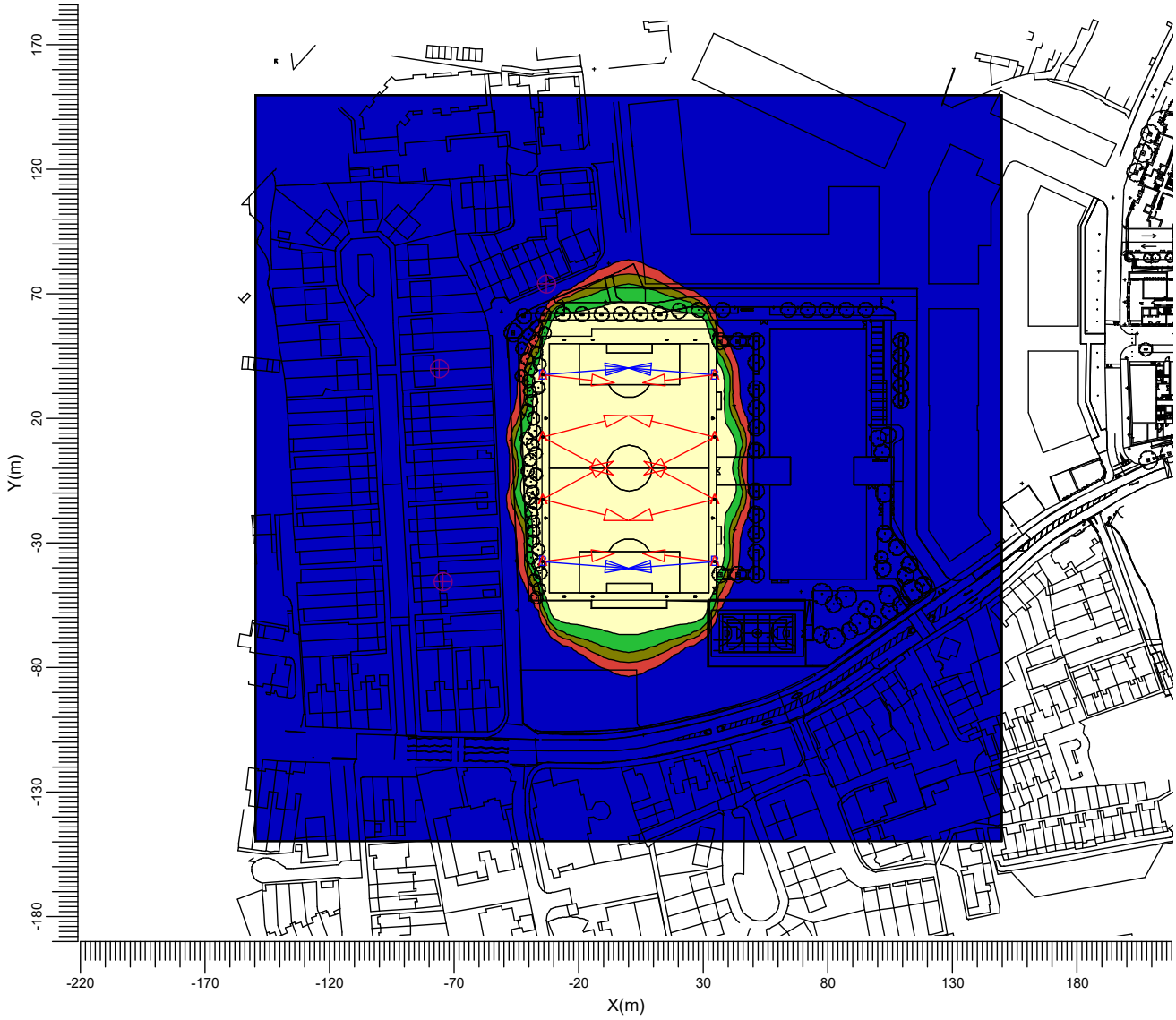
Scale
1:2000

3.7 Spill Ltg Grid: Filled Iso Contour

Spill Ltg

Grid : Spill Ltg Grid at Z = -0.00 m
Calculation : Surface Illuminance (lux)





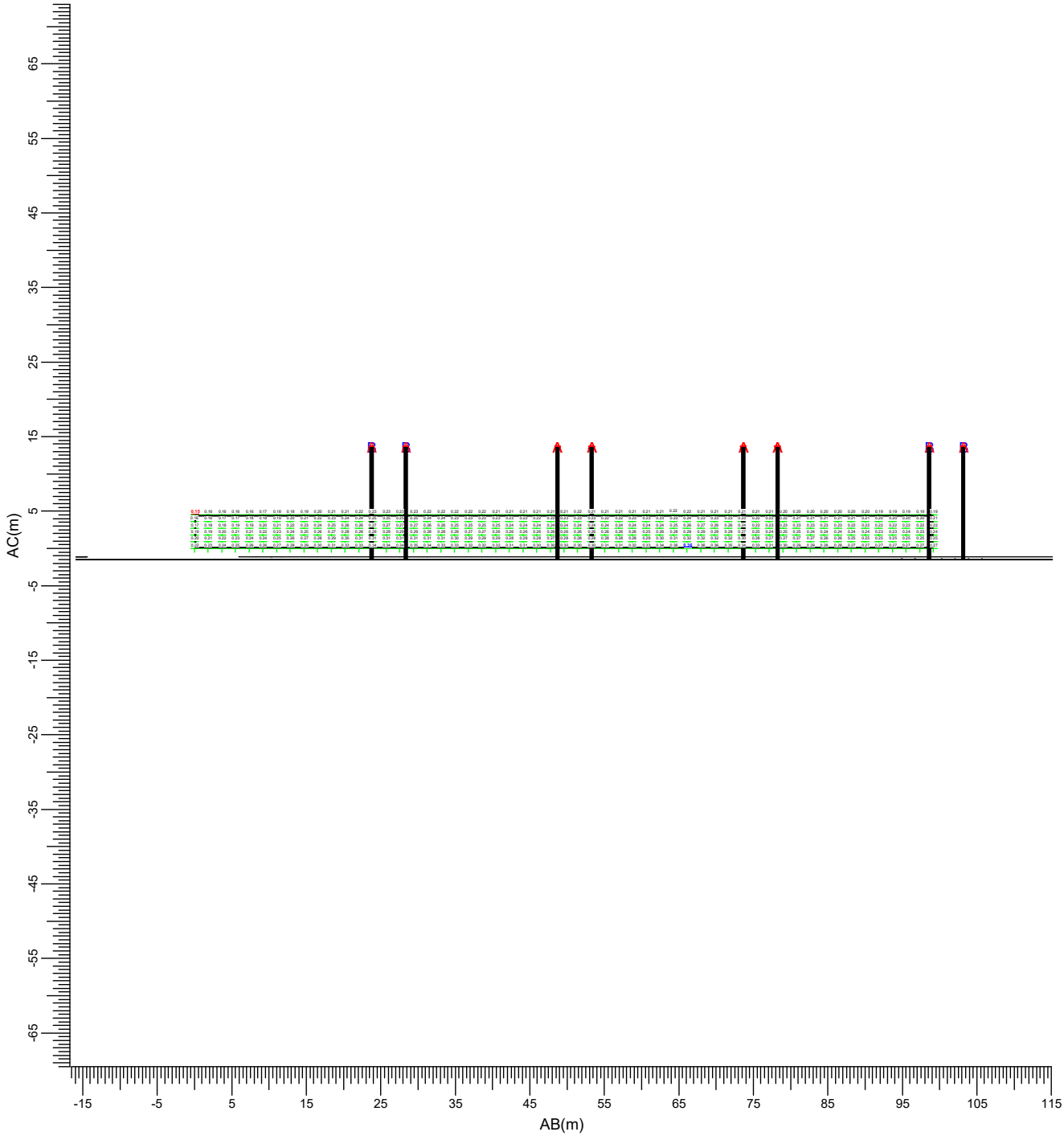
A BVP525 OUT T15 100K A-WB/3 B BVP525 OUT T15 100K A-NB/30
H BVP525 OUT T15 100K A-VWB/ O BVP651 T25 DW10 BL1

Project maintenance factor
1.00

Scale
1:2500

3.8 Ev West houses @1.5m-6m: Graphical Table Spill Ltg

Grid : Ev West houses @1.5m-6m
Calculation : Surface Illuminance (lux)



(-73.29, -68.50, 6.00) C-----D (-79.88, 30.44, 6.00)
(-73.29, -68.50, 1.50) A-----B (-79.88, 30.44, 1.50)

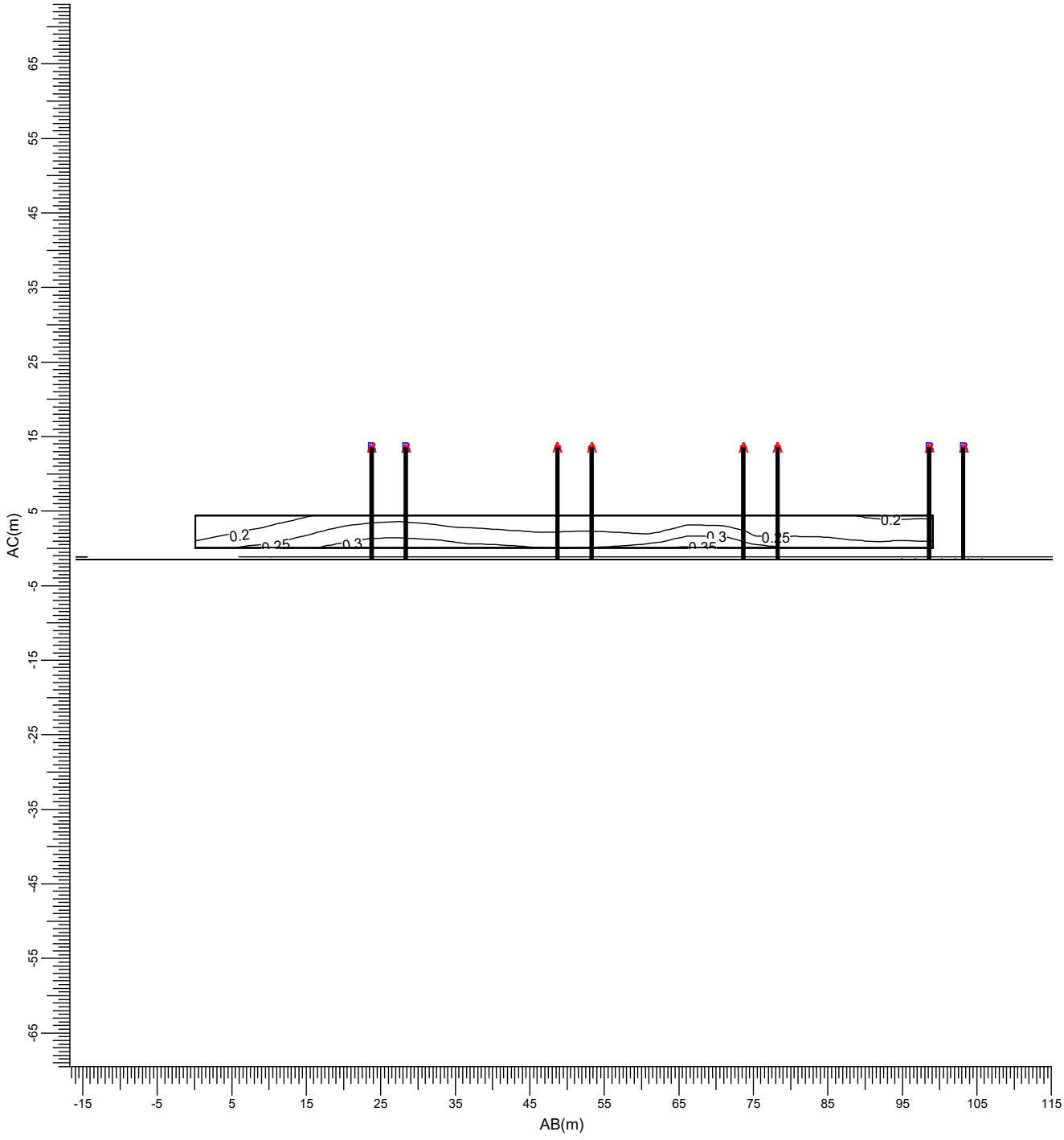
A : BVP525 OUT T15 100K A-WB/30 +LO
B : BVP525 OUT T15 100K A-NB/30 +LO
H : BVP525 OUT T15 100K A-VWB/30
O : BVP651 T25 DW10 BL1

Average	Minimum	Maximum	Min/Ave	Min/Max	Project maintenance factor	Scale
0.25	0.15	0.36	0.61	0.43	1.00	1:750

3.9 Ev West houses @1.5m-6m: Iso Contour

Spill Ltg

Grid : Ev West houses @1.5m-6m
Calculation : Surface Illuminance (lux)



(-73.29, -68.50, 6.00) C-----D (-79.88, 30.44, 6.00)
(-73.29, -68.50, 1.50) A-----B (-79.88, 30.44, 1.50)

A : BVP525 OUT T15 100K A-WB/30 +LO
B : BVP525 OUT T15 100K A-NB/30 +LO
H : BVP525 OUT T15 100K A-VWB/30
O : BVP651 T25 DW10 BL1

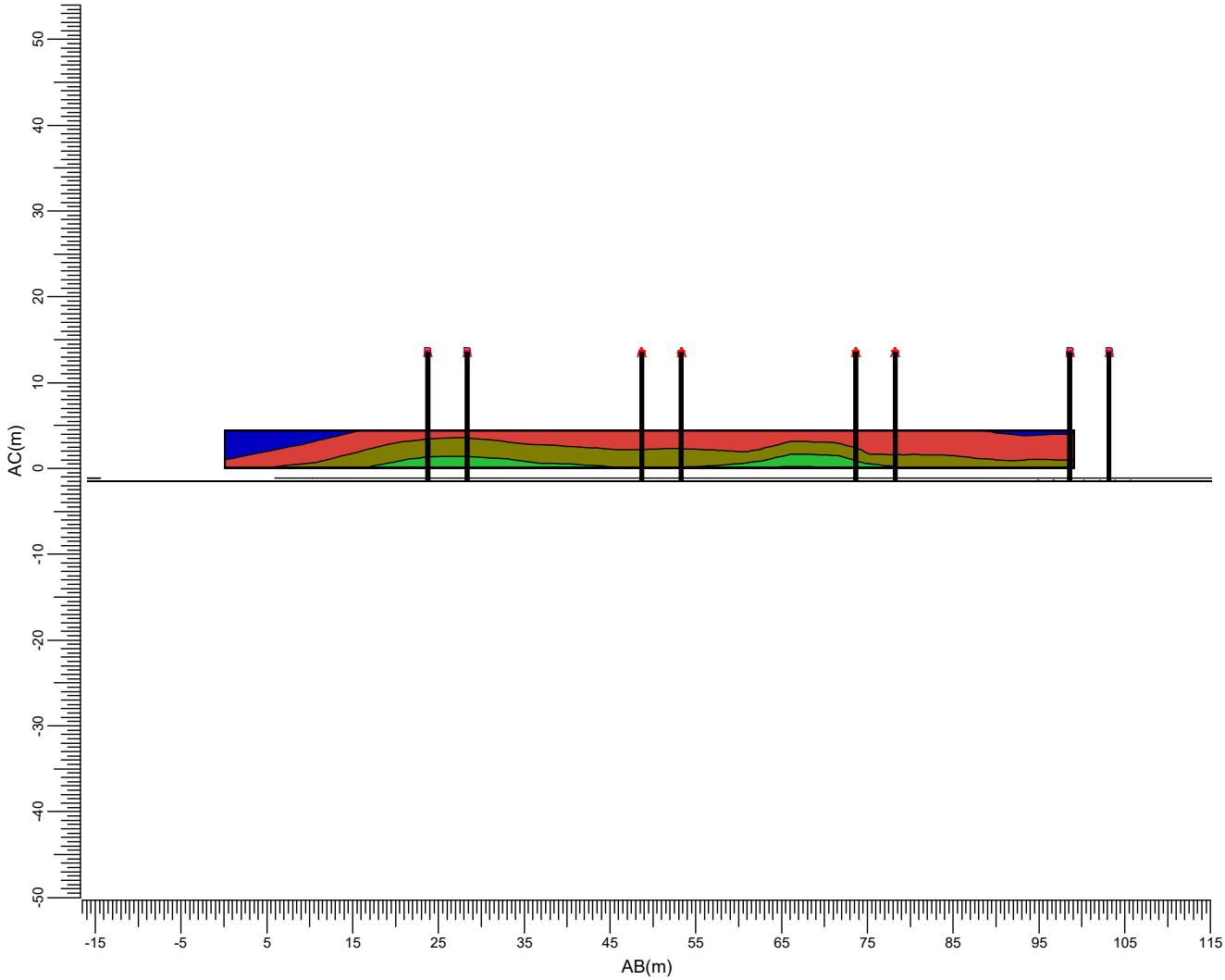
Average	Minimum	Maximum	Min/Ave	Min/Max	Project maintenance factor	Scale
0.25	0.15	0.36	0.61	0.43	1.00	1:750

3.10 Ev West houses @1.5m-6m: Filled Iso Contour

Spill Ltg

Grid : Ev West houses @1.5m-6m
Calculation : Surface Illuminance (lux)





(-73.29, -68.50, 6.00) C-----D (-79.88, 30.44, 6.00)
(-73.29, -68.50, 1.50) A-----B (-79.88, 30.44, 1.50)

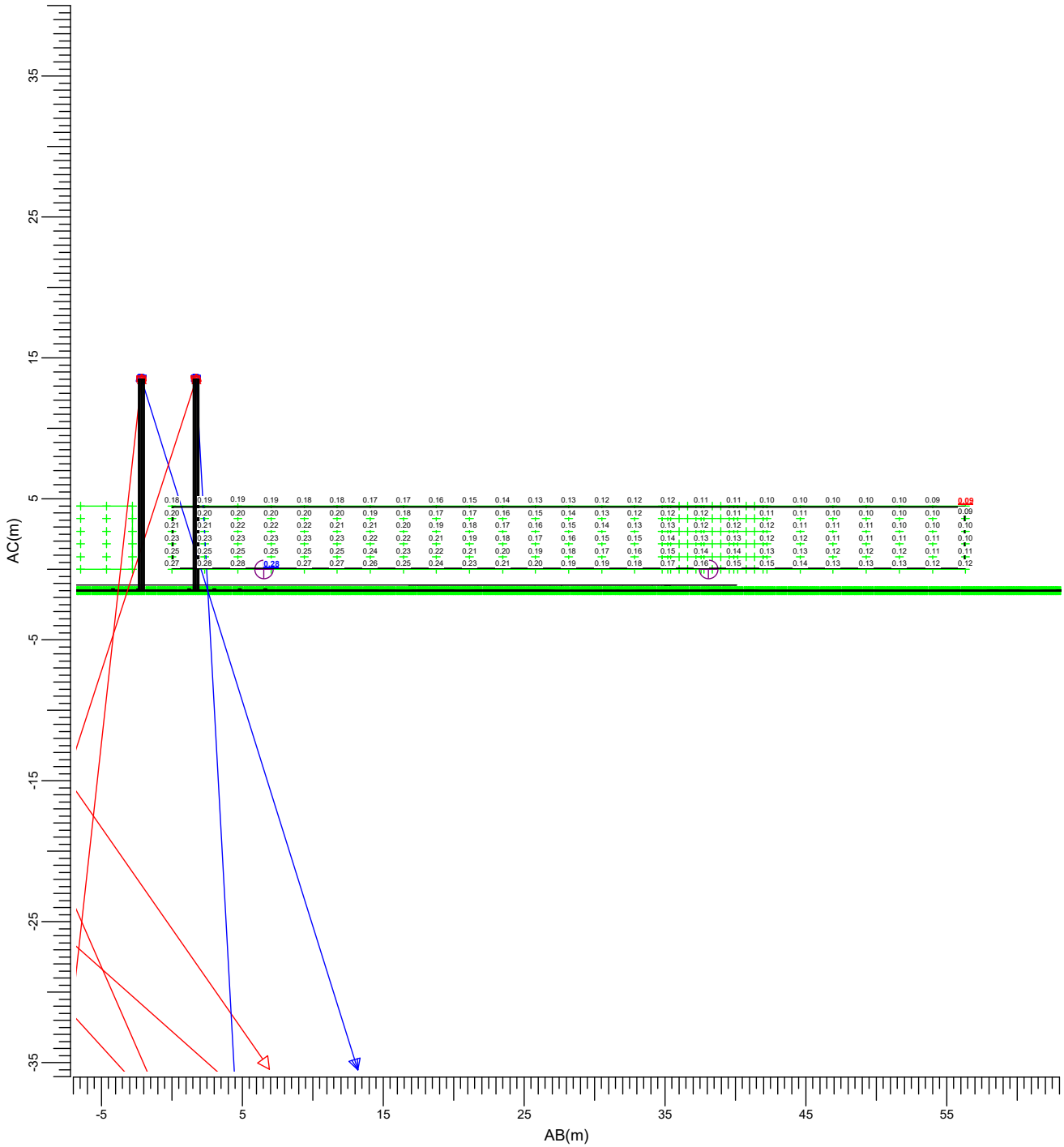
A : BVP525 OUT T15 100K A-WB/30 +LO
B : BVP525 OUT T15 100K A-NB/30 +LO
H : BVP525 OUT T15 100K A-VWB/30
O : BVP651 T25 DW10 BL1

Average	Minimum	Maximum	Min/Ave	Min/Max	Project maintenance factor	Scale
0.25	0.15	0.36	0.61	0.43	1.00	1:750

3.11 Ev NWest house @1.5m-6m: Graphical Table

Performance

Grid : Ev NWest house @1.5m-6m
Calculation : Surface Illuminance (lux)



(-77.12, 33.38, 6.00) C-----D (-80.29, 89.63, 6.00)
(-77.12, 33.38, 1.50) A-----B (-80.29, 89.63, 1.50)

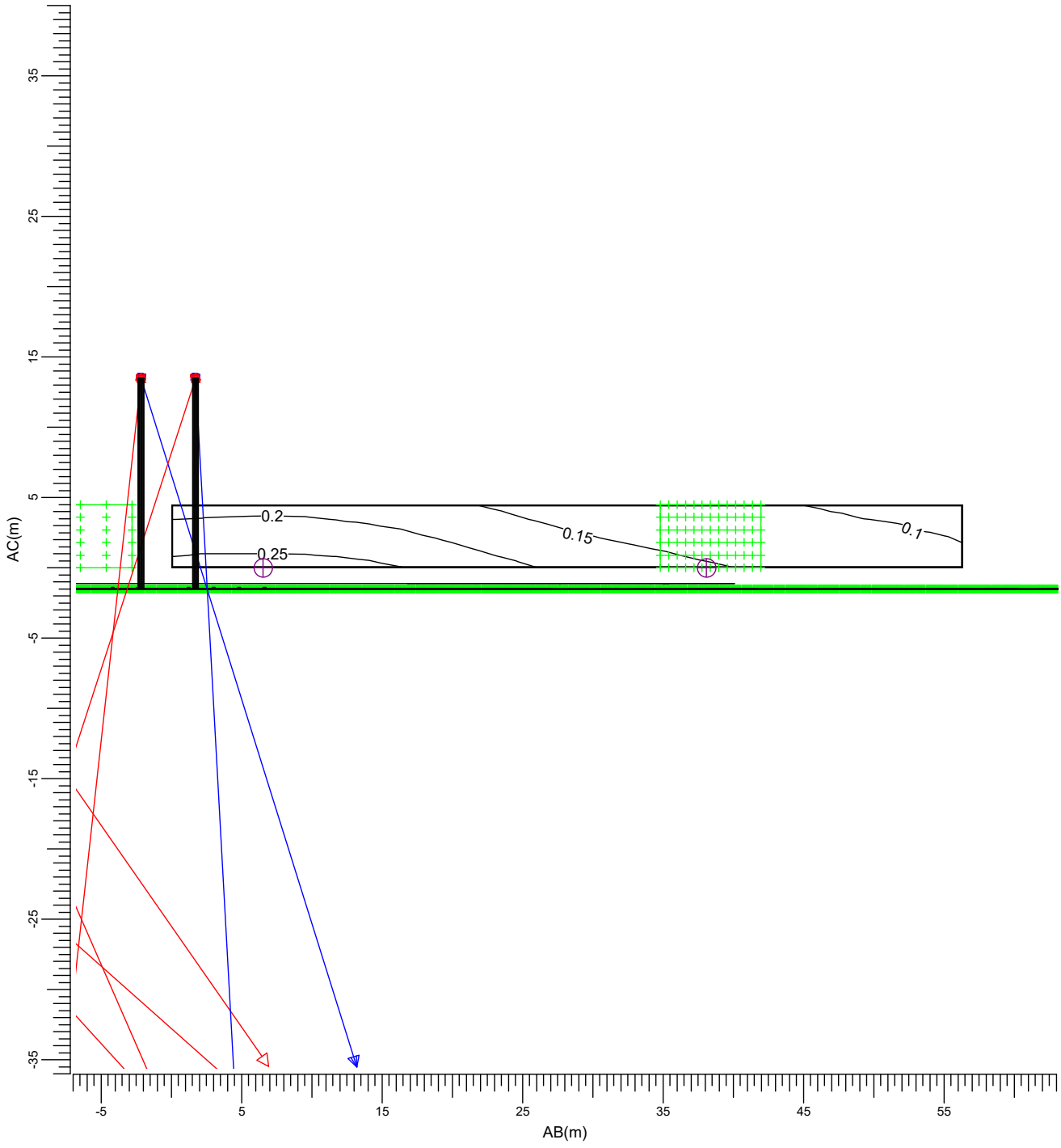
A BVP525 OUT T15 100K A-WB/3 B BVP525 OUT T15 100K A-NB/30
H BVP525 OUT T15 100K A-VWB/ O BVP651 T25 DW10 BL1

Average	Minimum	Maximum	Min/Ave	Min/Max	CV	Project maintenance factor	Scale
0.17	0.09	0.28	0.55	0.33	0.311	0.90	1:400

3.12 Ev NWest house @1.5m-6m: Iso Contour

Performance

Grid : Ev NWest house @1.5m-6m
Calculation : Surface Illuminance (lux)



(-77.12, 33.38, 6.00) C-----D (-80.29, 89.63, 6.00)
(-77.12, 33.38, 1.50) A-----B (-80.29, 89.63, 1.50)

A BVP525 OUT T15 100K A-WB/3 B BVP525 OUT T15 100K A-NB/30
H BVP525 OUT T15 100K A-VWB/ O BVP651 T25 DW10 BL1

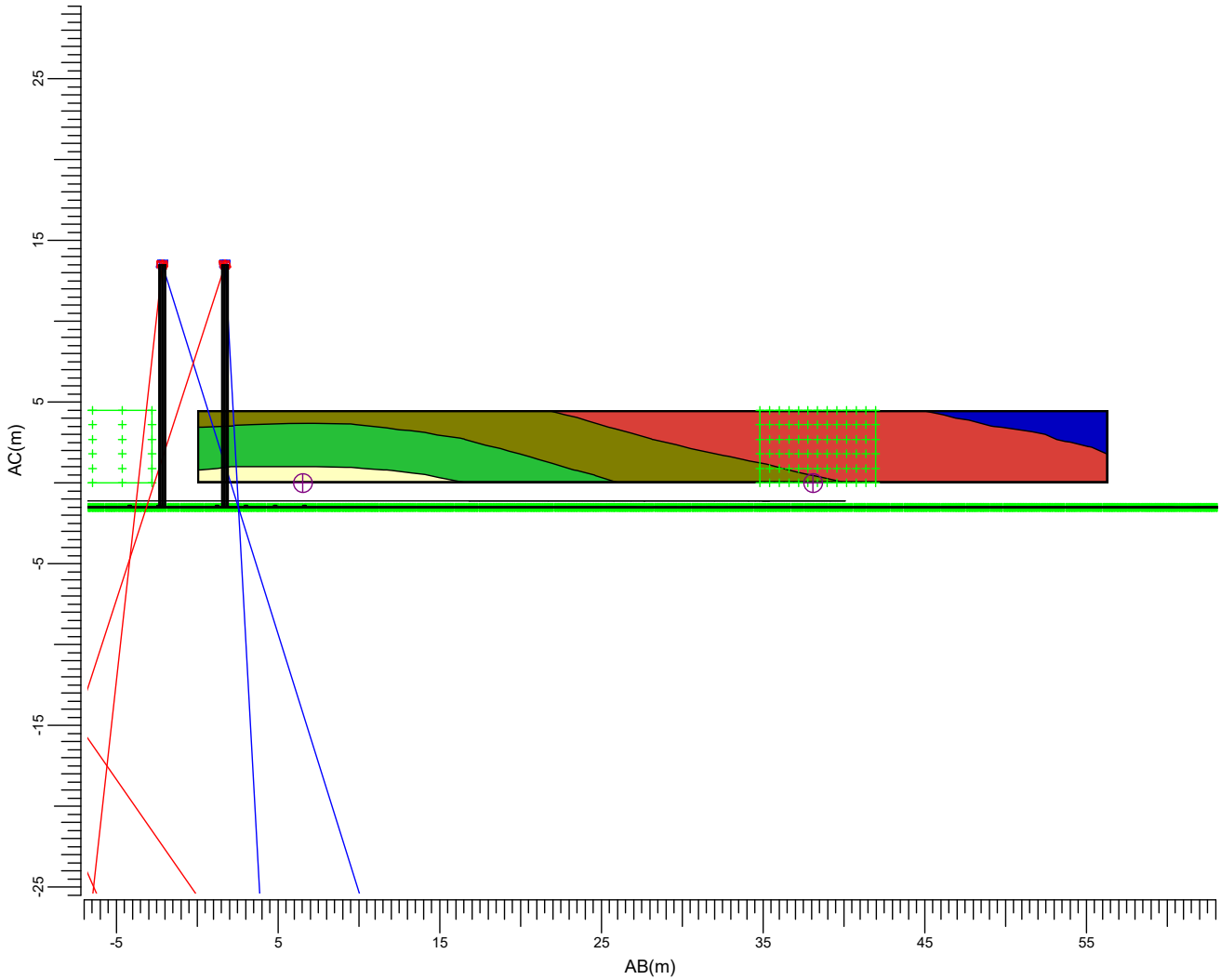
Average	Minimum	Maximum	Min/Ave	Min/Max	CV	Project maintenance factor	Scale
0.17	0.09	0.28	0.55	0.33	0.311	0.90	1:400

3.13 Ev NWest house @1.5m-6m: Filled Iso Contour

Performance

Grid : Ev NWest house @1.5m-6m
Calculation : Surface Illuminance (lux)





(-77.12, 33.38, 6.00) C-----D (-80.29, 89.63, 6.00)
(-77.12, 33.38, 1.50) A-----B (-80.29, 89.63, 1.50)

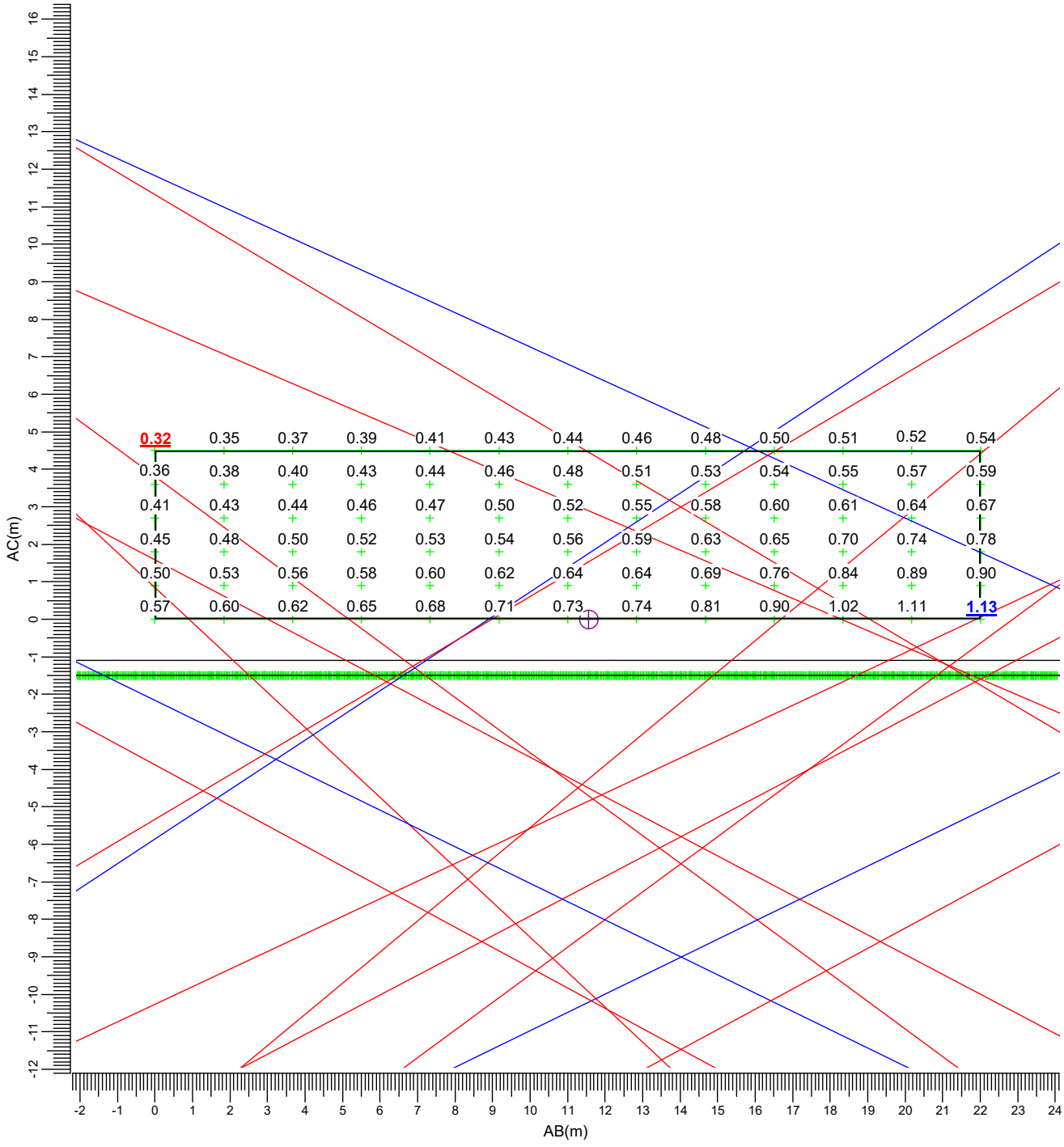
A BVP525 OUT T15 100K A-WB/3 B BVP525 OUT T15 100K A-NB/30
H BVP525 OUT T15 100K A-VWB/ O BVP651 T25 DW10 BL1

Average	Minimum	Maximum	Min/Ave	Min/Max	CV	Project maintenance factor	Scale
0.17	0.09	0.28	0.55	0.33	0.311	0.90	1:400

3.14 Ev Nth houses @1.5m-6m1: Graphical Table

Performance

Grid : Ev Nth houses @1.5m-6m1
Calculation : Surface Illuminance (lux)



(-43.90, 70.10, 6.00) C-----D (-23.54, 78.45, 6.00)
(-43.90, 70.10, 1.50) A-----B (-23.54, 78.45, 1.50)

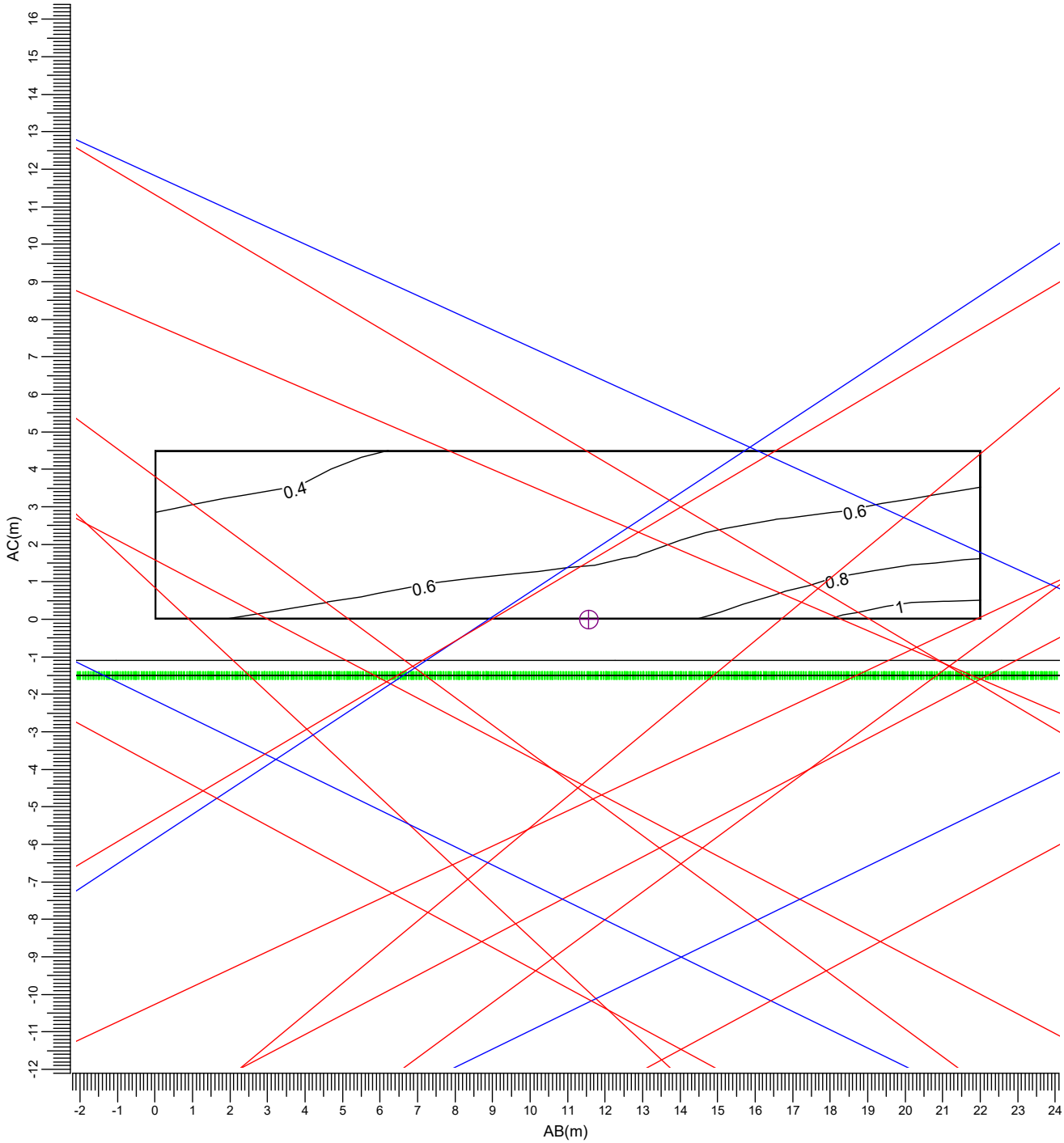
A BVP525 OUT T15 100K A-WB/3 B BVP525 OUT T15 100K A-NB/30
H BVP525 OUT T15 100K A-VWB/ O BVP651 T25 DW10 BL1

Average	Minimum	Maximum	Min/Ave	Min/Max	CV	Project maintenance factor	Scale
0.58	0.32	1.13	0.55	0.29	0.281	0.90	1:150

3.15 Ev Nth houses @1.5m-6m1: Iso Contour

Performance

Grid : Ev Nth houses @1.5m-6m1
Calculation : Surface Illuminance (lux)



(-43.90, 70.10, 6.00) C-----D (-23.54, 78.45, 6.00)
(-43.90, 70.10, 1.50) A-----B (-23.54, 78.45, 1.50)

A BVP525 OUT T15 100K A-WB/3 B BVP525 OUT T15 100K A-NB/30
H BVP525 OUT T15 100K A-VWB/ O BVP651 T25 DW10 BL1

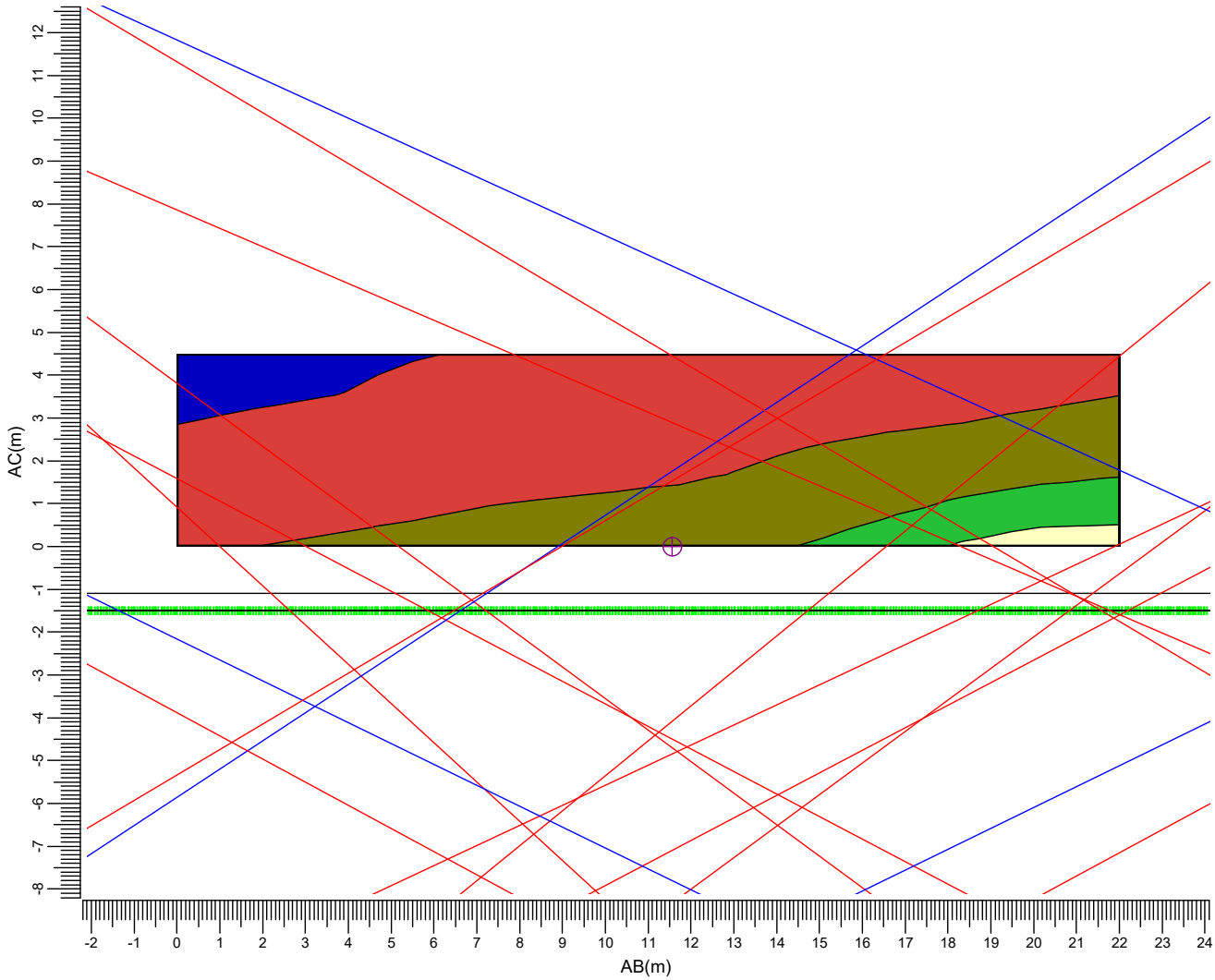
Average	Minimum	Maximum	Min/Ave	Min/Max	CV	Project maintenance factor	Scale
0.58	0.32	1.13	0.55	0.29	0.281	0.90	1:150

3.16 Ev Nth houses @1.5m-6m1: Filled Iso Contour

Performance

Grid : Ev Nth houses @1.5m-6m1
Calculation : Surface Illuminance (lux)





(-43.90, 70.10, 6.00) C-----D (-23.54, 78.45, 6.00)
(-43.90, 70.10, 1.50) A-----B (-23.54, 78.45, 1.50)

A BVP525 OUT T15 100K A-WB/3 B BVP525 OUT T15 100K A-NB/30
H BVP525 OUT T15 100K A-VWB/ O BVP651 T25 DW10 BL1

Average	Minimum	Maximum	Min/Ave	Min/Max	CV	Project maintenance factor	Scale
0.58	0.32	1.13	0.55	0.29	0.281	0.90	1:150

4. Luminaire Details

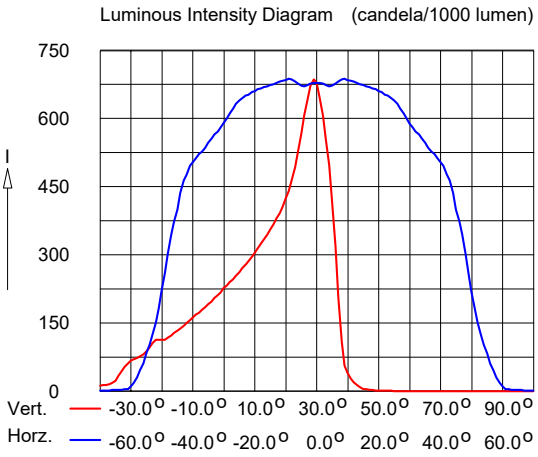
4.1 Project Luminaires

OptiVision LED
BVP525 OUT T15 100K 1xLED1940/740 A-WB/30 +LO

Light output ratios
- DLOR : 0.65
- ULOR : 0.00
- TLOR : 0.65

Ballast : N/A
Lamp flux : 183674 lm
Luminaire wattage : 1375.4 W
Measurement code : LVA1409005

Note: Luminaire data not from database.

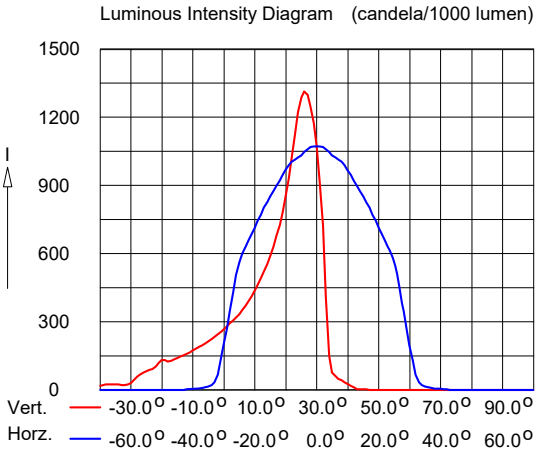


OptiVision LED
BVP525 OUT T15 100K 1xLED1940/740 A-NB/30 +LO

Light output ratios
- DLOR : 0.53
- ULOR : 0.00
- TLOR : 0.53

Ballast : N/A
Lamp flux : 183674 lm
Luminaire wattage : 1375.4 W
Measurement code : LVA1409003

Note: Luminaire data not from database.



5. Installation Data

5.1 Legends

Project Luminaires:

Code	Qty	Luminaire Type	Lamp Type	Flux (lm)
A	12	BVP525 OUT T15 100K A-WB/30 +LO	1 * LED1940/740	1 * 183674
B	4	BVP525 OUT T15 100K A-NB/30 +LO	1 * LED1940/740	1 * 183674

Arrangements:

Code	Arrangement
1	End Columns
2	Centre Columns
3	Centre Columns plus 1m
4	End Columns plus 1m
5	Half way line 1
6	Half way line 2
7	Half way line 3
8	Half way line 4

Switching Modes:

Code	Switching Mode
1	Performance
2	Spill Ltg

5.2 Luminaire Positioning and Orientation

Including Aiming Points:

Qty and Code	Position			Aiming Points			ULR	Arr.	Switching Modes	
	X (m)	Y (m)	Z (m)	X (m)	Y (m)	Z (m)			1	2
1 * A	-34.50	-37.50	15.00	-5.87	-34.24	-0.00	0.00	1	+	+
1 * B	-34.50	-37.50	15.00	-0.11	-40.27	0.00	0.00	1	+	+
1 * A	-34.50	37.50	15.00	-5.87	34.24	-0.00	0.00	1	+	+
1 * B	-34.50	37.50	15.00	-0.11	40.27	0.00	0.00	1	+	+
1 * A	34.50	-37.50	15.00	5.87	-34.24	-0.00	0.00	1	+	+
1 * B	34.50	-37.50	15.00	0.11	-40.27	0.00	0.00	1	+	+
1 * A	34.50	37.50	15.00	5.87	34.24	-0.00	0.00	1	+	+
1 * B	34.50	37.50	15.00	0.11	40.27	0.00	0.00	1	+	+
1 * A	-34.50	-12.50	15.00	-6.21	2.81	0.00	0.00	6	+	+
1 * A	-34.50	-12.50	15.00	-0.20	-21.01	0.00	0.00	6	+	+
1 * A	-34.50	12.50	15.00	-6.21	-2.81	0.00	0.00	6	+	+
1 * A	-34.50	12.50	15.00	-0.20	21.01	0.00	0.00	6	+	+
1 * A	34.50	-12.50	15.00	6.21	2.81	0.00	0.00	6	+	+
1 * A	34.50	-12.50	15.00	0.20	-21.01	0.00	0.00	6	+	+
1 * A	34.50	12.50	15.00	6.21	-2.81	0.00	0.00	6	+	+
1 * A	34.50	12.50	15.00	0.20	21.01	0.00	0.00	6	+	+

Including Aiming Angles:

Qty and Code	Position			Aiming Angles			ULR	Arr.	Switching Modes	
	X (m)	Y (m)	Z (m)	Rot.	Tilt90	Tilt0			1	2
1 * A	-34.50	-37.50	15.00	6.5	62.5	0.0	0.00	1	+	+

Qty and Code	Position			Aiming Angles			ULR	Arr.	Switching Modes	
	X (m)	Y (m)	Z (m)	Rot.	Tilt90	Tilt0			1	2
1 * B	-34.50	-37.50	15.00	-4.6	66.5	0.0	0.00	1	+	+
1 * A	-34.50	37.50	15.00	-6.5	62.5	-0.0	0.00	1	+	+
1 * B	-34.50	37.50	15.00	4.6	66.5	-0.0	0.00	1	+	+
1 * A	34.50	-37.50	15.00	173.5	62.5	-0.0	0.00	1	+	+
1 * B	34.50	-37.50	15.00	-175.4	66.5	-0.0	0.00	1	+	+
1 * A	34.50	37.50	15.00	-173.5	62.5	0.0	0.00	1	+	+
1 * B	34.50	37.50	15.00	175.4	66.5	0.0	0.00	1	+	+
1 * A	-34.50	-12.50	15.00	28.4	65.0	0.0	0.00	6	+	+
1 * A	-34.50	-12.50	15.00	-13.9	67.0	0.0	0.00	6	+	+
1 * A	-34.50	12.50	15.00	-28.4	65.0	-0.0	0.00	6	+	+
1 * A	-34.50	12.50	15.00	13.9	67.0	-0.0	0.00	6	+	+
1 * A	34.50	-12.50	15.00	151.6	65.0	-0.0	0.00	6	+	+
1 * A	34.50	-12.50	15.00	-166.1	67.0	-0.0	0.00	6	+	+
1 * A	34.50	12.50	15.00	-151.6	65.0	0.0	0.00	6	+	+
1 * A	34.50	12.50	15.00	166.1	67.0	0.0	0.00	6	+	+

Appendix B

Appendix 9

MICHAEL GRUBB STUDIO



Stag Brewery, Mortlake

Sports Pitch Lighting Assessment

For Reselton Properties

February 2018

Former Stag Brewery, Mortlake.

Sports Pitch Lighting Assessment Summary

Document: 547-(010)-RP-EX-LA

February 2018

Introduction

Michael Grubb Studio (the Lighting Consultant) has considered various lighting options for the Sports Pitch. The challenge being to provide appropriate levels of illumination and uniformity for Sport England / FA without over-lighting and creating excessive glare or light spill into adjacent properties.

Lighting designs for both Class II and FA Class III have been developed, with both complying to the relevant ILP guidelines. These lighting designs are detailed in the appended documents. Whilst both schemes are considered acceptable, the preference is for the FA Class lll scheme as this is deemed to be most appropriate when considering use and location.

Design & Specification

Both lighting schemes have been designed to Sport England Outdoor Football Pitch Class guidelines, which are:

- Class lll FA Standard = 120 lux ave, 0.6 Uo 60 Ra.
- Class II = 200 lux ave, 0.6 Uo 60 Ra

Both schemes are based on 8 No 15m columns with 2 No luminaires on each column. 16 No fittings in total. Luminaires for the Class ll scheme would be higher output.

The proposed luminaire (floodlight) from Phillips Lighting contains an internal louvre, which limits spill in all directions as well as reducing light intensity and glare. An additional external louvre is also proposed to ensure that all efforts are made to reduce glare and light spill.

Compliance

Lighting calculations are contained within the appended assessments and are based on Sport England Document and ILP Guidance Notes for Obtrusive Light 2011.

Lighting calculations also include 3 No. 'Observer' locations for each row of houses at 1.5m height (as this represents a person looking out the window). The Maximum Lighting Intensity Obtrusive Light towards each observer is considered acceptable and within ILP Guidelines.

Finally, it should be noted that a 'worst case' scenario approach has been taken in order to ensure a robust assessment – in reality, soft landscaping proposals around the perimeter of the school site (Application B) , especially on the western site boundary, will further protect residents from any impact relating to artificial light.

www.michaelgrubbstudio.com

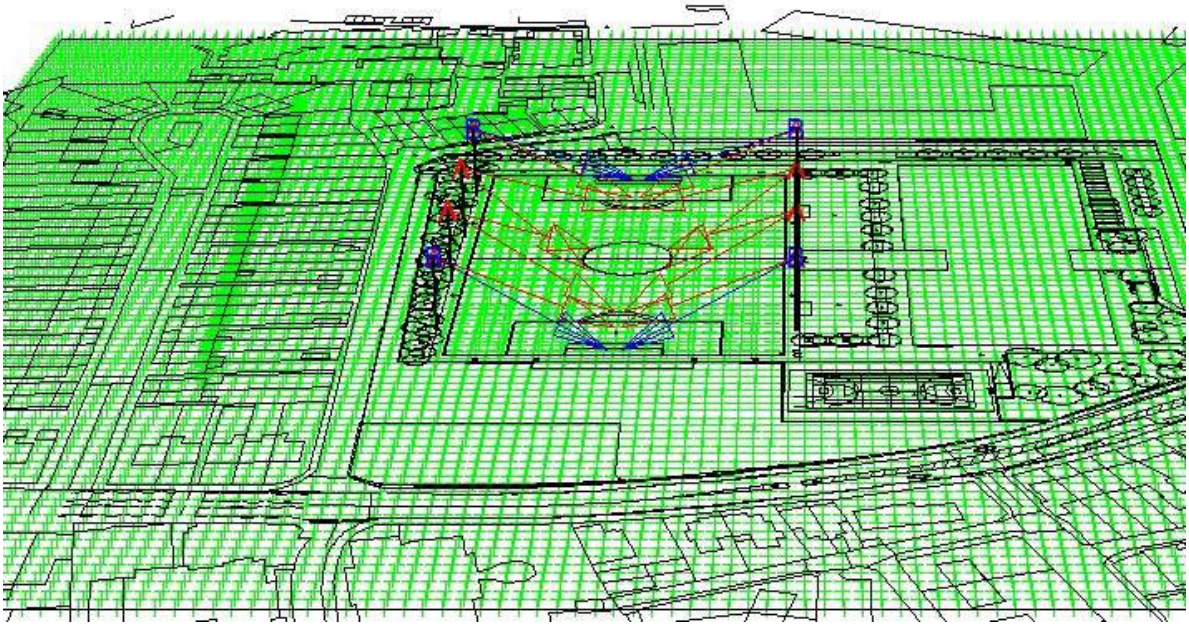
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Mortlake Stage Brewery Development

F/ball Pitch LED Ltg15m 120 Lx 0.6 U0 LO

Project code:	0400061129, D-227389
Date:	31-01-2018
Customer:	Michael Grubb Studios
Customer Representative:	Alastair Aiken
Designer:	Steve Johnston



The nominal values shown in this report are the result of precision calculations, based upon precisely positioned luminaires in a fixed relationship to each other and to the area under examination. In practice the values may vary due to tolerances on luminaires, luminaire positioning, reflection properties and electrical supply.

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The Philips Centre
Guildford Business Park
Guildford
Surrey
GU2 8XG
Mobile Phone: (+44) (0)7917-591561
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1. Project Description

1.1 Description

Designed to Sport England Outdoor Football Pitch Class II
FA Standard = 200 lux ave, 0.6 Uo
60 Ra

Pitch now rotated 90 degrees and new drawing layout included

MF for OptiVivision LED Sports Lighting = 0.9 MF

8 No 15m columns with 2 No luminaires on each

Luminaires are Philips OptiVision LED luminaires with Louvre
BVP525 OUT T15 100K 1xLED1940/740 A-NB/30 +LO = 4 No
BVP525 OUT T15 100K 1xLED1940/740 A-WB/30 +LO = 12 No

16 No fittings in total
GR Max claculation shown on Pitch grid

Grid points doubled to be within 5m spacing. Not placed on lines as helps Calculation result and not required for Commissioning results.

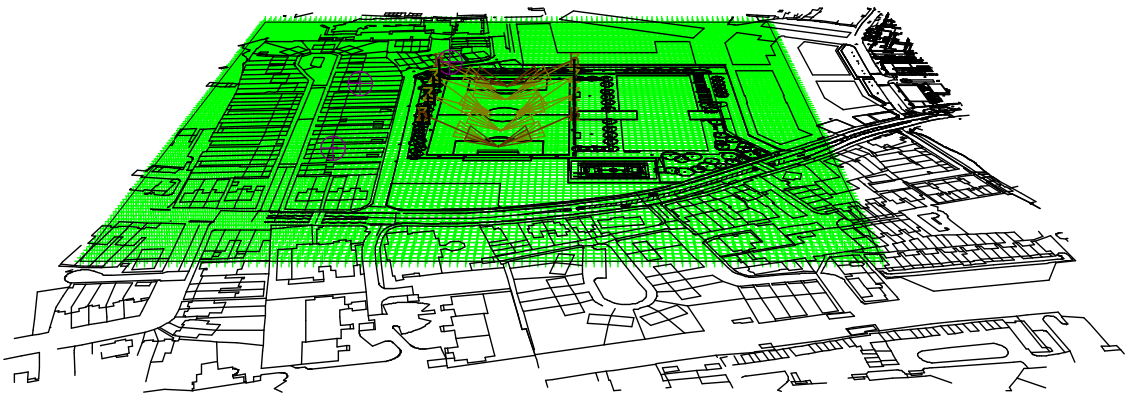
Spill Light Isocontours are shown outside Pitch Area based upon the Spill Light levels shown in Sport England Document and ILP Guidance Notes for Obtrusive Light 2011. These are 2,5,10 & 25 lux levels.
Spill lighting iso-contour results are shown with an MF of 1.0 which is worst case when newley installed.

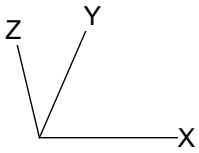
Pre Curfew Spill light through windows are E1 = 2 lux, E2 = 5 lux, E3 = 10 lux, calculation with internal louvre fitted is below 5 lux so conforms wit E2-E4 Zones. Observers at houses added @ 1.5m for Lighting Intensity Calc

Tilt angles are no higher than 68 degree peak beam.
Peak beam angle included in Tilt 90 of calculation so
68 deg peak beam tilt (38 degree Physical housing tilt as 30 deg asymmetric)

Louvres are fitted internally around each LED to reduce spill in all directions Light intensity at angles and glare reduction.

1.2 3-D Project Overview





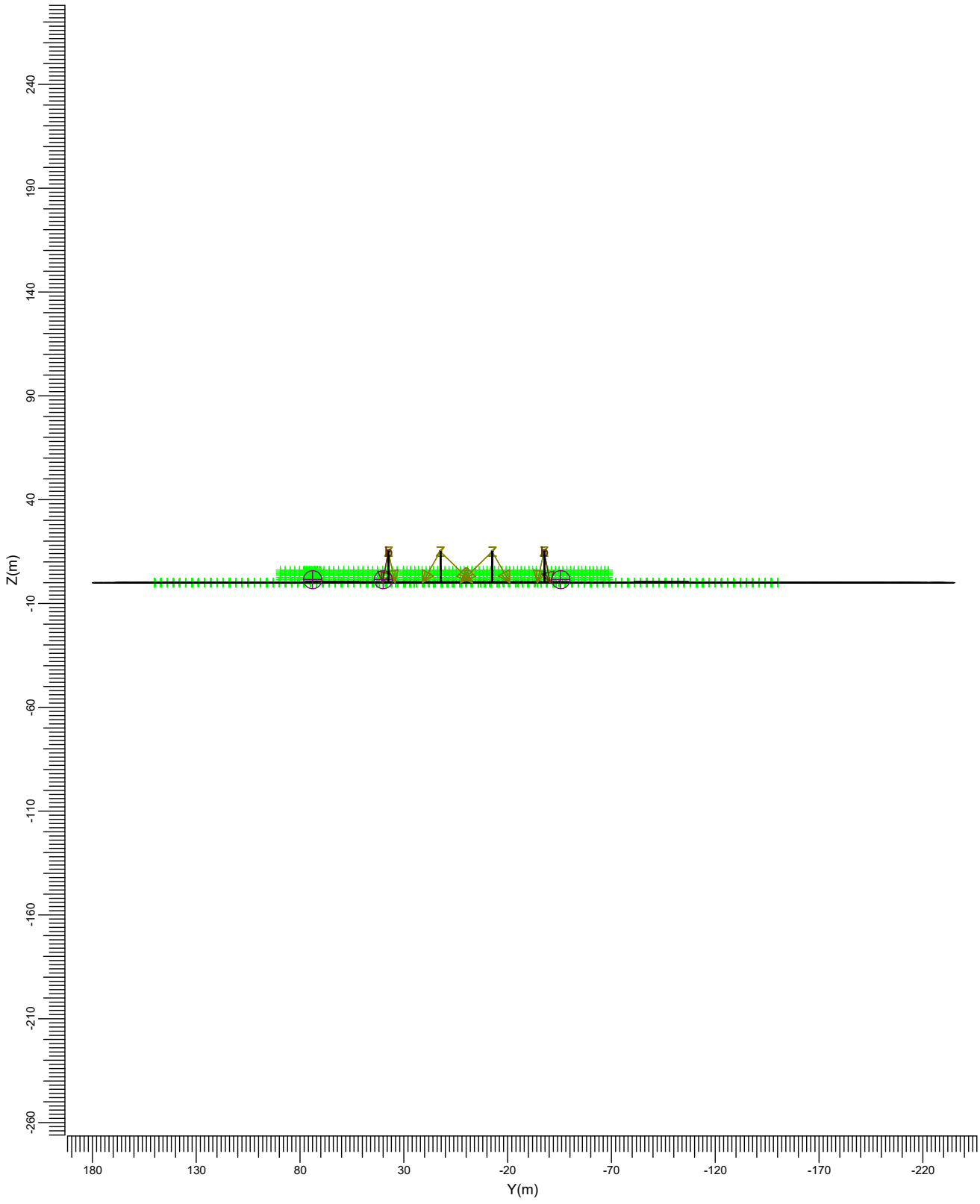
G BVP525 OUT T15 100K A-VWB/ N BVP651 T25 DW10 BL1
Z BVP515 OUT T15 100K A-WB/3 b BVP515 OUT T15 100K A-NB/30

1.3 Top Project Overview



Scale
1:2500

1.4 Left Project Overview



Scale
1:2500

2. Summary

2.1 Observer Information

Code	Observer	Position		
		X (m)	Y (m)	Z (m)
Aa	North Houses	-33.00	74.00	1.50
Bb	North West Houses	-76.00	40.00	1.50
Cc	South West Houses	-74.50	-45.50	1.50

2.2 Obstacle Information

Obstacle	Transparency (%)	Position		
		X (m)	Y (m)	Z (m)
Corner Columns	0	-34.50	-37.50	0.00
		34.50	-37.50	0.00
		-34.50	37.50	0.00
		34.50	37.50	0.00
Centre Columns	0	-34.50	-12.50	0.00
		34.50	-12.50	0.00
		-34.50	12.50	0.00
		34.50	12.50	0.00

2.3 Project Luminaires

Code	Qty	Luminaire Type	Lamp Type	Power (W)	Flux (lm)
Z	12	BVP515 OUT T15 100K A-WB/30 +LO	1 * LED1290/740	917.2	1 * 122450
b	4	BVP515 OUT T15 100K A-NB/30 +LO	1 * LED1290/740	917.2	1 * 122450

The total installed power: 14.68 (kWatt)

Number of Luminaires Per Switching Mode:

Switching Mode	Luminaire Code		Power (kWatt)
	Z	b	
Performance	12	4	14.68
Spill Ltg	12	4	14.68

Number of Luminaires Per Arrangement:

Arrangement	Luminaire Code		Power (kWatt)
	Z	b	
Centre Columns	0	0	0.00
Centre Columns plus 1m	0	0	0.00
End Columns	4	4	7.34
End Columns plus 1m	0	0	0.00
Half way line 1	0	0	0.00
Half way line 2	8	0	7.34
Half way line 3	0	0	0.00
Half way line 4	0	0	0.00

2.4 Calculation Results

Switching Modes:

Code	Switching Mode	Maintenance factor
1	Performance	0.90
2	Spill Ltg	1.00

(Il)luminance Calculations:

Calculation	Switching Mode	Type	Unit	Ave	Min	Max	Min/Ave	Min/Max	CV
Football	1	Surface Illuminance	lux	144	93	188	0.65	0.50	
Spill Ltg Grid	2	Surface Illuminance	lux						
Ev West houses @1.5m-6m	2	Surface Illuminance	lux	0.17	0.10	0.24	0.61	0.43	
Ev NWest house @1.5m-6m	1	Surface Illuminance	lux	0.11	0.06	0.19	0.55	0.33	0.311
Ev Nth houses @1.5m-6m1	1	Surface Illuminance	lux	0.39	0.22	0.75	0.55	0.29	0.281

Glare Rating for Grid of Observers:

Calculation	Switching Mode	Observer Grid	Reference Grid	Reflectance	GR-Max
GR Max for Pitch	1	Football	Football	0.25	43.9

Obtrusive Light Calculations:

Switching Mode	Observer Code	Luminaire Code	Position			Aiming Angles			Maximum Intensity (cd)
			X (m)	Y (m)	Z (m)	Rot.	Tilt90	Tilt0	
1	Aa	Z	34.50	12.50	15.00	166.07	67.00	0.00	911
1	Bb	Z	34.50	-12.50	15.00	-166.07	67.00	-0.00	643
1	Cc	Z	34.50	12.50	15.00	166.07	67.00	0.00	690

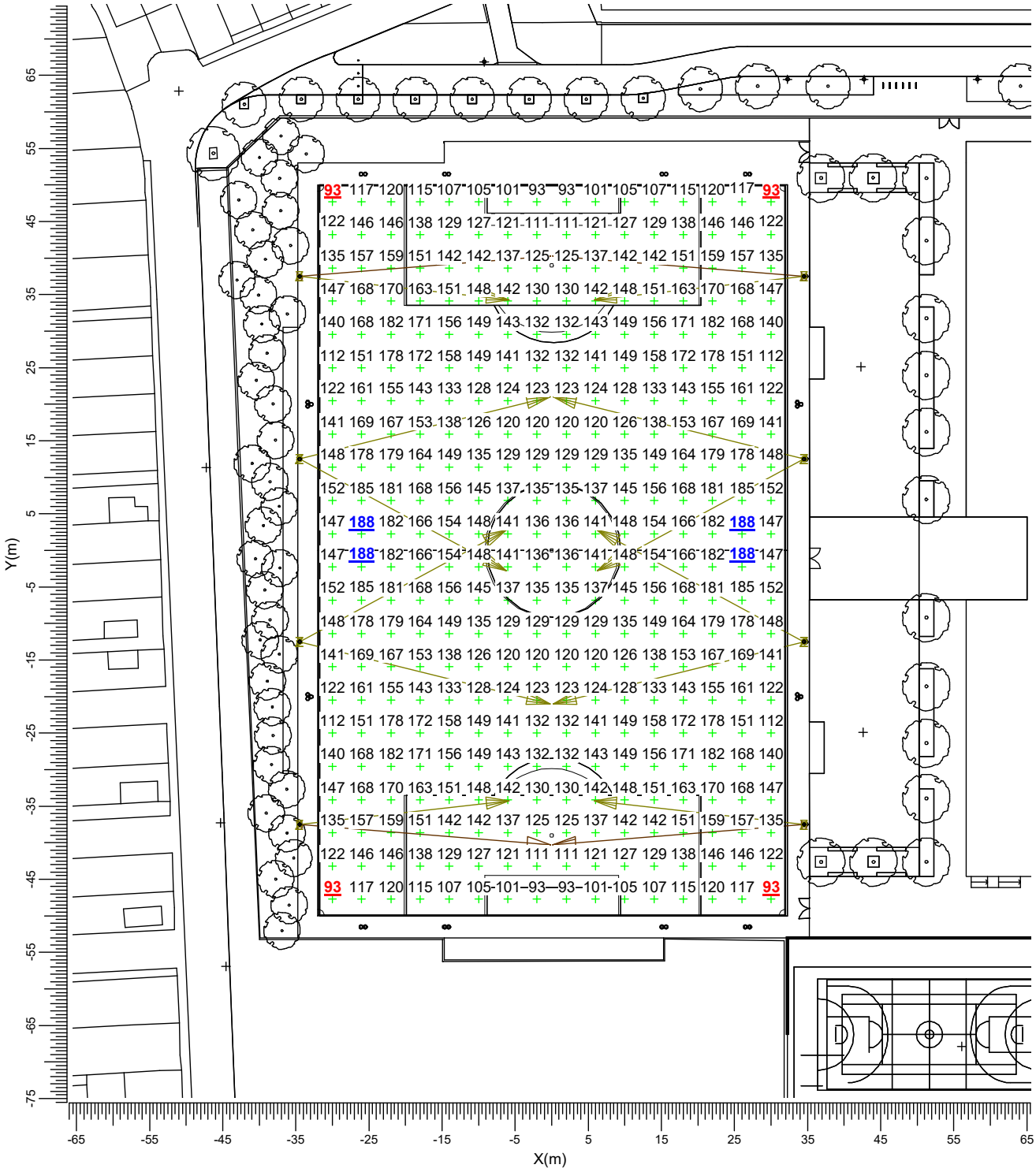
Switching Mode	ULR
1	0.00
2	0.00

3. Calculation Results

3.1 Football: Graphical Table

Performance

Grid : Football at Z = -0.00 m
Calculation : Surface Illuminance (lux)



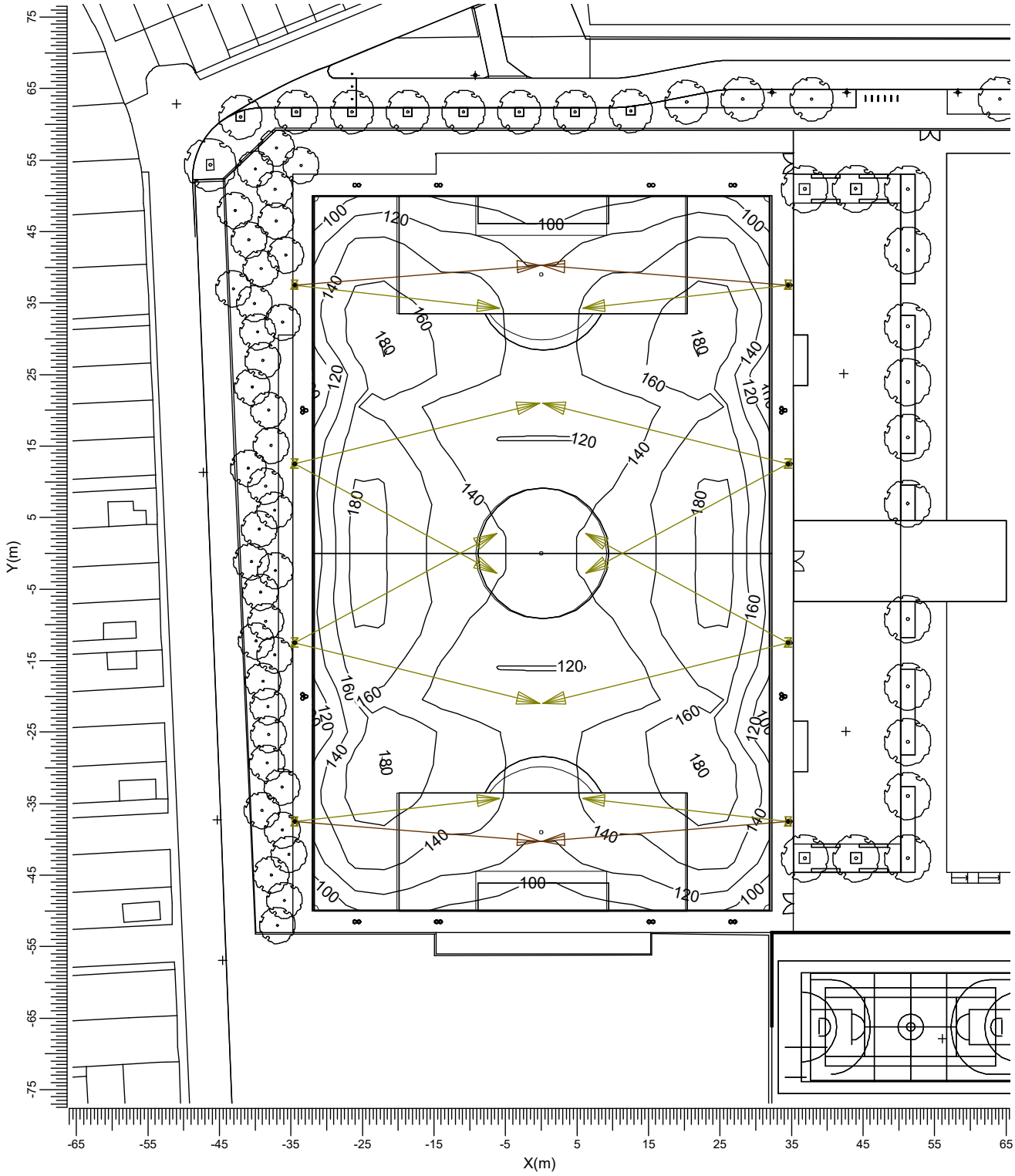
G BVP525 OUT T15 100K A-VWB/ N BVP651 T25 DW10 BL1
Z BVP515 OUT T15 100K A-WB/3 b BVP515 OUT T15 100K A-NB/30

Average	Minimum	Maximum	Min/Ave	Min/Max	Project maintenance factor	Scale
144	93	188	0.65	0.50	0.90	1:750

3.2 Football: Iso Contour

Performance

Grid : Football at Z = -0.00 m
Calculation : Surface Illuminance (lux)



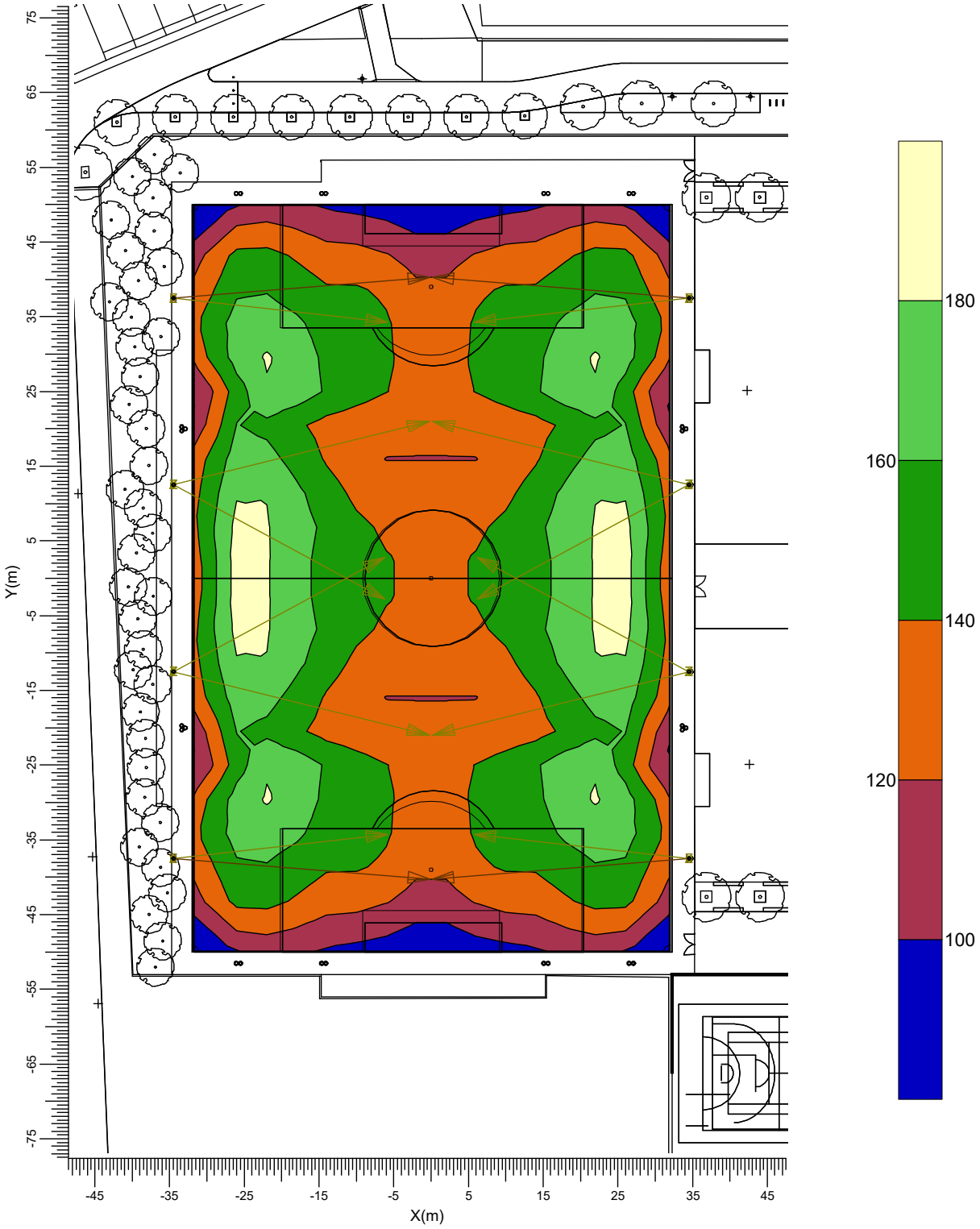
G BVP525 OUT T15 100K A-VWB/ N BVP651 T25 DW10 BL1
Z BVP515 OUT T15 100K A-WB/3 b BVP515 OUT T15 100K A-NB/30

Average	Minimum	Maximum	Min/Ave	Min/Max	Project maintenance factor	Scale
144	93	188	0.65	0.50	0.90	1:750

3.3 Football: Filled Iso Contour

Performance

Grid : Football at Z = -0.00 m
Calculation : Surface Illuminance (lux)



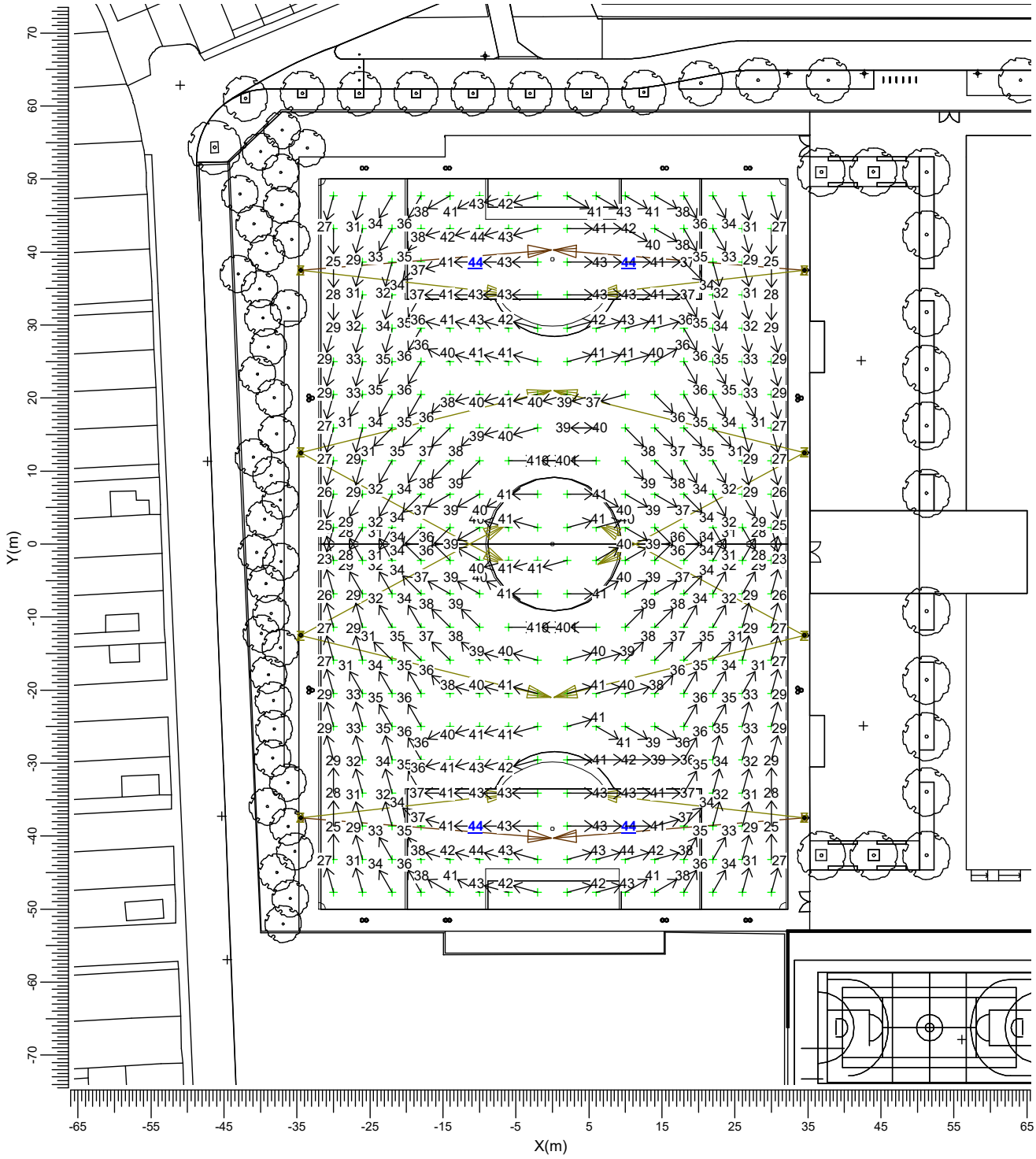
G BVP525 OUT T15 100K A-VWB/ N BVP651 T25 DW10 BL1
Z BVP515 OUT T15 100K A-WB/3 b BVP515 OUT T15 100K A-NB/30

Average	Minimum	Maximum	Min/Ave	Min/Max	Project maintenance factor	Scale
144	93	188	0.65	0.50	0.90	1:750

3.4 GR Max for Pitch: Graphical Table

Performance

Grid of Observers : Football
Calculation : Glare Rating
Grid for Background Luminance : Football (Reflectance: 0.25)
Vertical Viewing Angle : -2.0 deg



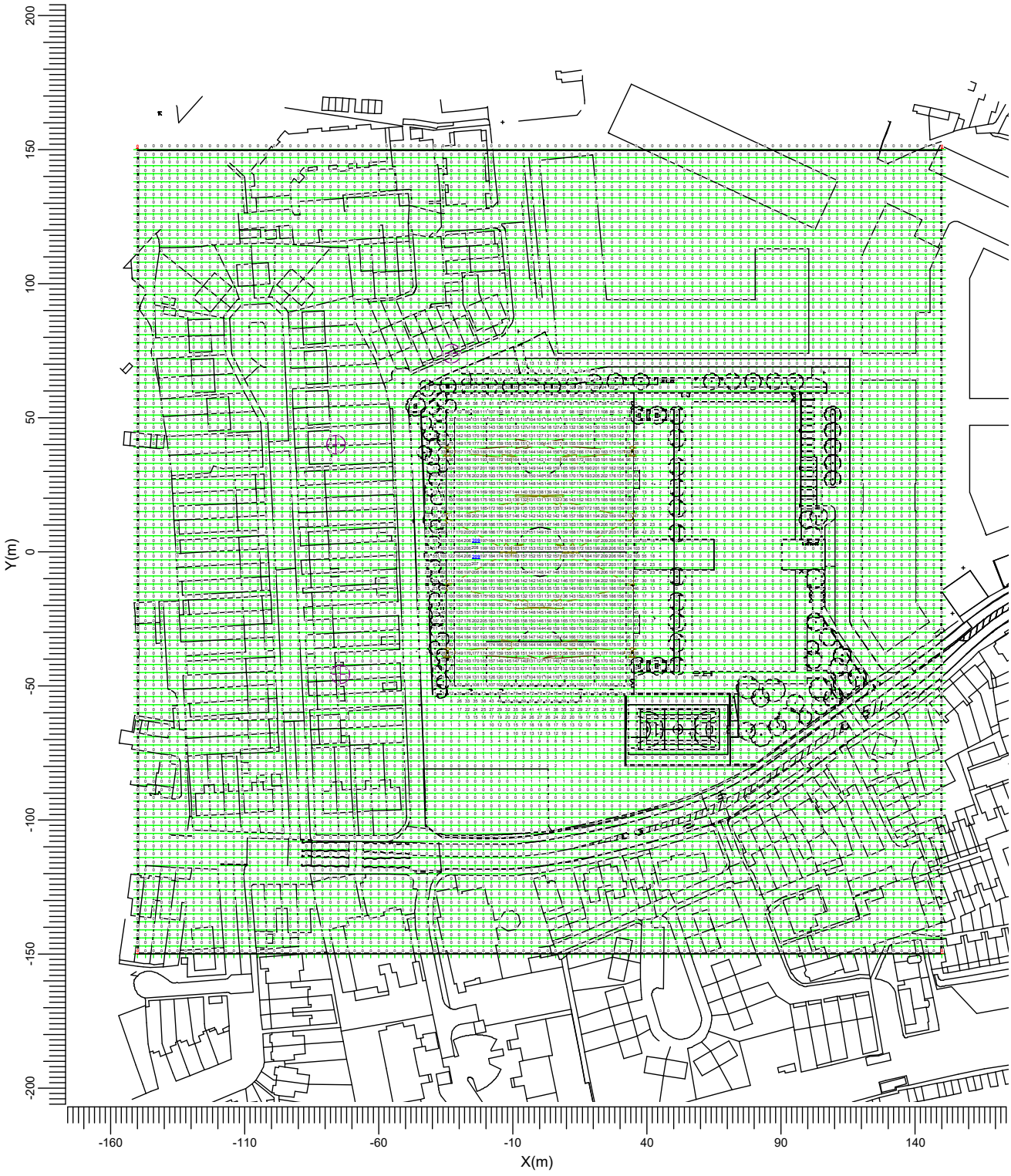
G BVP525 OUT T15 100K A-VWB/ N
Z BVP515 OUT T15 100K A-WB/3 b
BVP651 T25 DW10 BL1
BVP515 OUT T15 100K A-NB/30

Maximum	Project maintenance factor	Scale
43.9	0.90	1:750

3.5 Spill Ltg Grid: Graphical Table

Spill Ltg

Grid : Spill Ltg Grid at Z = -0.00 m
Calculation : Surface Illuminance (lux)



G BVP525 OUT T15 100K A-VWB/ N
Z BVP515 OUT T15 100K A-WB/3 b
BVP651 T25 DW10 BL1
BVP515 OUT T15 100K A-NB/30

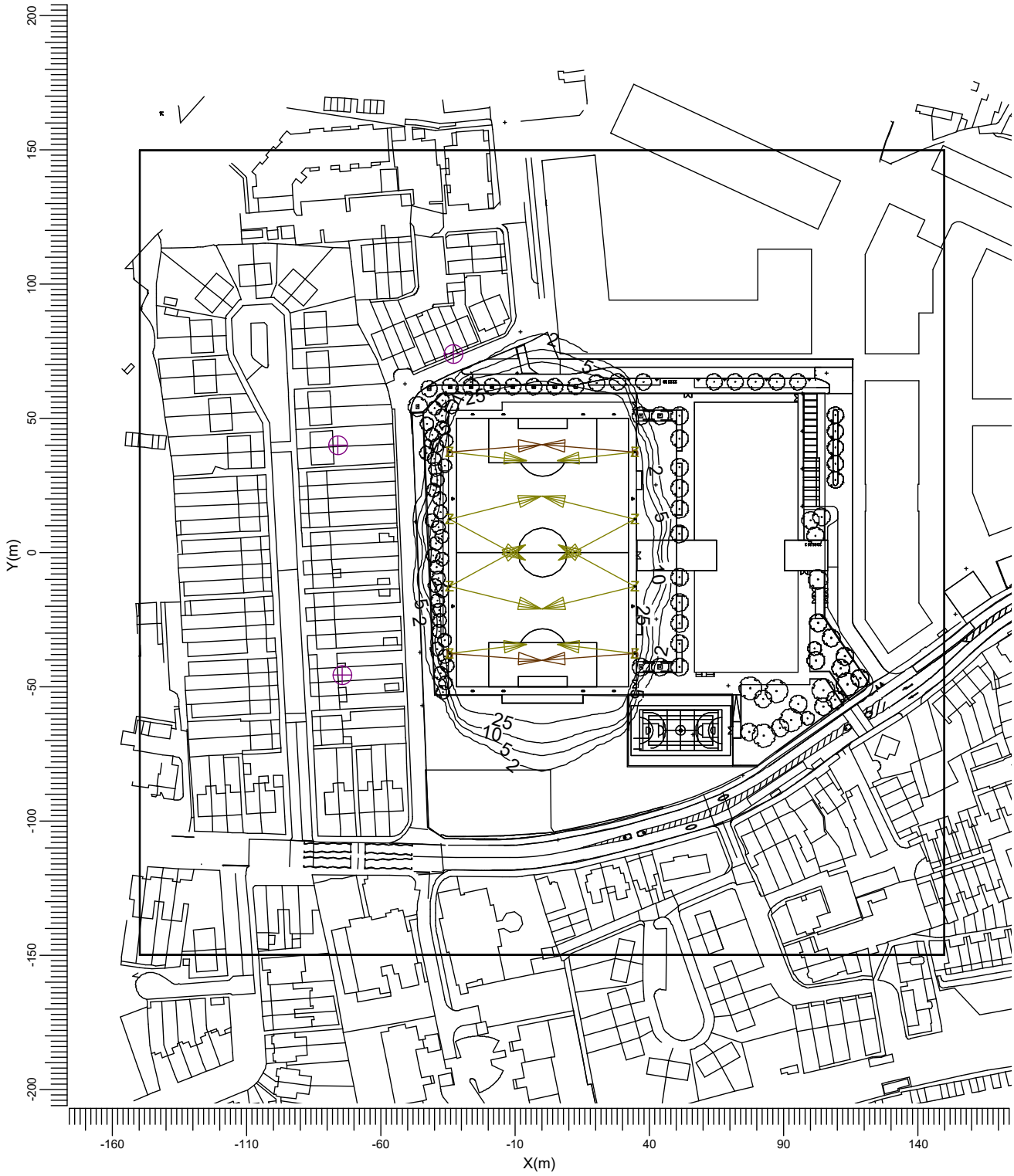
Project maintenance factor
1.00

Scale
1:2000

3.6 Spill Ltg Grid: Iso Contour

Spill Ltg

Grid : Spill Ltg Grid at Z = -0.00 m
Calculation : Surface Illuminance (lux)



G → BVP525 OUT T15 100K A-VWB/3 Z → BVP515 OUT T15 100K A-WB/3
N → BVP651 T25 DW10 BL1 b → BVP515 OUT T15 100K A-NB/30

Project maintenance factor
1.00

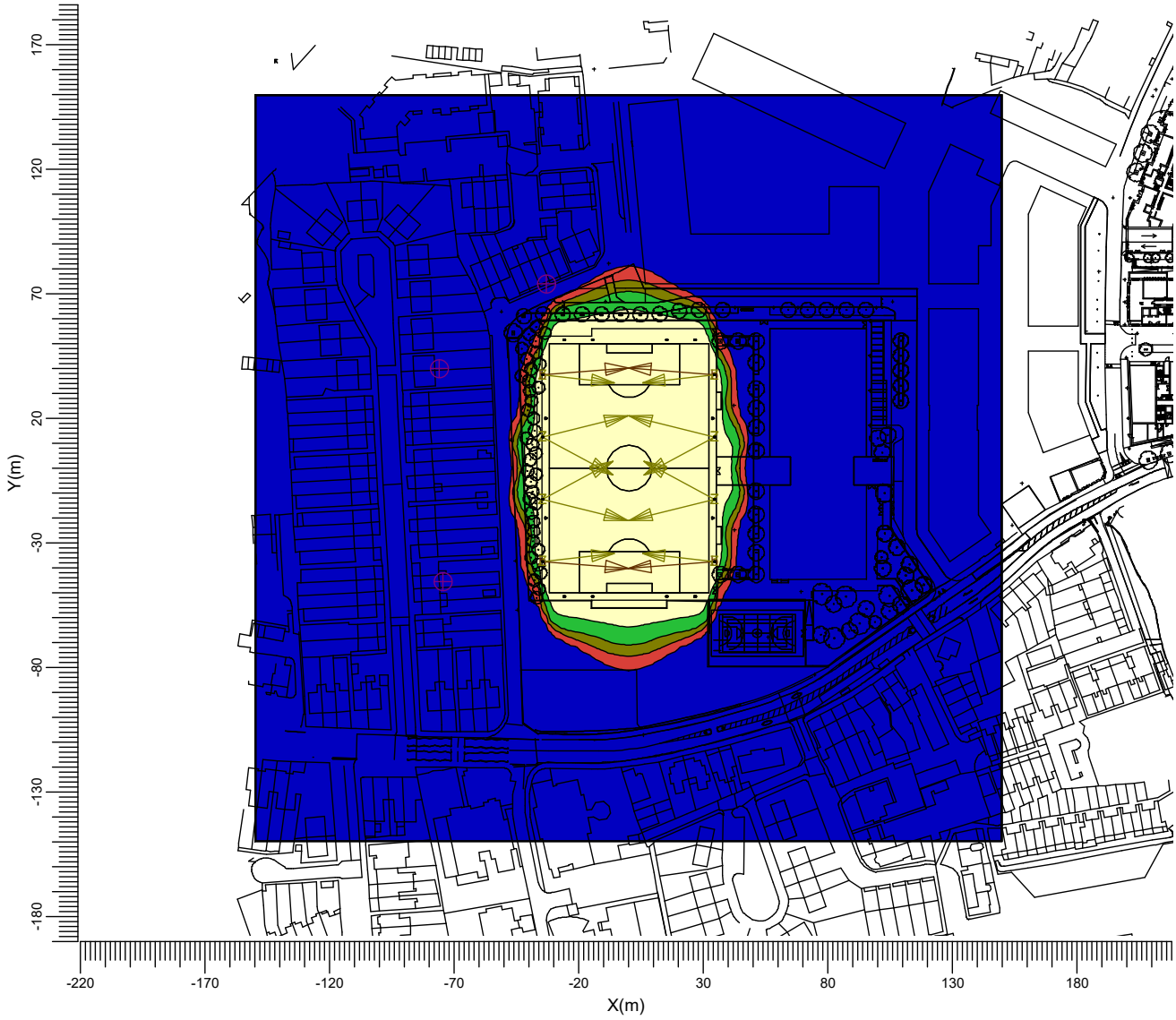
Scale
1:2000

3.7 Spill Ltg Grid: Filled Iso Contour

Spill Ltg

Grid : Spill Ltg Grid at Z = -0.00 m
Calculation : Surface Illuminance (lux)





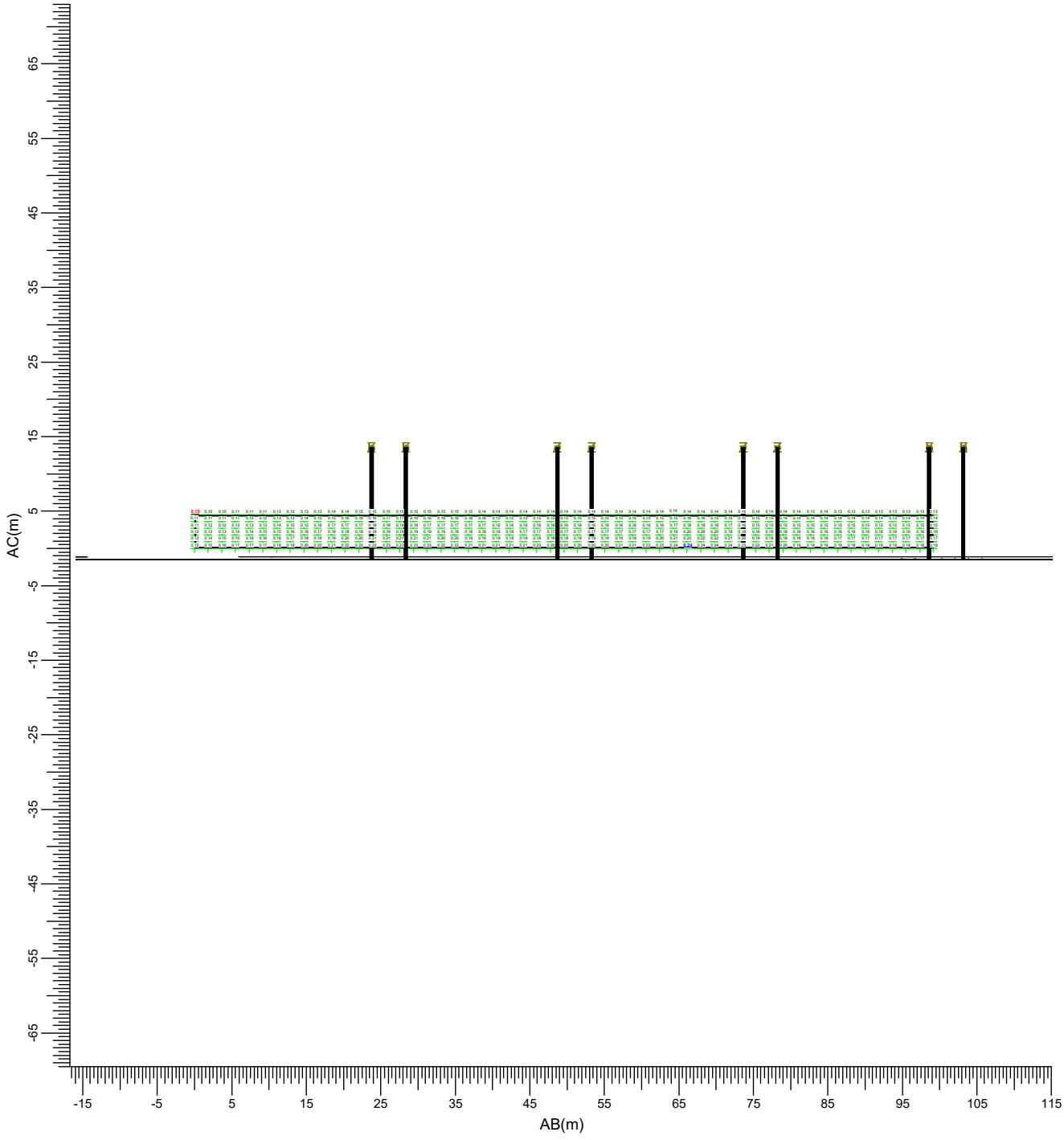
G BVP525 OUT T15 100K A-VWB/ N BVP651 T25 DW10 BL1
Z BVP515 OUT T15 100K A-WB/3 b BVP515 OUT T15 100K A-NB/30

Project maintenance factor
1.00

Scale
1:2500

3.8 Ev West houses @1.5m-6m: Graphical Table Spill Ltg

Grid : Ev West houses @1.5m-6m
Calculation : Surface Illuminance (lux)



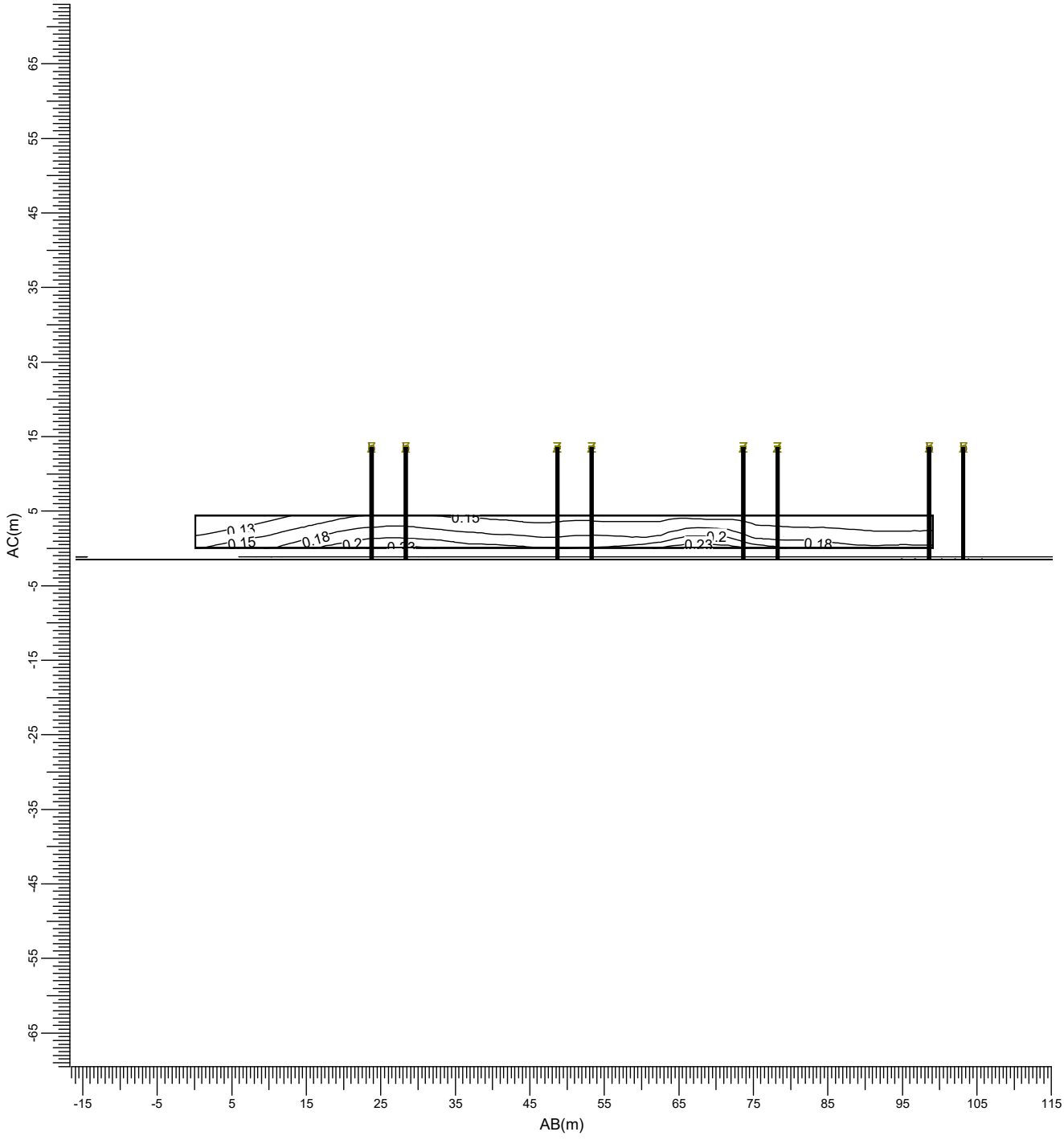
(-73.29, -68.50, 6.00) C-----D (-79.88, 30.44, 6.00)
| |
(-73.29, -68.50, 1.50) A-----B (-79.88, 30.44, 1.50)

G : BVP525 OUT T15 100K A-VWB/30 N : BVP651 T25 DW10 BL1
Z : BVP515 OUT T15 100K A-WB/30 +LO b : BVP515 OUT T15 100K A-NB/30 +LO

Average	Minimum	Maximum	Min/Ave	Min/Max	Project maintenance factor	Scale
0.17	0.10	0.24	0.61	0.43	1.00	1:750

3.9 Ev West houses @1.5m-6m: Iso Contour Spill Ltg

Grid : Ev West houses @1.5m-6m
Calculation : Surface Illuminance (lux)



(-73.29, -68.50, 6.00) C-----D (-79.88, 30.44, 6.00)
| |
(-73.29, -68.50, 1.50) A-----B (-79.88, 30.44, 1.50)

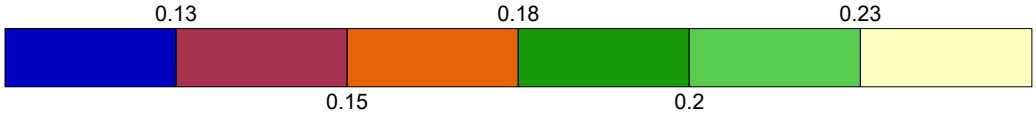
G : BVP525 OUT T15 100K A-VWB/30 N : BVP651 T25 DW10 BL1
Z : BVP515 OUT T15 100K A-WB/30 +LO b : BVP515 OUT T15 100K A-NB/30 +LO

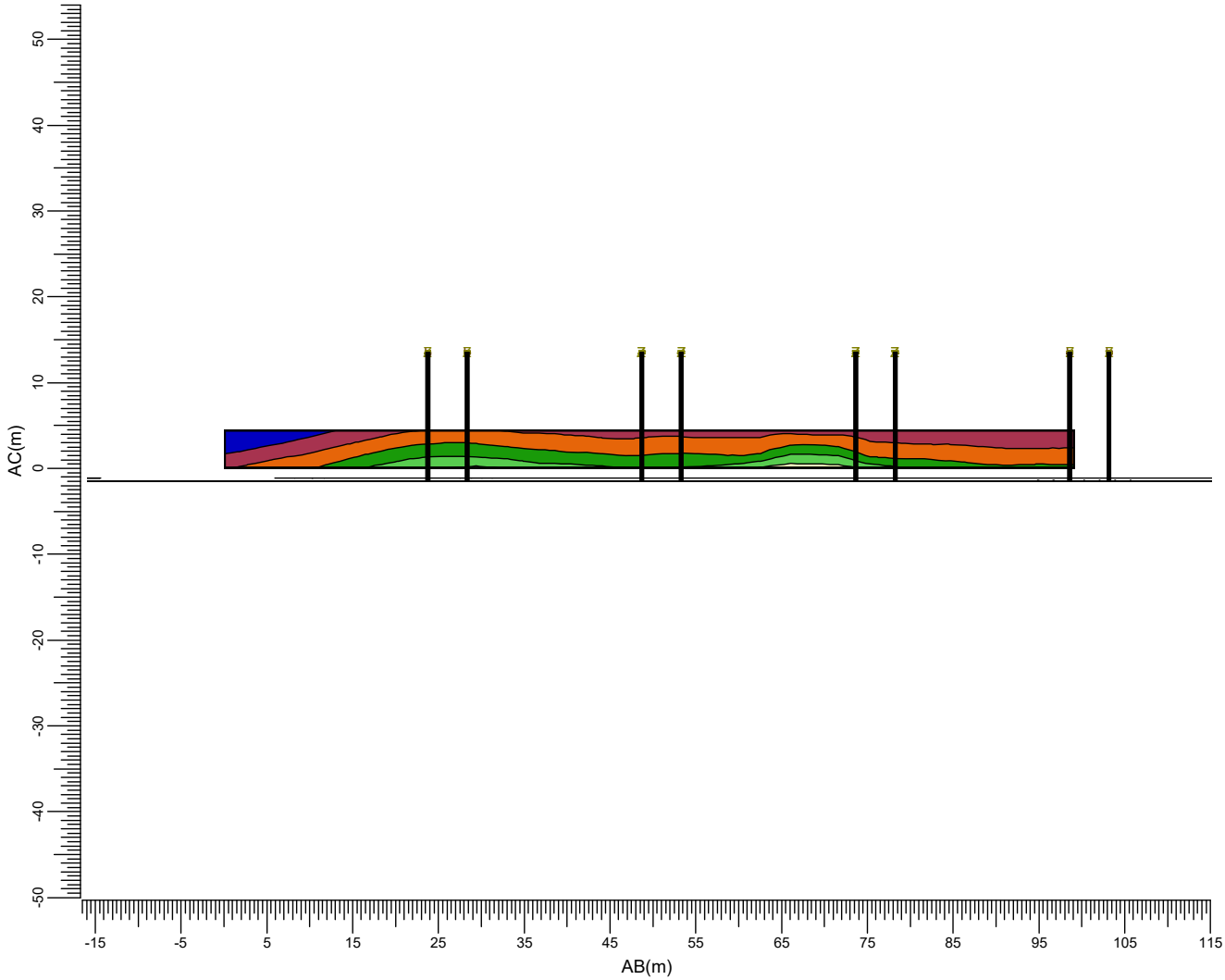
Average	Minimum	Maximum	Min/Ave	Min/Max	Project maintenance factor	Scale
0.17	0.10	0.24	0.61	0.43	1.00	1:750

3.10 Ev West houses @1.5m-6m: Filled Iso Contour

Spill Ltg

Grid : Ev West houses @1.5m-6m
Calculation : Surface Illuminance (lux)





(-73.29, -68.50, 6.00) C-----D (-79.88, 30.44, 6.00)
(-73.29, -68.50, 1.50) A-----B (-79.88, 30.44, 1.50)

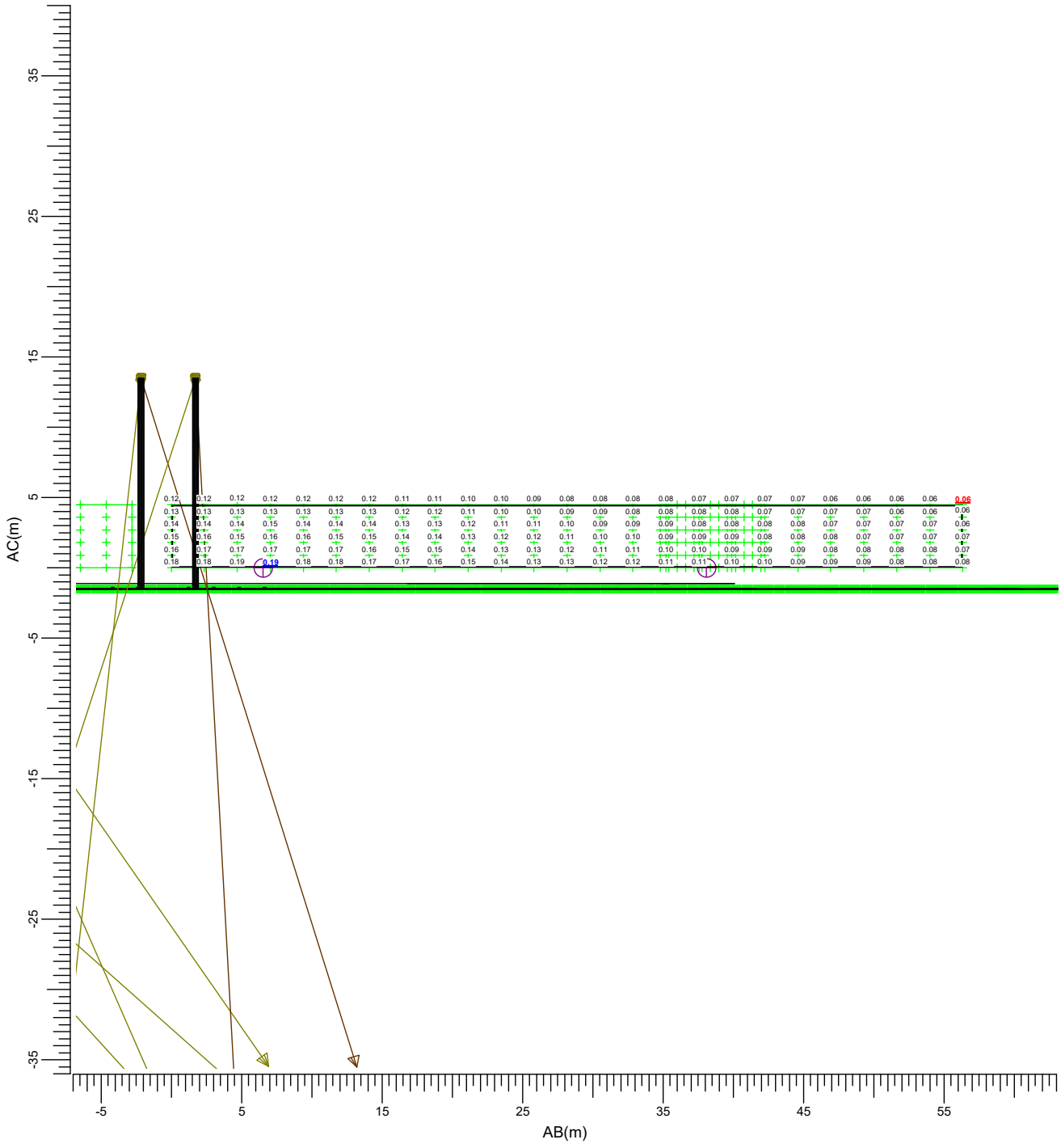
G : BVP525 OUT T15 100K A-VWB/30
Z : BVP515 OUT T15 100K A-WB/30 +LO
N : BVP651 T25 DW10 BL1
b : BVP515 OUT T15 100K A-NB/30 +LO

Average	Minimum	Maximum	Min/Ave	Min/Max	Project maintenance factor	Scale
0.17	0.10	0.24	0.61	0.43	1.00	1:750

3.11 Ev NWest house @1.5m-6m: Graphical Table

Performance

Grid : Ev NWest house @1.5m-6m
Calculation : Surface Illuminance (lux)



(-77.12, 33.38, 6.00) C-----D (-80.29, 89.63, 6.00)
(-77.12, 33.38, 1.50) A-----B (-80.29, 89.63, 1.50)

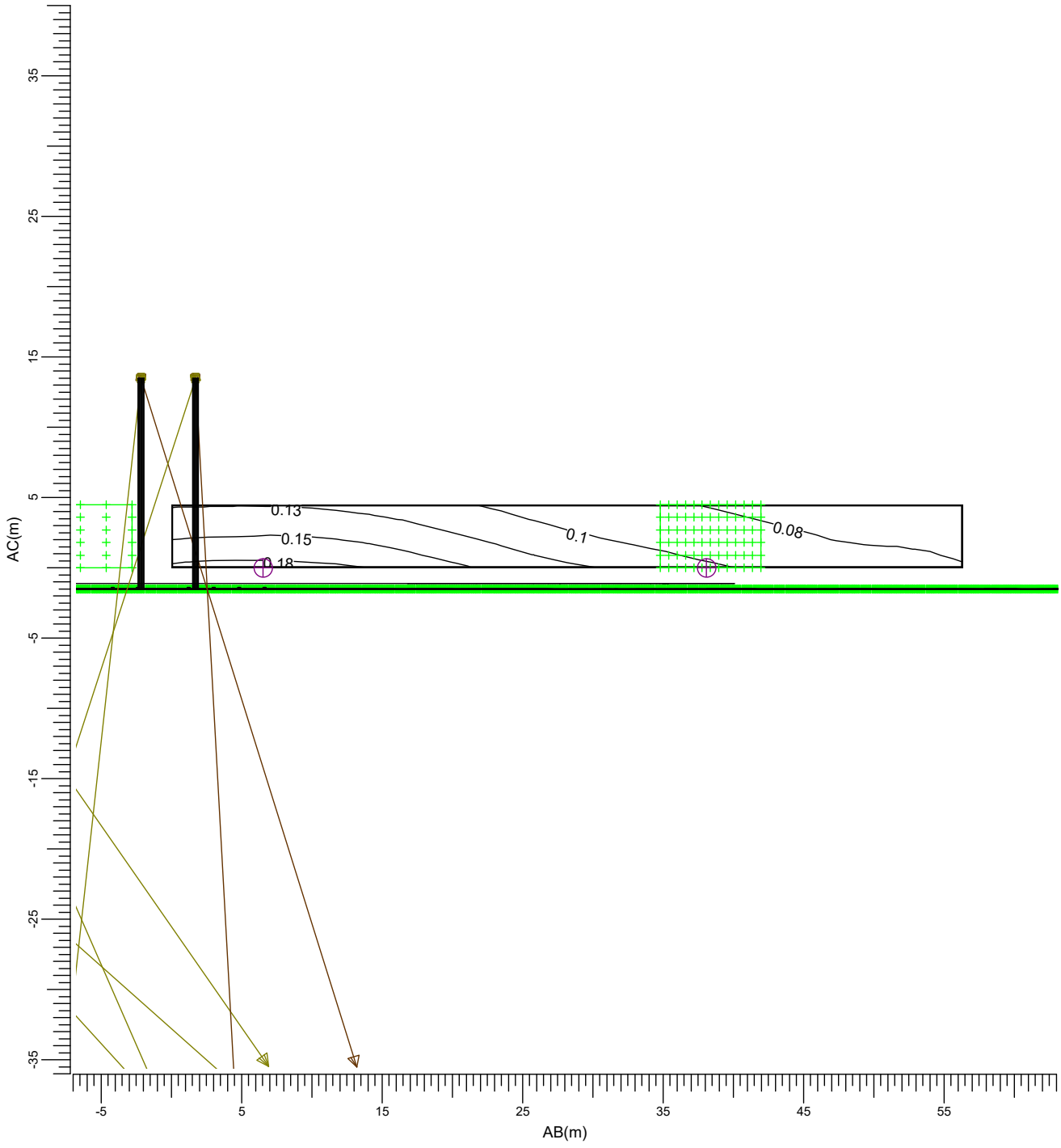
G BVP525 OUT T15 100K A-VWB/ N BVP651 T25 DW10 BL1
Z BVP515 OUT T15 100K A-WB/3 b BVP515 OUT T15 100K A-NB/30

Average	Minimum	Maximum	Min/Ave	Min/Max	CV	Project maintenance factor	Scale
0.11	0.06	0.19	0.55	0.33	0.311	0.90	1:400

3.12 Ev NWest house @1.5m-6m: Iso Contour

Performance

Grid : Ev NWest house @1.5m-6m
Calculation : Surface Illuminance (lux)



(-77.12, 33.38, 6.00) C-----D (-80.29, 89.63, 6.00)
(-77.12, 33.38, 1.50) A-----B (-80.29, 89.63, 1.50)

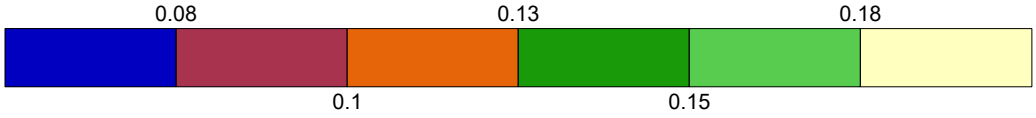
G BVP525 OUT T15 100K A-VWB/ N BVP651 T25 DW10 BL1
Z BVP515 OUT T15 100K A-WB/3 b BVP515 OUT T15 100K A-NB/30

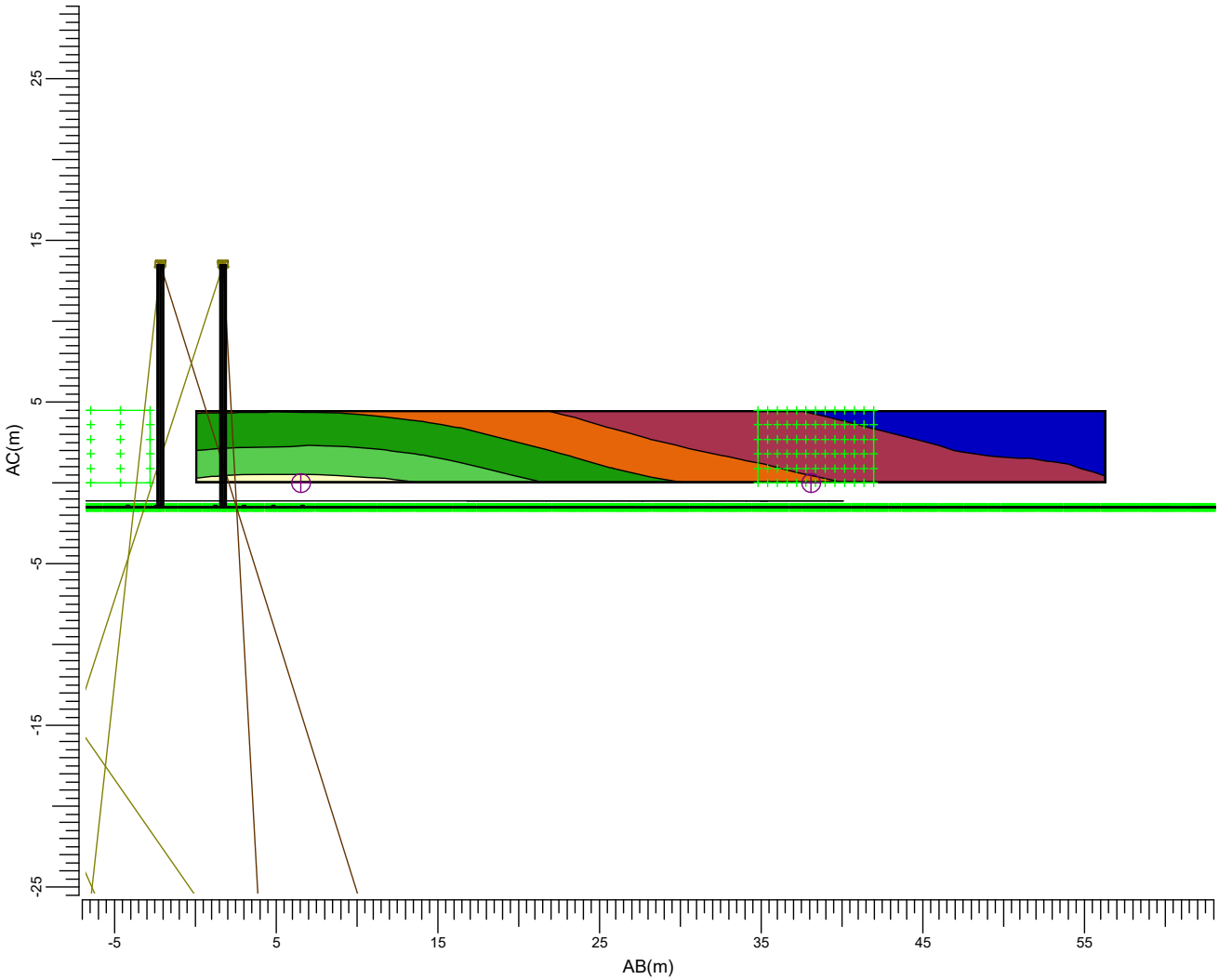
Average	Minimum	Maximum	Min/Ave	Min/Max	CV	Project maintenance factor	Scale
0.11	0.06	0.19	0.55	0.33	0.311	0.90	1:400

3.13 Ev NWest house @1.5m-6m: Filled Iso Contour

Performance

Grid : Ev NWest house @1.5m-6m
Calculation : Surface Illuminance (lux)





(-77.12, 33.38, 6.00) C-----D (-80.29, 89.63, 6.00)
(-77.12, 33.38, 1.50) A-----B (-80.29, 89.63, 1.50)

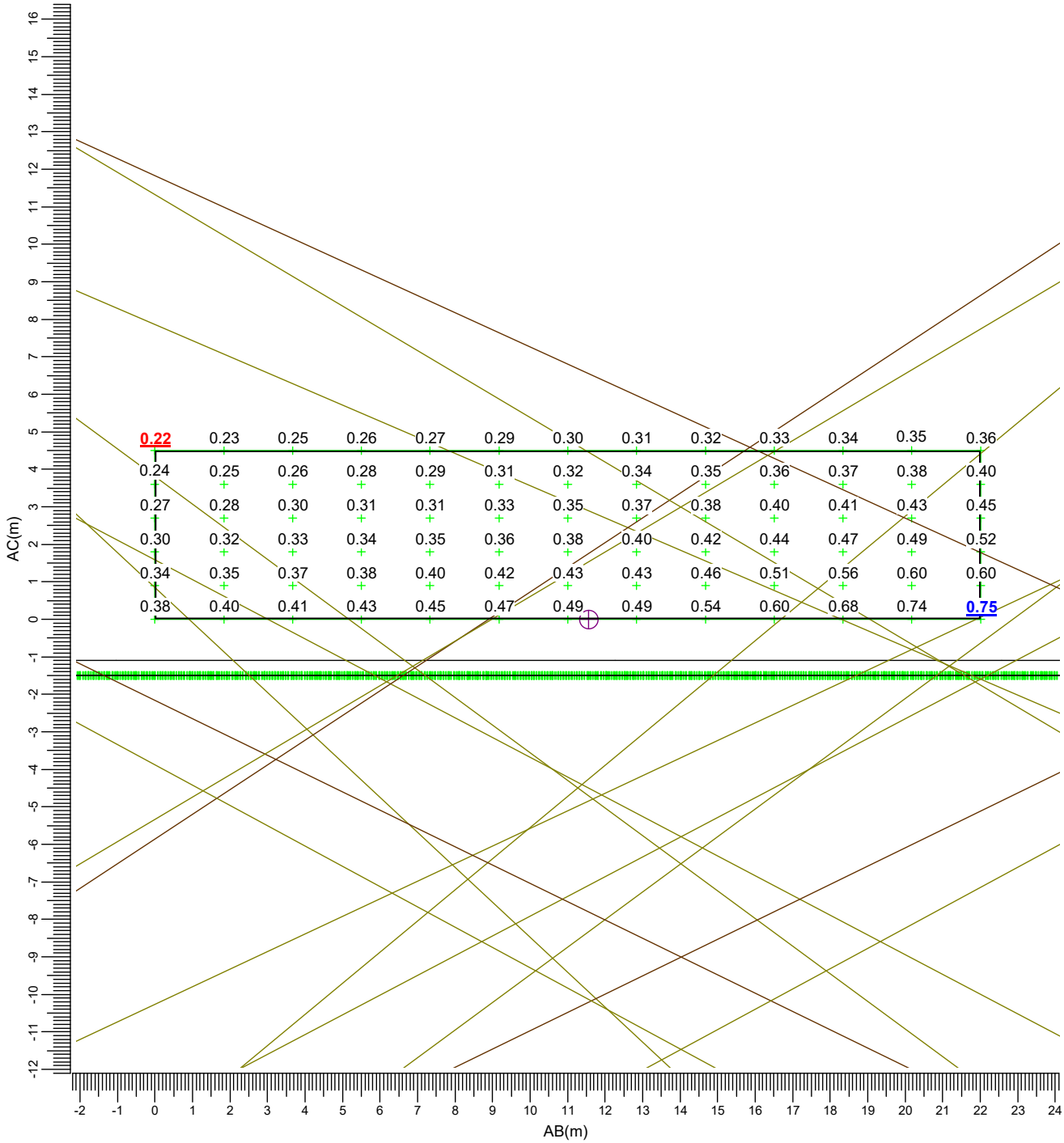
G BVP525 OUT T15 100K A-VWB/ N BVP651 T25 DW10 BL1
Z BVP515 OUT T15 100K A-WB/3 b BVP515 OUT T15 100K A-NB/30

Average	Minimum	Maximum	Min/Ave	Min/Max	CV	Project maintenance factor	Scale
0.11	0.06	0.19	0.55	0.33	0.311	0.90	1:400

3.14 Ev Nth houses @1.5m-6m1: Graphical Table

Performance

Grid : Ev Nth houses @1.5m-6m1
Calculation : Surface Illuminance (lux)



(-43.90, 70.10, 6.00) C-----D (-23.54, 78.45, 6.00)
(-43.90, 70.10, 1.50) A-----B (-23.54, 78.45, 1.50)

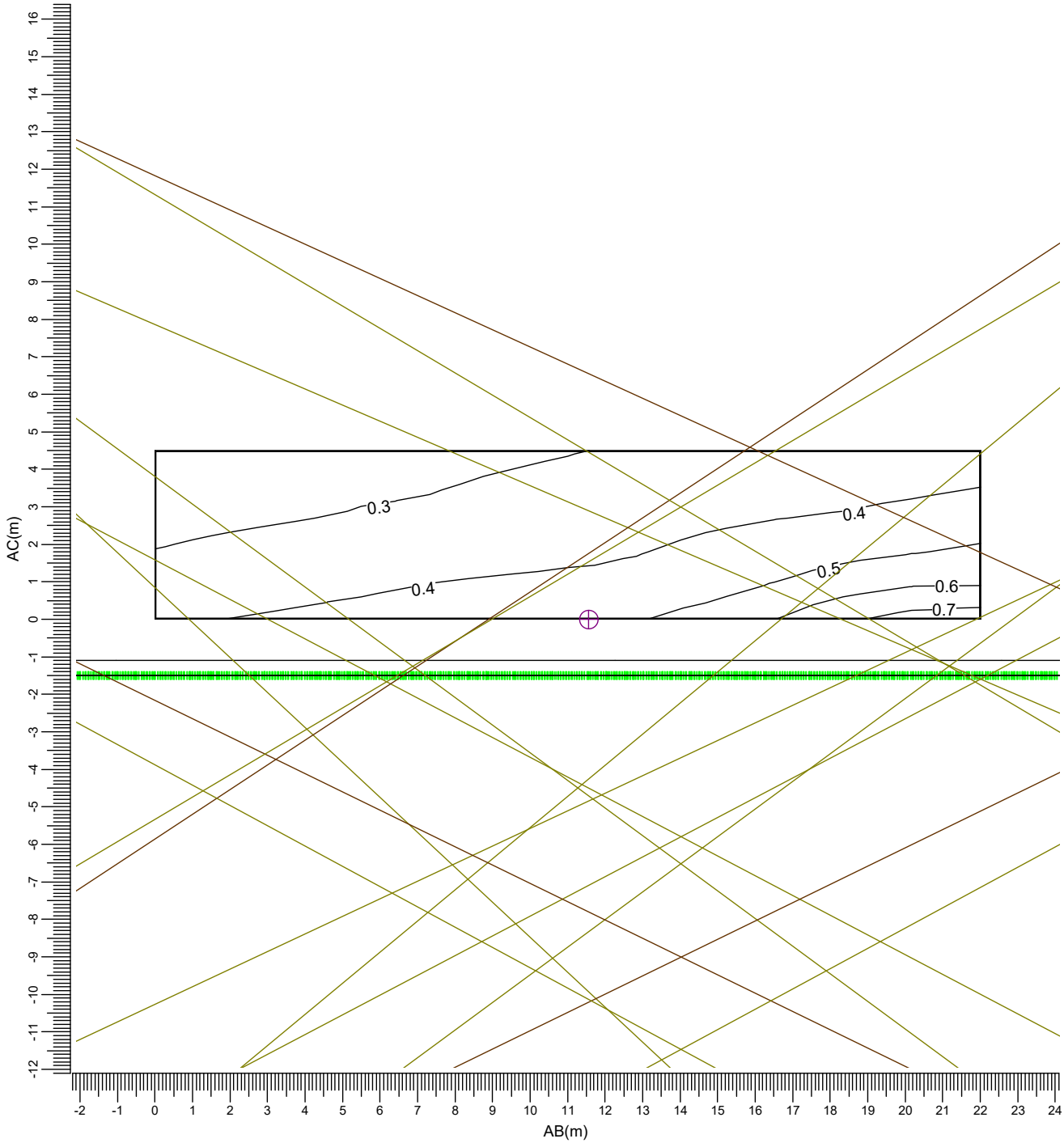
G BVP525 OUT T15 100K A-VWB/ N BVP651 T25 DW10 BL1
Z BVP515 OUT T15 100K A-WB/3 b BVP515 OUT T15 100K A-NB/30

Average	Minimum	Maximum	Min/Ave	Min/Max	CV	Project maintenance factor	Scale
0.39	0.22	0.75	0.55	0.29	0.281	0.90	1:150

3.15 Ev Nth houses @1.5m-6m1: Iso Contour

Performance

Grid : Ev Nth houses @1.5m-6m1
Calculation : Surface Illuminance (lux)



(-43.90, 70.10, 6.00) C-----D (-23.54, 78.45, 6.00)
(-43.90, 70.10, 1.50) A-----B (-23.54, 78.45, 1.50)

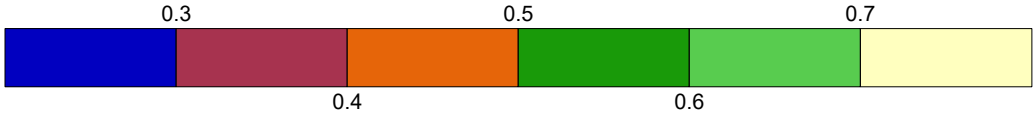
G BVP525 OUT T15 100K A-VWB/ N BVP651 T25 DW10 BL1
Z BVP515 OUT T15 100K A-WB/3 b BVP515 OUT T15 100K A-NB/30

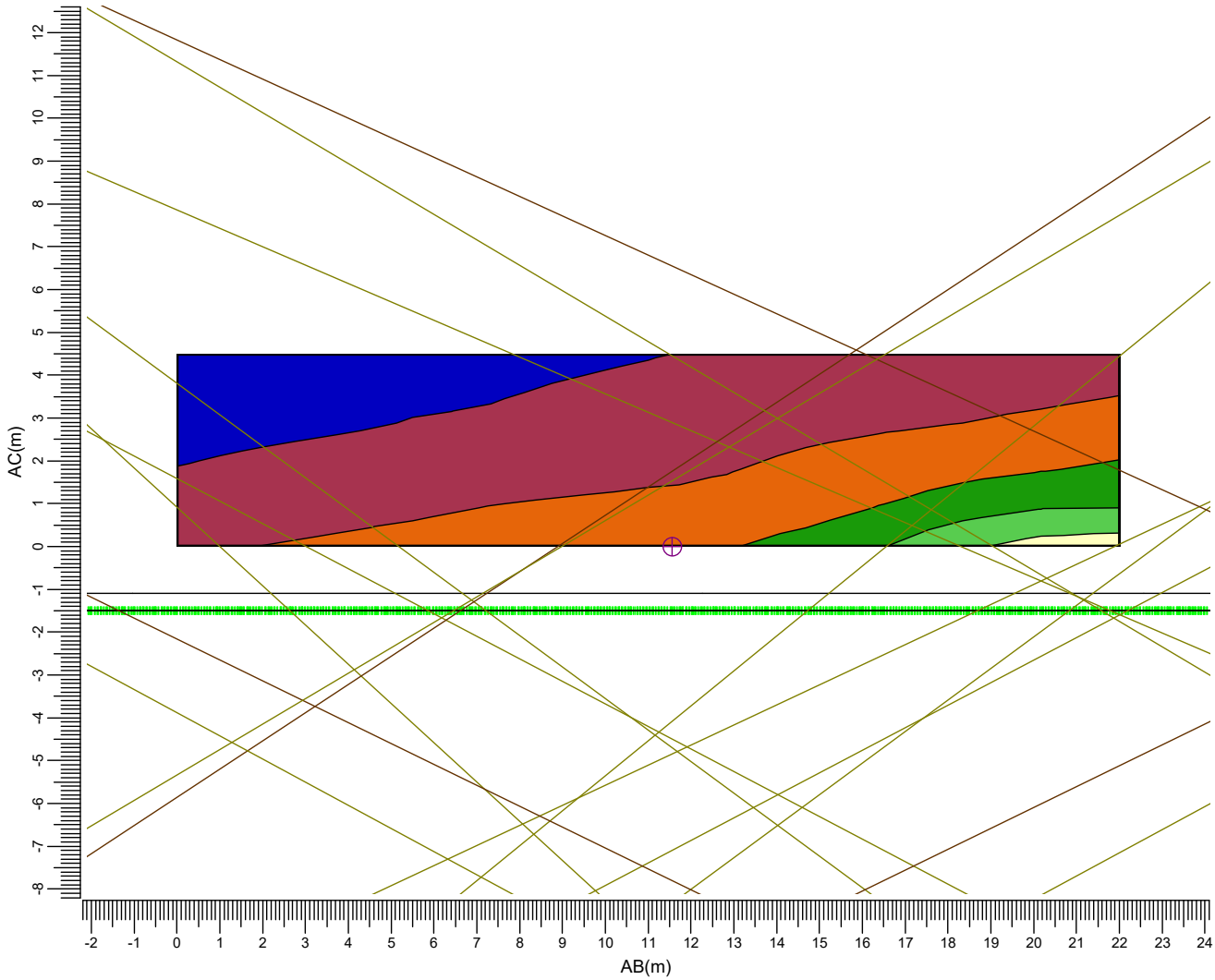
Average	Minimum	Maximum	Min/Ave	Min/Max	CV	Project maintenance factor	Scale
0.39	0.22	0.75	0.55	0.29	0.281	0.90	1:150

3.16 Ev Nth houses @1.5m-6m1: Filled Iso Contour

Performance

Grid : Ev Nth houses @1.5m-6m1
Calculation : Surface Illuminance (lux)





(-43.90, 70.10, 6.00) C-----D (-23.54, 78.45, 6.00)
(-43.90, 70.10, 1.50) A-----B (-23.54, 78.45, 1.50)

G BVP525 OUT T15 100K A-VWB/ N BVP651 T25 DW10 BL1
Z BVP515 OUT T15 100K A-WB/3 b BVP515 OUT T15 100K A-NB/30

Average	Minimum	Maximum	Min/Ave	Min/Max	CV	Project maintenance factor	Scale
0.39	0.22	0.75	0.55	0.29	0.281	0.90	1:150

4. Luminaire Details

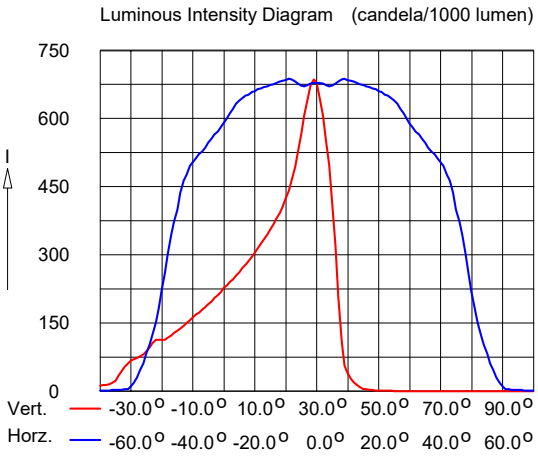
4.1 Project Luminaires

OptiVision LED
BVP515 OUT T15 100K 1xLED1290/740 A-WB/30 +LO

Light output ratios
- DLOR : 0.65
- ULOR : 0.00
- TLOR : 0.65

Ballast : N/A
Lamp flux : 122450 lm
Luminaire wattage : 917.2 W
Measurement code : LVA1409005

Note: Luminaire data not from database.

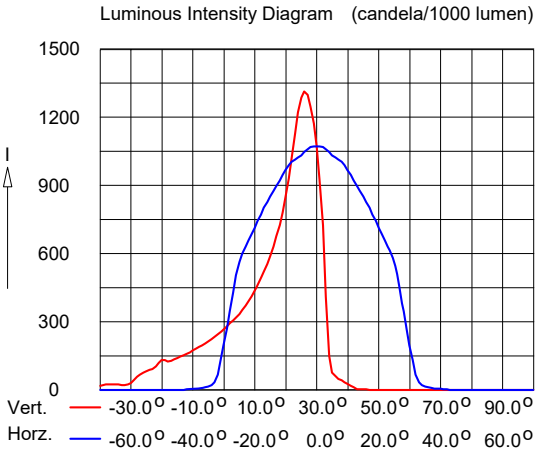


OptiVision LED
BVP515 OUT T15 100K 1xLED1290/740 A-NB/30 +LO

Light output ratios
- DLOR : 0.53
- ULOR : 0.00
- TLOR : 0.53

Ballast : N/A
Lamp flux : 122450 lm
Luminaire wattage : 917.2 W
Measurement code : LVA1409003

Note: Luminaire data not from database.



5. Installation Data

5.1 Legends

Project Luminaires:

Code	Qty	Luminaire Type	Lamp Type	Flux (lm)
Z	12	BVP515 OUT T15 100K A-WB/30 +LO	1 * LED1290/740	1 * 122450
b	4	BVP515 OUT T15 100K A-NB/30 +LO	1 * LED1290/740	1 * 122450

Arrangements:

Code	Arrangement
1	End Columns
2	Centre Columns
3	Centre Columns plus 1m
4	End Columns plus 1m
5	Half way line 1
6	Half way line 2
7	Half way line 3
8	Half way line 4

Switching Modes:

Code	Switching Mode
1	Performance
2	Spill Ltg

5.2 Luminaire Positioning and Orientation

Including Aiming Points:

Qty and Code	Position			Aiming Points			ULR	Arr.	Switching Modes	
	X (m)	Y (m)	Z (m)	X (m)	Y (m)	Z (m)			1	2
1 * Z	-34.50	-37.50	15.00	-5.87	-34.24	-0.00	0.00	1	+	+
1 * b	-34.50	-37.50	15.00	-0.11	-40.27	0.00	0.00	1	+	+
1 * Z	-34.50	37.50	15.00	-5.87	34.24	-0.00	0.00	1	+	+
1 * b	-34.50	37.50	15.00	-0.11	40.27	0.00	0.00	1	+	+
1 * Z	34.50	-37.50	15.00	5.87	-34.24	-0.00	0.00	1	+	+
1 * b	34.50	-37.50	15.00	0.11	-40.27	0.00	0.00	1	+	+
1 * Z	34.50	37.50	15.00	5.87	34.24	-0.00	0.00	1	+	+
1 * b	34.50	37.50	15.00	0.11	40.27	0.00	0.00	1	+	+
1 * Z	-34.50	-12.50	15.00	-6.21	2.81	0.00	0.00	6	+	+
1 * Z	-34.50	-12.50	15.00	-0.20	-21.01	0.00	0.00	6	+	+
1 * Z	-34.50	12.50	15.00	-6.21	-2.81	0.00	0.00	6	+	+
1 * Z	-34.50	12.50	15.00	-0.20	21.01	0.00	0.00	6	+	+
1 * Z	34.50	-12.50	15.00	6.21	2.81	0.00	0.00	6	+	+
1 * Z	34.50	-12.50	15.00	0.20	-21.01	0.00	0.00	6	+	+
1 * Z	34.50	12.50	15.00	6.21	-2.81	0.00	0.00	6	+	+
1 * Z	34.50	12.50	15.00	0.20	21.01	0.00	0.00	6	+	+

Including Aiming Angles:

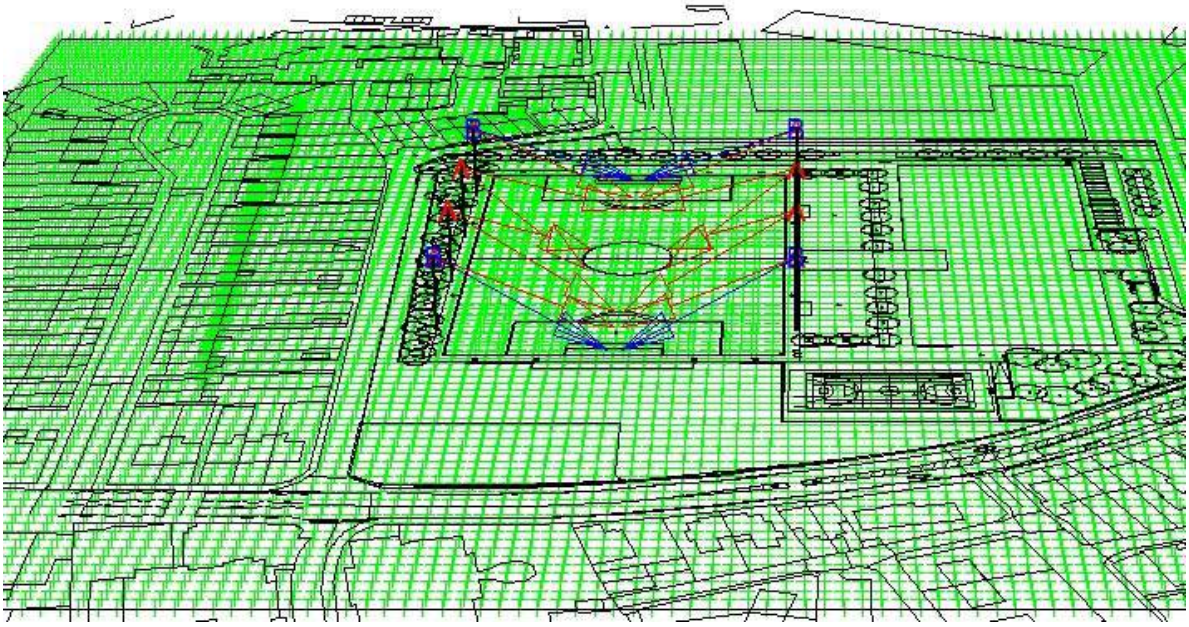
Qty and Code	Position			Aiming Angles			ULR	Arr.	Switching Modes	
	X (m)	Y (m)	Z (m)	Rot.	Tilt90	Tilt0			1	2
1 * Z	-34.50	-37.50	15.00	6.5	62.5	0.0	0.00	1	+	+

Qty and Code	Position			Aiming Angles			ULR	Arr.	Switching Modes	
	X (m)	Y (m)	Z (m)	Rot.	Tilt90	Tilt0			1	2
1 * b	-34.50	-37.50	15.00	-4.6	66.5	0.0	0.00	1	+	+
1 * Z	-34.50	37.50	15.00	-6.5	62.5	-0.0	0.00	1	+	+
1 * b	-34.50	37.50	15.00	4.6	66.5	-0.0	0.00	1	+	+
1 * Z	34.50	-37.50	15.00	173.5	62.5	-0.0	0.00	1	+	+
1 * b	34.50	-37.50	15.00	-175.4	66.5	-0.0	0.00	1	+	+
1 * Z	34.50	37.50	15.00	-173.5	62.5	0.0	0.00	1	+	+
1 * b	34.50	37.50	15.00	175.4	66.5	0.0	0.00	1	+	+
1 * Z	-34.50	-12.50	15.00	28.4	65.0	0.0	0.00	6	+	+
1 * Z	-34.50	-12.50	15.00	-13.9	67.0	0.0	0.00	6	+	+
1 * Z	-34.50	12.50	15.00	-28.4	65.0	-0.0	0.00	6	+	+
1 * Z	-34.50	12.50	15.00	13.9	67.0	-0.0	0.00	6	+	+
1 * Z	34.50	-12.50	15.00	151.6	65.0	-0.0	0.00	6	+	+
1 * Z	34.50	-12.50	15.00	-166.1	67.0	-0.0	0.00	6	+	+
1 * Z	34.50	12.50	15.00	-151.6	65.0	0.0	0.00	6	+	+
1 * Z	34.50	12.50	15.00	166.1	67.0	0.0	0.00	6	+	+

Mortlake Stage Brewery Development

F/ball Pitch LED Ltg15m 200 Lx 0.6 U0 LO

Project code:	0400061129, D-227389
Date:	31-01-2018
Customer:	Michael Grubb Studios
Customer Representative:	Alastair Aiken
Designer:	Steve Johnston



The nominal values shown in this report are the result of precision calculations, based upon precisely positioned luminaires in a fixed relationship to each other and to the area under examination. In practice the values may vary due to tolerances on luminaires, luminaire positioning, reflection properties and electrical supply.

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1. Project Description

1.1 Description

Designed to Sport England Outdoor Football Pitch Class II
FA Standard = 200 lux ave, 0.6 Uo
60 Ra

Pitch now rotated 90 degrees and new drawing layout included

MF for OptiVivision LED Sports Lighting = 0.9 MF

8 No 15m columns with 2 No luminaires on each

Luminaires are Philips OptiVision LED luminaires with Louvre
BVP525 OUT T15 100K 1xLED1940/740 A-NB/30 +LO = 4 No
BVP525 OUT T15 100K 1xLED1940/740 A-WB/30 +LO = 12 No

16 No fittings in total
GR Max claculation shown on Pitch grid

Grid points doubled to be within 5m spacing. Not placed on lines as helps Calculation result and not required for Commissioning results.

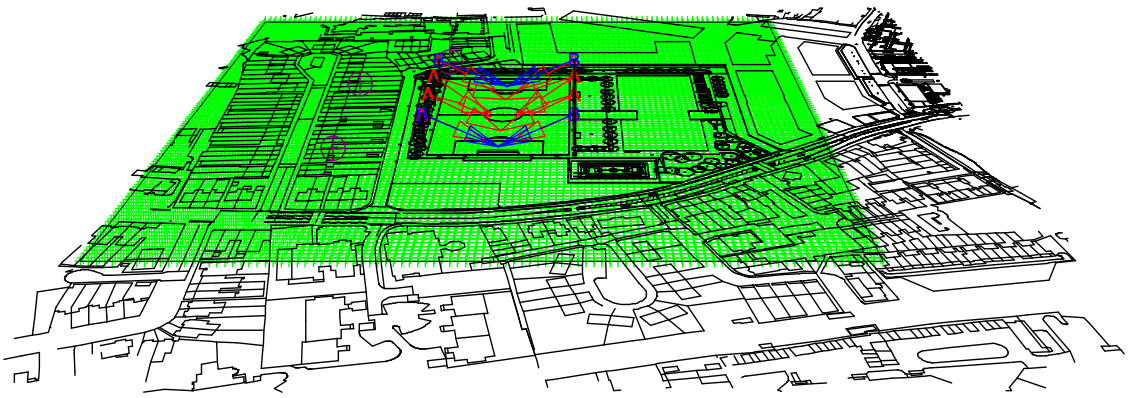
Spill Light Isocontours are shown outside Pitch Area based upon the Spill Light levels shown in Sport England Document and ILP Guidance Notes for Obtrusive Light 2011. These are 2,5,10 & 25 lux levels.
Spill lighting iso-contour results are shown with an MF of 1.0 which is worst case when newly installed. Observers at houses added @ 1.5m for Ltg Intensity

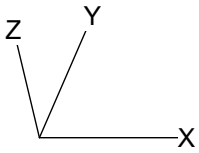
Pre Curfew Spill light through windows are E1 = 2 lux, E2 = 5 lux, E3 = 10 lux, calculation with internal louvre fitted is below 5 lux so conforms wit E2-E4 Zones

Tilt angles are no higher than 68 degree peak beam.
Peak beam angle included in Tilt 90 of calculation so
68 deg peak beam tilt (38 degree Physical housing tilt as 30 deg asymmetric)

Louvres are fitted internally around each LED to reduce spill in all directions Light intensity at angles and glare reduction.

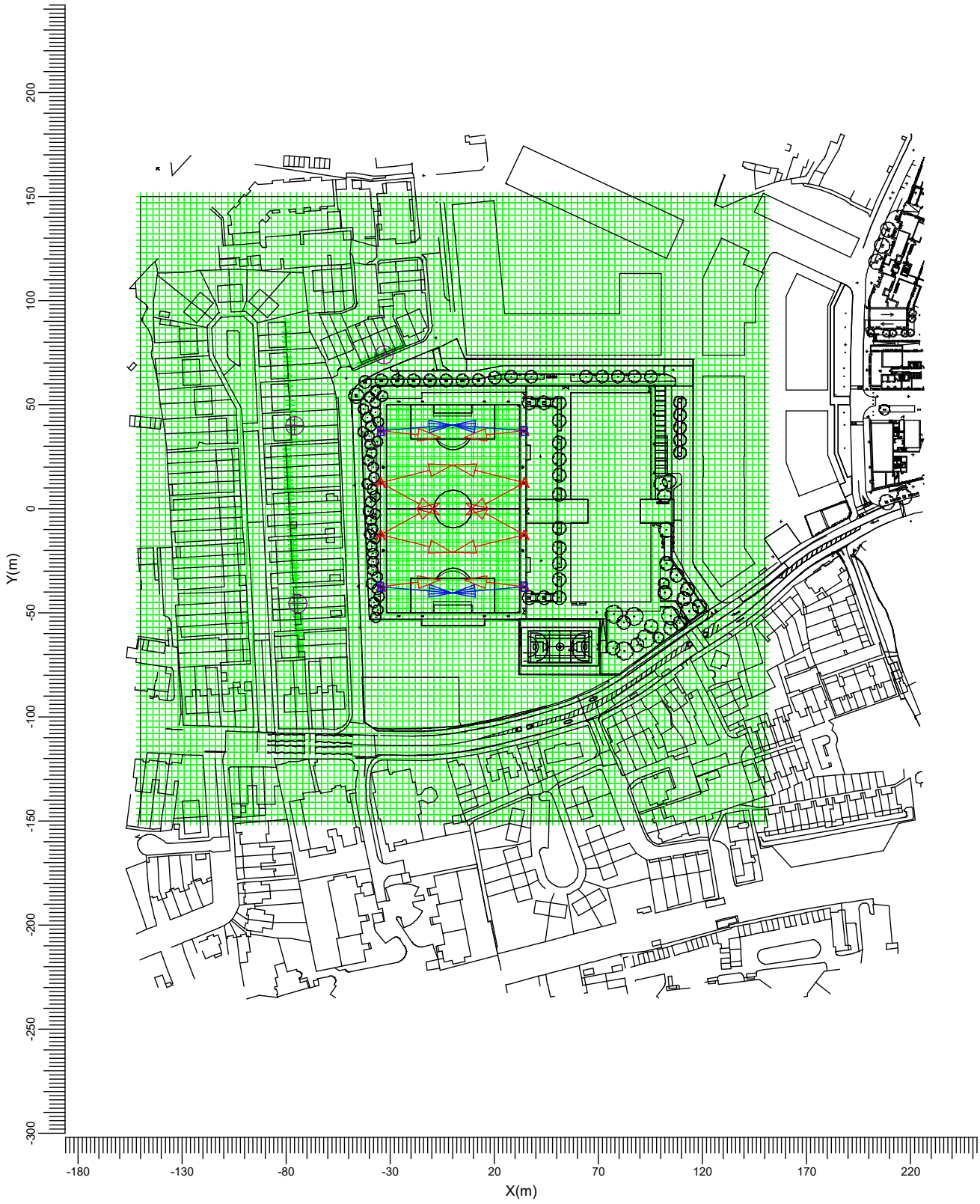
1.2 3-D Project Overview





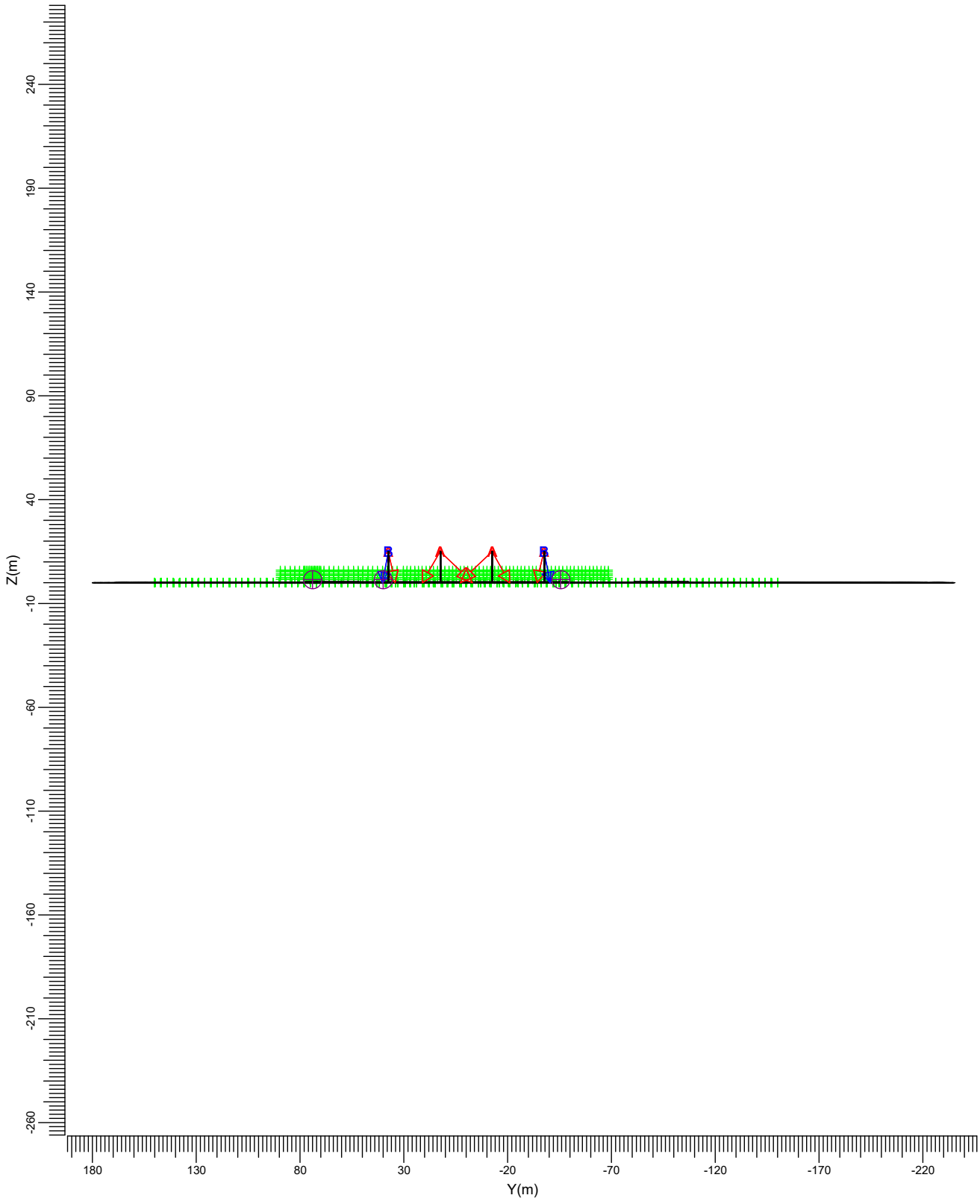
A BVP525 OUT T15 100K A-WB/3
B BVP525 OUT T15 100K A-NB/30
H BVP525 OUT T15 100K A-VWB/
O BVP651 T25 DW10 BL1

1.3 Top Project Overview



Scale
1:2500

1.4 Left Project Overview



Scale
1:2500

2. Summary

2.1 Observer Information

Code	Observer	Position		
		X (m)	Y (m)	Z (m)
Aa	North Houses	-33.00	74.00	1.50
Bb	North West Houses	-76.00	40.00	1.50
Cc	South West Houses	-74.50	-45.50	1.50

2.2 Obstacle Information

Obstacle	Transparency (%)	Position		
		X (m)	Y (m)	Z (m)
Corner Columns	0	-34.50	-37.50	0.00
		34.50	-37.50	0.00
		-34.50	37.50	0.00
		34.50	37.50	0.00
Centre Columns	0	-34.50	-12.50	0.00
		34.50	-12.50	0.00
		-34.50	12.50	0.00
		34.50	12.50	0.00

2.3 Project Luminaires

Code	Qty	Luminaire Type	Lamp Type	Power (W)	Flux (lm)
A	12	BVP525 OUT T15 100K A-WB/30 +LO	1 * LED1940/740	1375.4	1 * 183674
B	4	BVP525 OUT T15 100K A-NB/30 +LO	1 * LED1940/740	1375.4	1 * 183674

The total installed power: 22.01 (kWatt)

Number of Luminaires Per Switching Mode:

Switching Mode	Luminaire Code		Power (kWatt)
	A	B	
Performance	12	4	22.01
Spill Ltg	12	4	22.01

Number of Luminaires Per Arrangement:

Arrangement	Luminaire Code		Power (kWatt)
	A	B	
Centre Columns	0	0	0.00
Centre Columns plus 1m	0	0	0.00
End Columns	4	4	11.00
End Columns plus 1m	0	0	0.00
Half way line 1	0	0	0.00
Half way line 2	8	0	11.00
Half way line 3	0	0	0.00
Half way line 4	0	0	0.00

2.4 Calculation Results

Switching Modes:

Code	Switching Mode	Maintenance factor
1	Performance	0.90
2	Spill Ltg	1.00

(Il)luminance Calculations:

Calculation	Switching Mode	Type	Unit	Ave	Min	Max	Min/Ave	Min/Max	CV
Football	1	Surface Illuminance	lux	216	140	282	0.65	0.50	
Spill Ltg Grid	2	Surface Illuminance	lux						
Ev West houses @1.5m-6m	2	Surface Illuminance	lux	0.25	0.15	0.36	0.61	0.43	
Ev NWest house @1.5m-6m	1	Surface Illuminance	lux	0.17	0.09	0.28	0.55	0.33	0.311
Ev Nth houses @1.5m-6m1	1	Surface Illuminance	lux	0.58	0.32	1.13	0.55	0.29	0.281

Glare Rating for Grid of Observers:

Calculation	Switching Mode	Observer Grid	Reference Grid	Reflectance	GR-Max
GR Max for Pitch	1	Football	Football	0.25	44.3

Obtrusive Light Calculations:

Switching Mode	Observer Code	Luminaire Code	Position			Aiming Angles			Maximum Intensity (cd)
			X (m)	Y (m)	Z (m)	Rot.	Tilt90	Tilt0	
2	Aa	A	34.50	12.50	15.00	166.07	67.00	0.00	1366
2	Bb	A	34.50	-12.50	15.00	-166.07	67.00	-0.00	965
2	Cc	A	34.50	12.50	15.00	166.07	67.00	0.00	1034

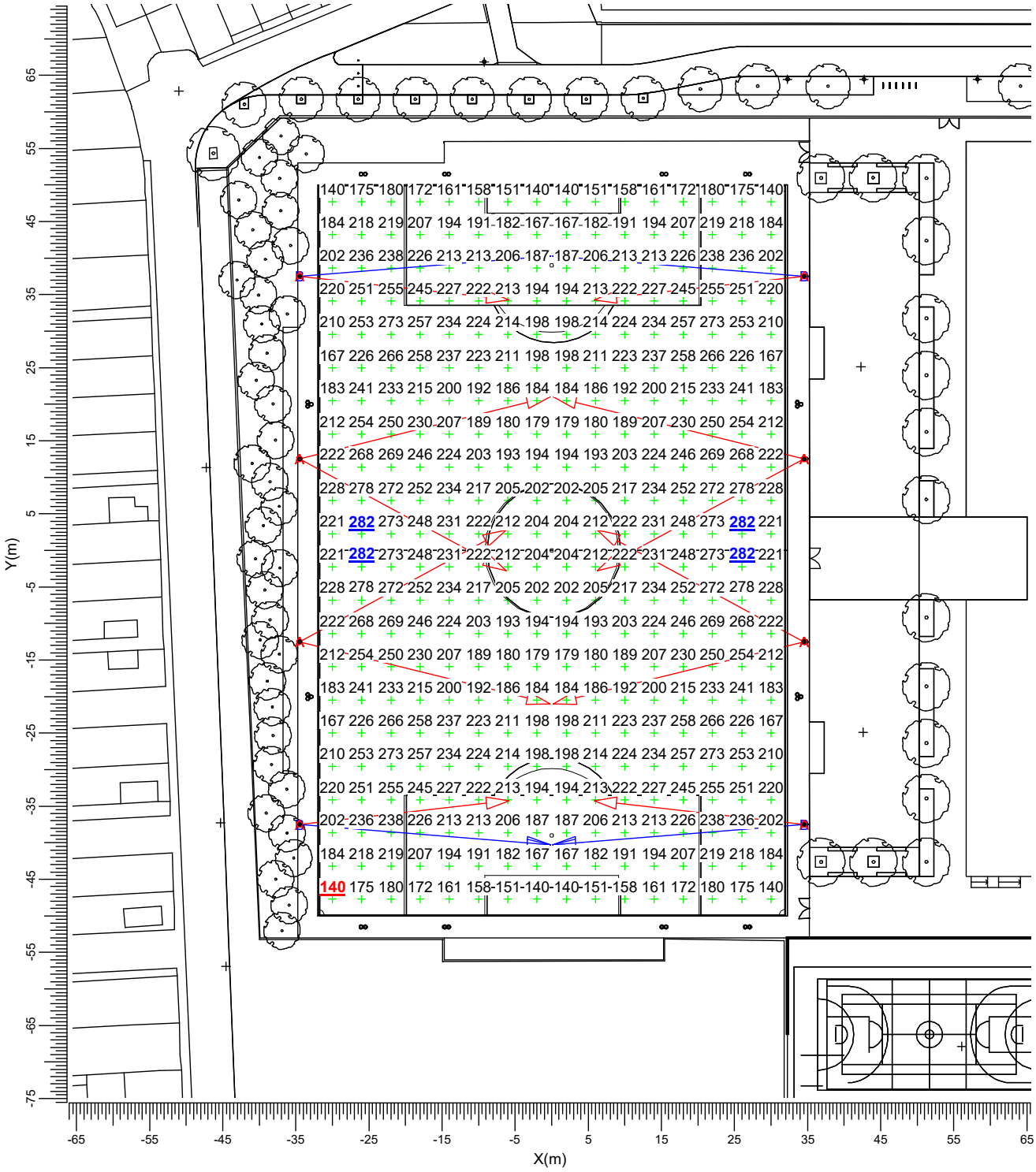
Switching Mode	ULR
1	0.00
2	0.00

3. Calculation Results

3.1 Football: Graphical Table

Performance

Grid : Football at Z = -0.00 m
Calculation : Surface Illuminance (lux)



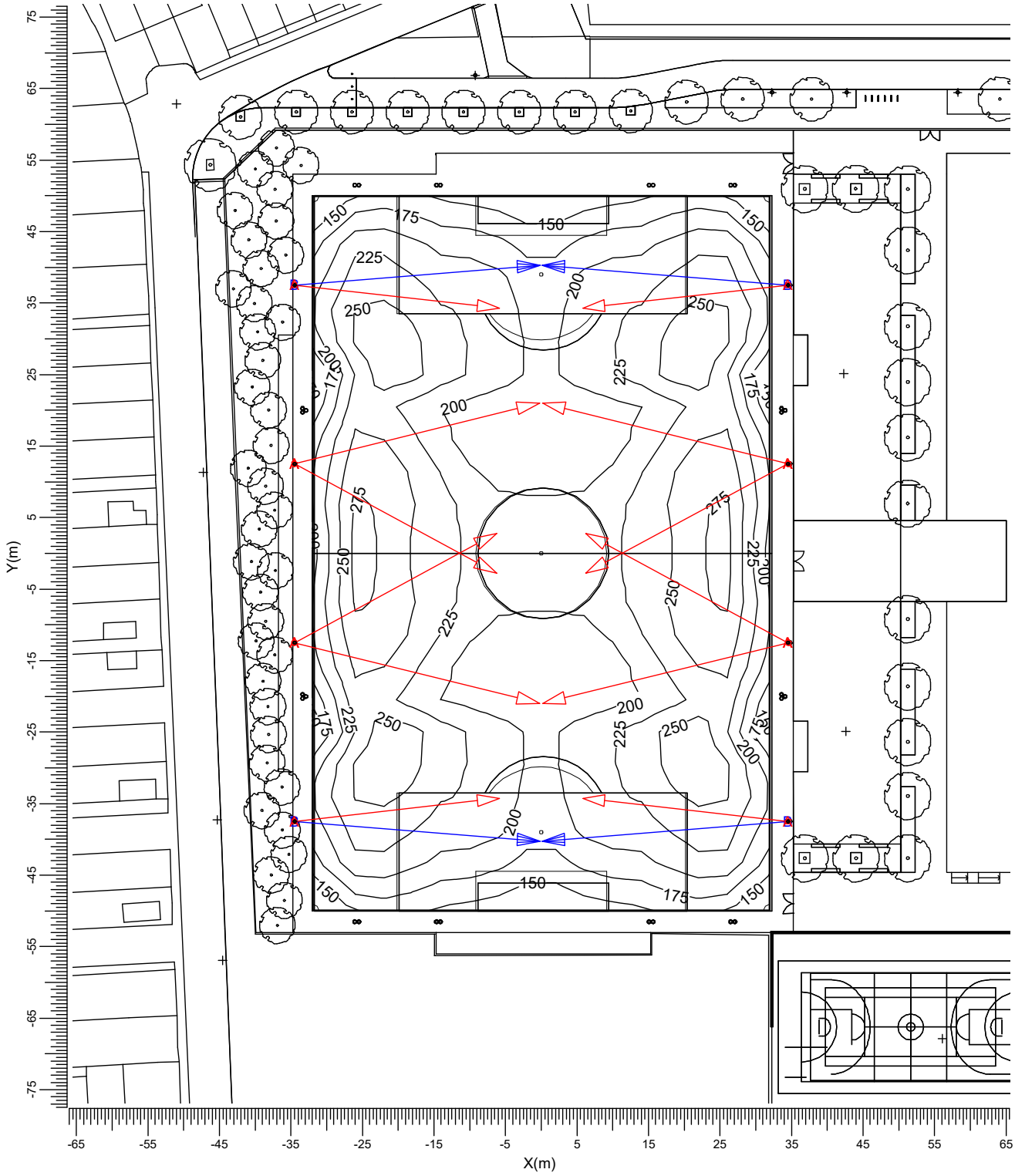
A BVP525 OUT T15 100K A-WB/3 B BVP525 OUT T15 100K A-NB/30
H BVP525 OUT T15 100K A-VWB/ O BVP651 T25 DW10 BL1

Average	Minimum	Maximum	Min/Ave	Min/Max	Project maintenance factor	Scale
216	140	282	0.65	0.50	0.90	1:750

3.2 Football: Iso Contour

Performance

Grid : Football at Z = -0.00 m
Calculation : Surface Illuminance (lux)



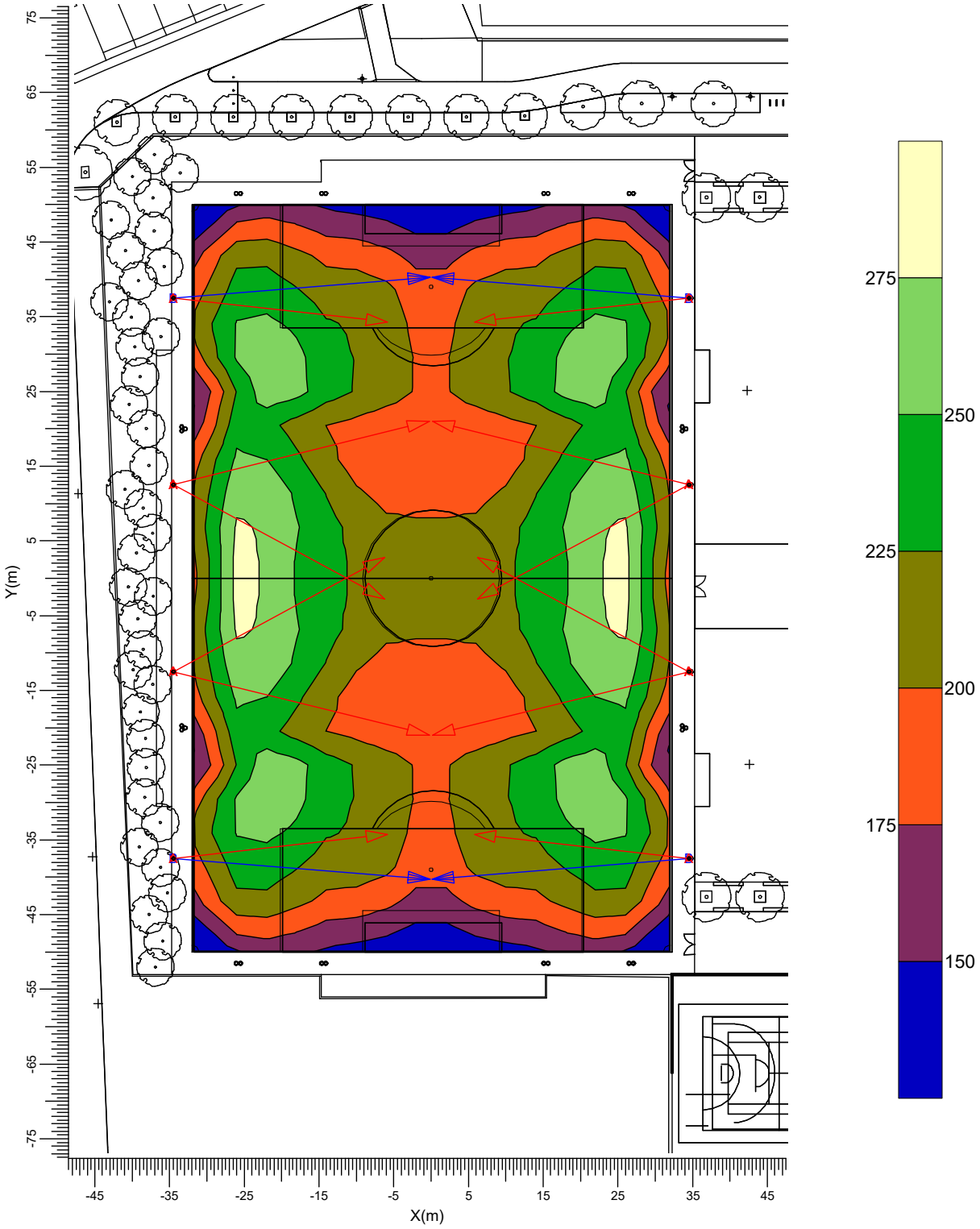
A BVP525 OUT T15 100K A-WB/3 B BVP525 OUT T15 100K A-NB/30
H BVP525 OUT T15 100K A-VWB/ O BVP651 T25 DW10 BL1

Average	Minimum	Maximum	Min/Ave	Min/Max	Project maintenance factor	Scale
216	140	282	0.65	0.50	0.90	1:750

3.3 Football: Filled Iso Contour

Performance

Grid : Football at Z = -0.00 m
Calculation : Surface Illuminance (lux)



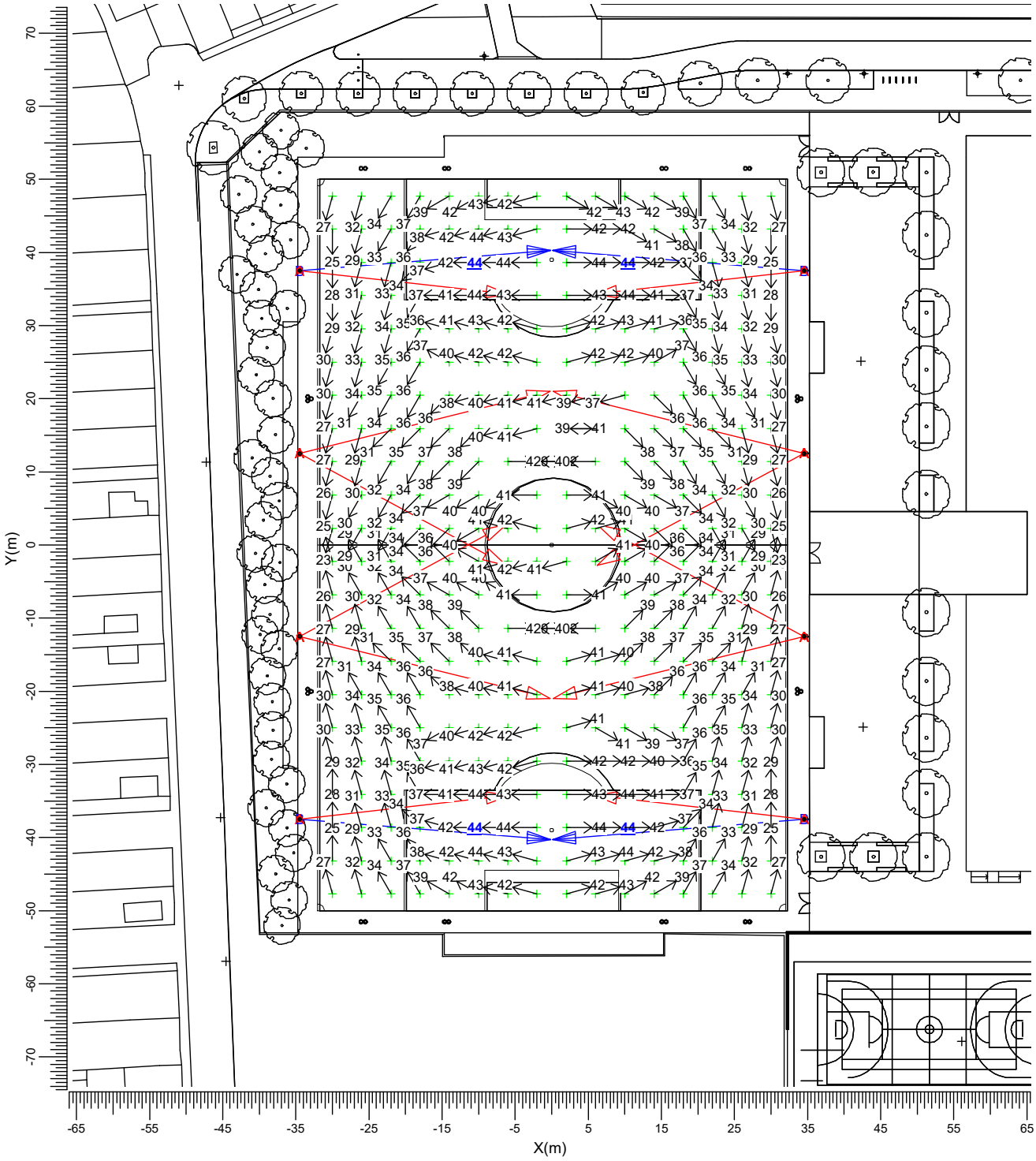
A BVP525 OUT T15 100K A-WB/3 B BVP525 OUT T15 100K A-NB/30
H BVP525 OUT T15 100K A-VWB/ O BVP651 T25 DW10 BL1

Average	Minimum	Maximum	Min/Ave	Min/Max	Project maintenance factor	Scale
216	140	282	0.65	0.50	0.90	1:750

3.4 GR Max for Pitch: Graphical Table

Performance

Grid of Observers : Football
Calculation : Glare Rating
Grid for Background Luminance : Football (Reflectance: 0.25)
Vertical Viewing Angle : -2.0 deg



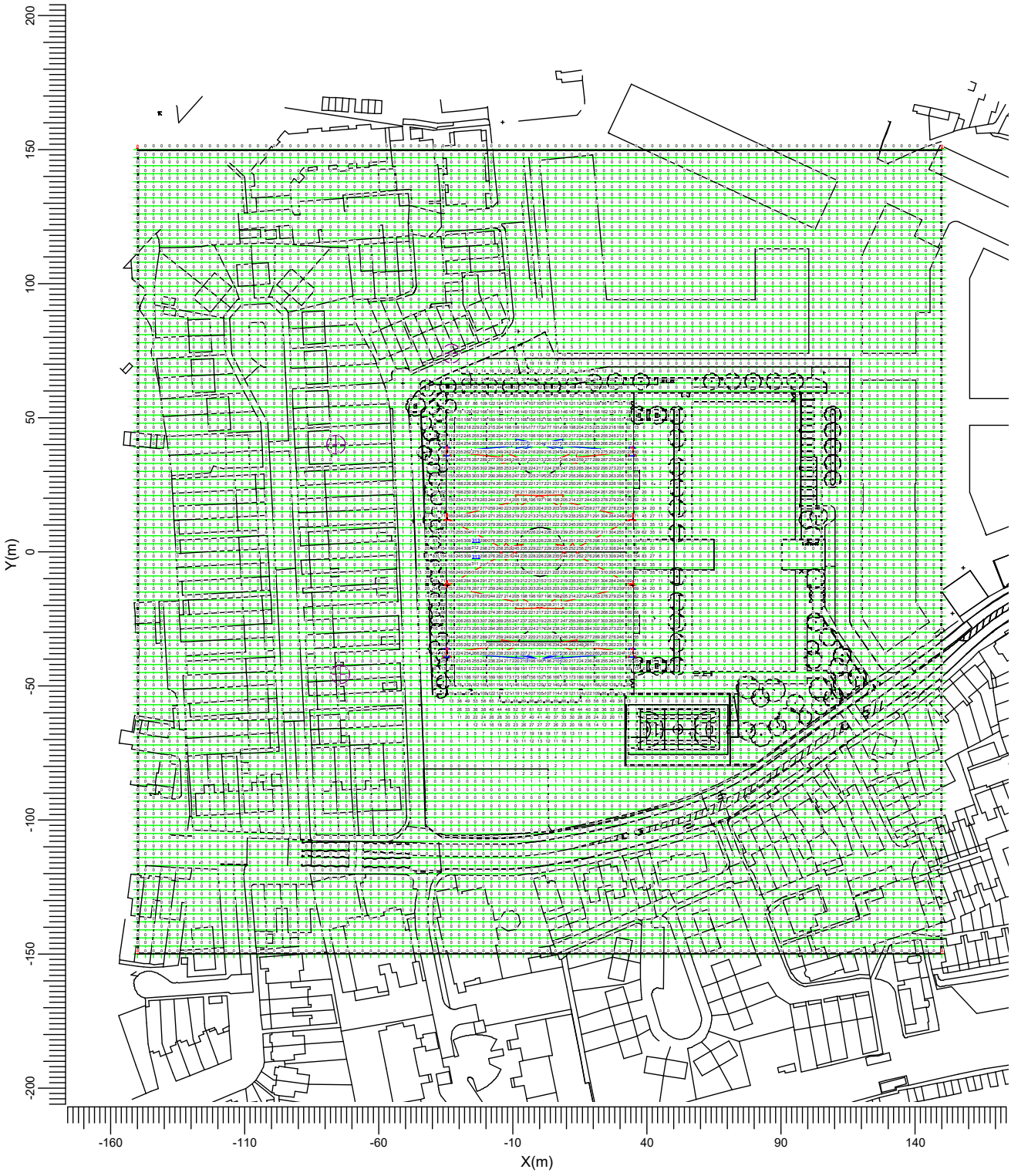
A BVP525 OUT T15 100K A-WB/3 B BVP525 OUT T15 100K A-NB/30
H BVP525 OUT T15 100K A-VWB/ O BVP651 T25 DW10 BL1

Maximum	Project maintenance factor	Scale
44.3	0.90	1:750

3.5 Spill Ltg Grid: Graphical Table

Spill Ltg

Grid : Spill Ltg Grid at Z = -0.00 m
Calculation : Surface Illuminance (lux)



A BVP525 OUT T15 100K A-WB/3 B BVP525 OUT T15 100K A-NB/30
H BVP525 OUT T15 100K A-VWB/ O BVP651 T25 DW10 BL1

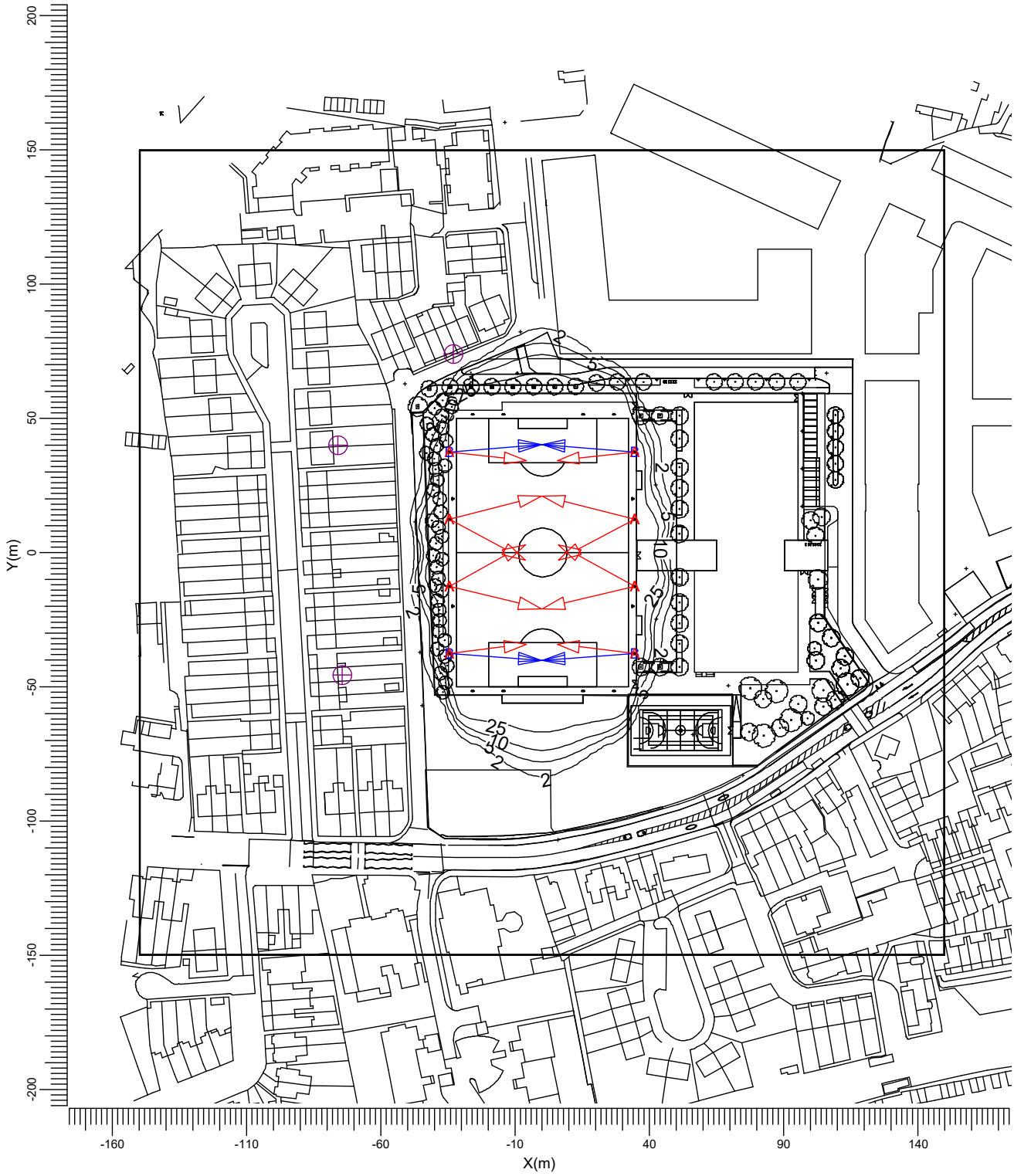
Project maintenance factor
1.00

Scale
1:2000

3.6 Spill Ltg Grid: Iso Contour

Spill Ltg

Grid : Spill Ltg Grid at Z = -0.00 m
Calculation : Surface Illuminance (lux)



A BVP525 OUT T15 100K A-WB/3 B BVP525 OUT T15 100K A-NB/30
H BVP525 OUT T15 100K A-VWB/ O BVP651 T25 DW10 BL1

Project maintenance factor
1.00

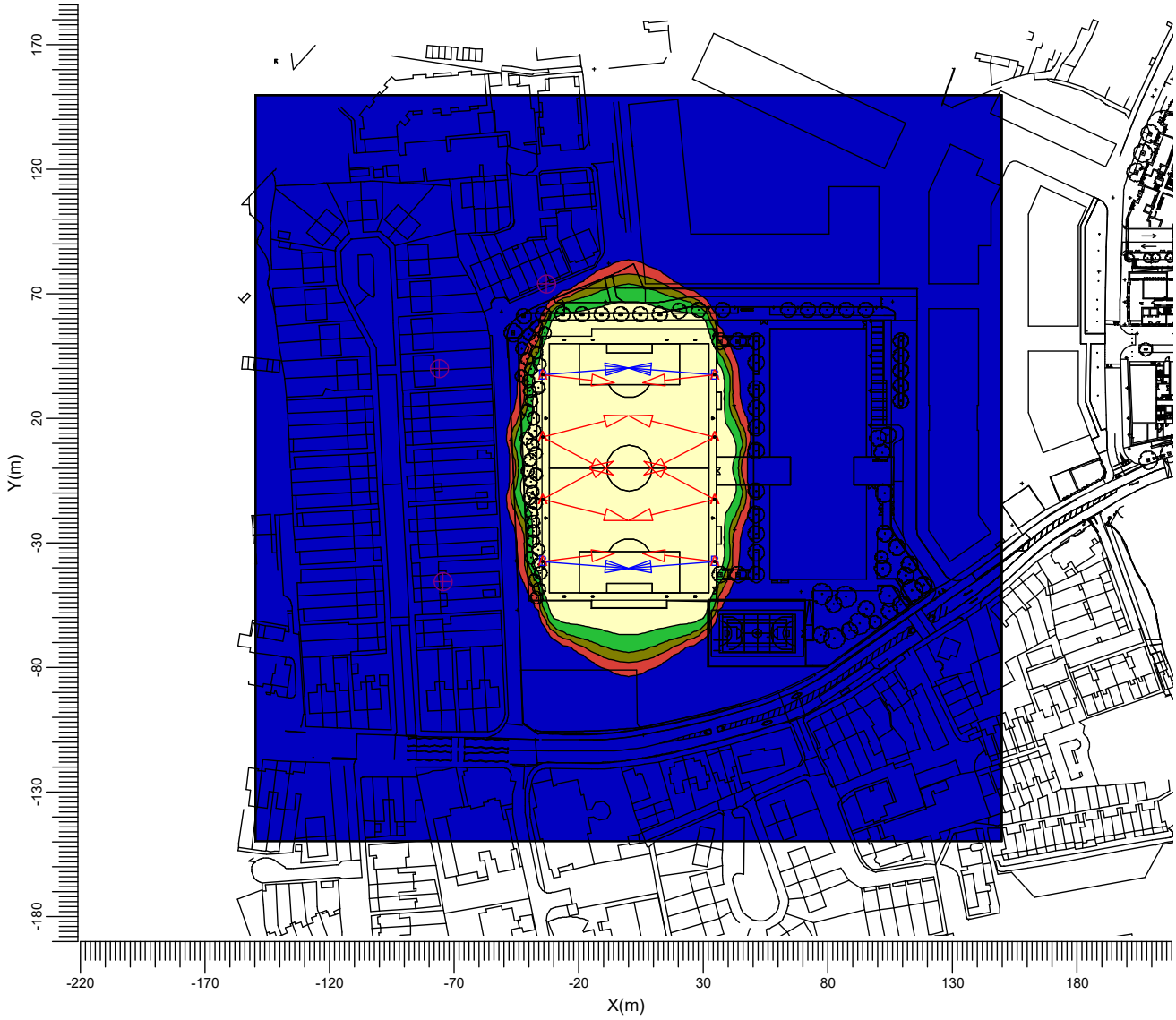
Scale
1:2000

3.7 Spill Ltg Grid: Filled Iso Contour

Spill Ltg

Grid : Spill Ltg Grid at Z = -0.00 m
Calculation : Surface Illuminance (lux)





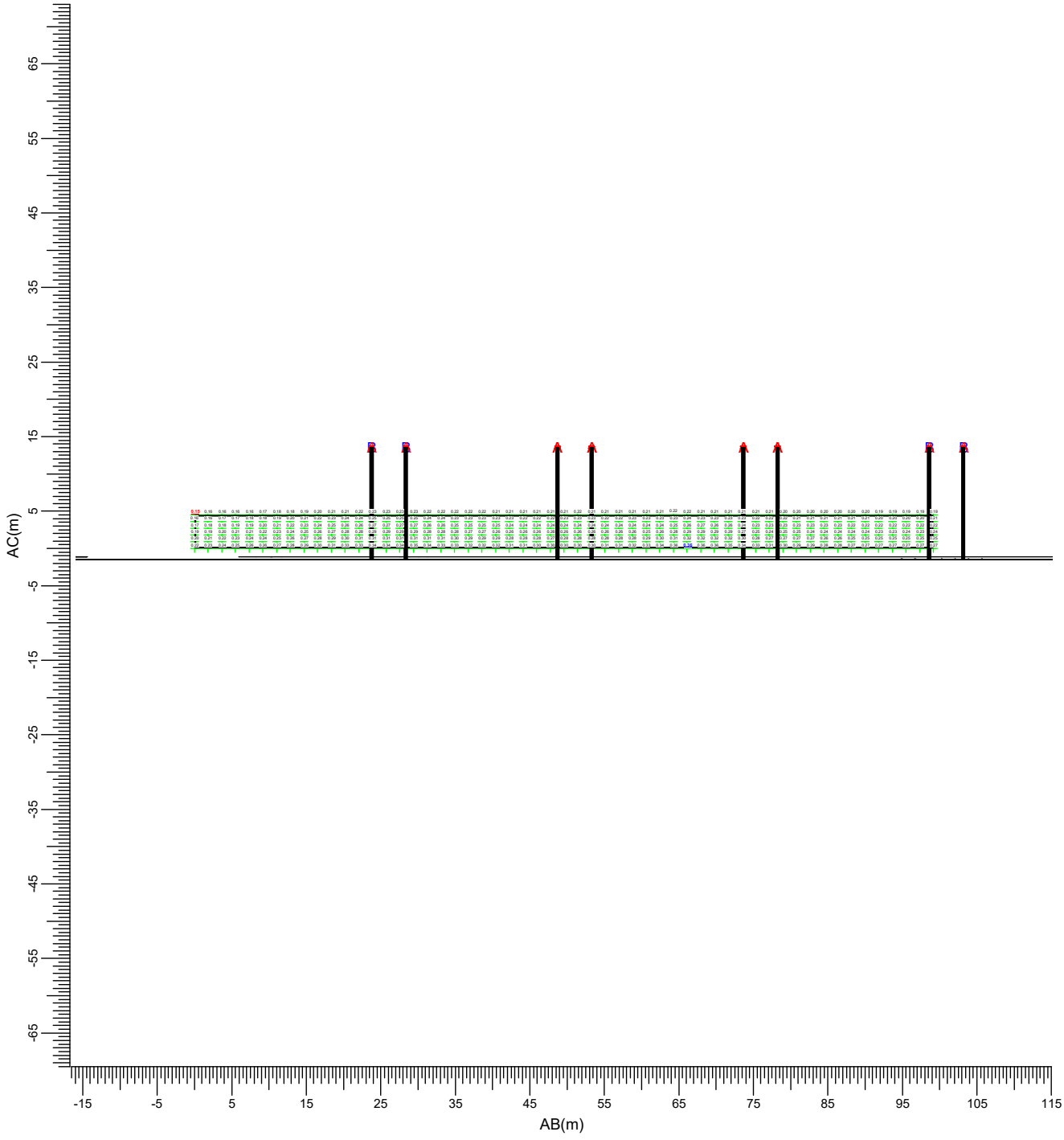
A BVP525 OUT T15 100K A-WB/3 B BVP525 OUT T15 100K A-NB/30
H BVP525 OUT T15 100K A-VWB/ O BVP651 T25 DW10 BL1

Project maintenance factor
1.00

Scale
1:2500

3.8 Ev West houses @1.5m-6m: Graphical Table Spill Ltg

Grid : Ev West houses @1.5m-6m
Calculation : Surface Illuminance (lux)



(-73.29, -68.50, 6.00) C-----D (-79.88, 30.44, 6.00)
(-73.29, -68.50, 1.50) A-----B (-79.88, 30.44, 1.50)

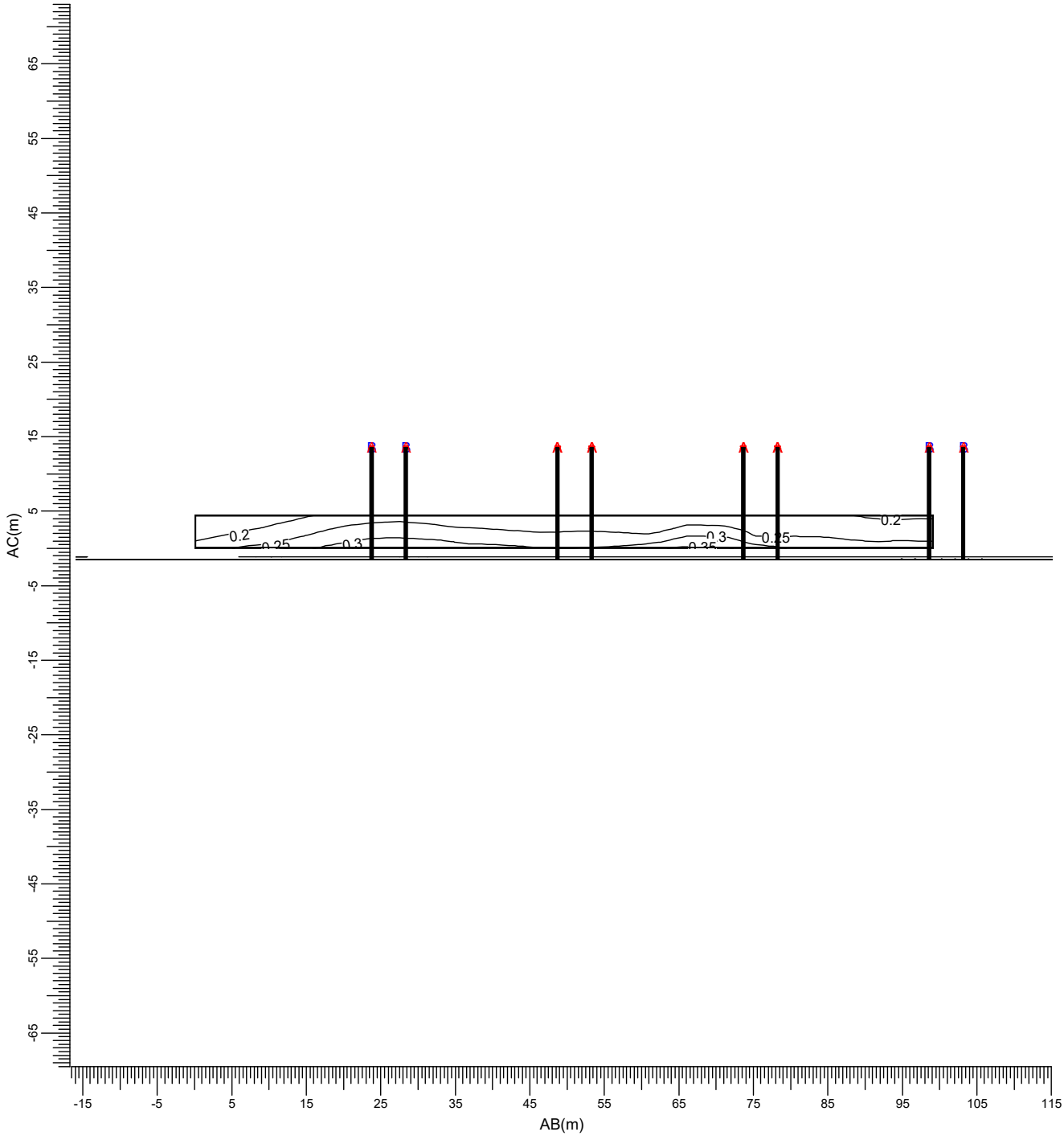
A : BVP525 OUT T15 100K A-WB/30 +LO
B : BVP525 OUT T15 100K A-NB/30 +LO
H : BVP525 OUT T15 100K A-VWB/30
O : BVP651 T25 DW10 BL1

Average	Minimum	Maximum	Min/Ave	Min/Max	Project maintenance factor	Scale
0.25	0.15	0.36	0.61	0.43	1.00	1:750

3.9 Ev West houses @1.5m-6m: Iso Contour

Spill Ltg

Grid : Ev West houses @1.5m-6m
Calculation : Surface Illuminance (lux)



(-73.29, -68.50, 6.00) C-----D (-79.88, 30.44, 6.00)
(-73.29, -68.50, 1.50) A-----B (-79.88, 30.44, 1.50)

A : BVP525 OUT T15 100K A-WB/30 +LO
B : BVP525 OUT T15 100K A-NB/30 +LO
H : BVP525 OUT T15 100K A-VWB/30
O : BVP651 T25 DW10 BL1

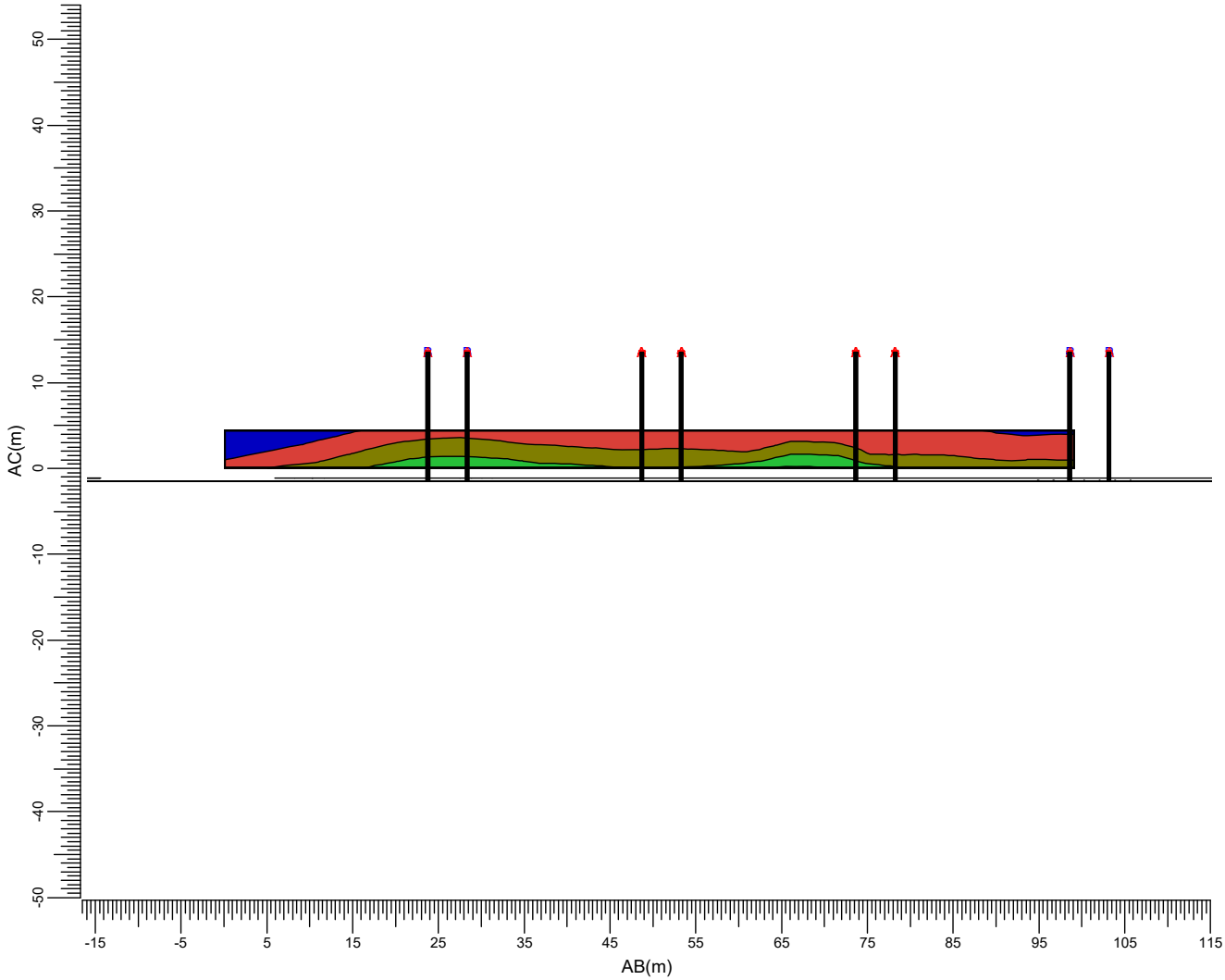
Average	Minimum	Maximum	Min/Ave	Min/Max	Project maintenance factor	Scale
0.25	0.15	0.36	0.61	0.43	1.00	1:750

3.10 Ev West houses @1.5m-6m: Filled Iso Contour

Spill Ltg

Grid : Ev West houses @1.5m-6m
Calculation : Surface Illuminance (lux)





(-73.29, -68.50, 6.00) C-----D (-79.88, 30.44, 6.00)
(-73.29, -68.50, 1.50) A-----B (-79.88, 30.44, 1.50)

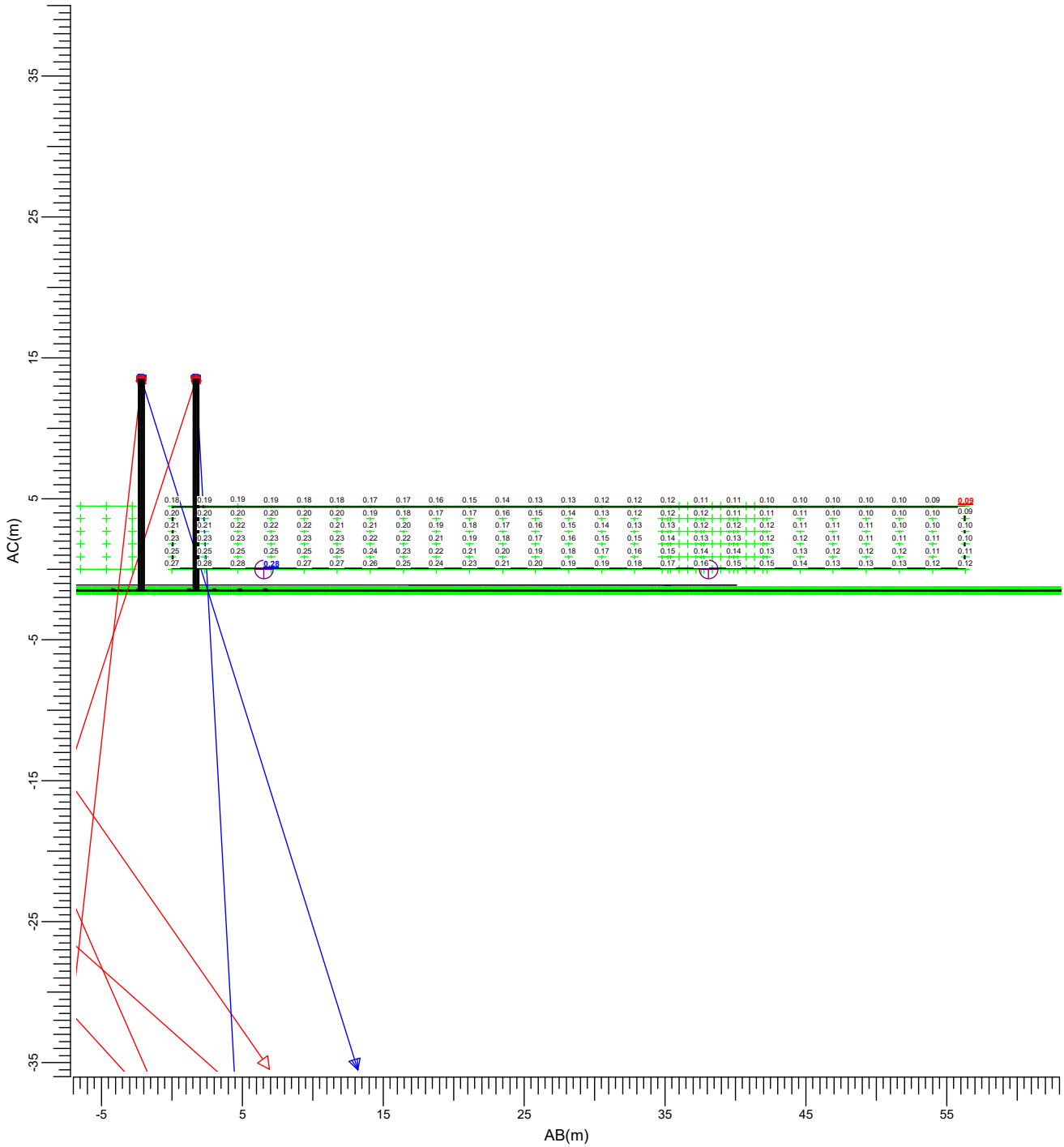
A : BVP525 OUT T15 100K A-WB/30 +LO
B : BVP525 OUT T15 100K A-NB/30 +LO
H : BVP525 OUT T15 100K A-VWB/30
O : BVP651 T25 DW10 BL1

Average	Minimum	Maximum	Min/Ave	Min/Max	Project maintenance factor	Scale
0.25	0.15	0.36	0.61	0.43	1.00	1:750

3.11 Ev NWest house @1.5m-6m: Graphical Table

Performance

Grid : Ev NWest house @1.5m-6m
Calculation : Surface Illuminance (lux)



(-77.12, 33.38, 6.00) C-----D (-80.29, 89.63, 6.00)
(-77.12, 33.38, 1.50) A-----B (-80.29, 89.63, 1.50)

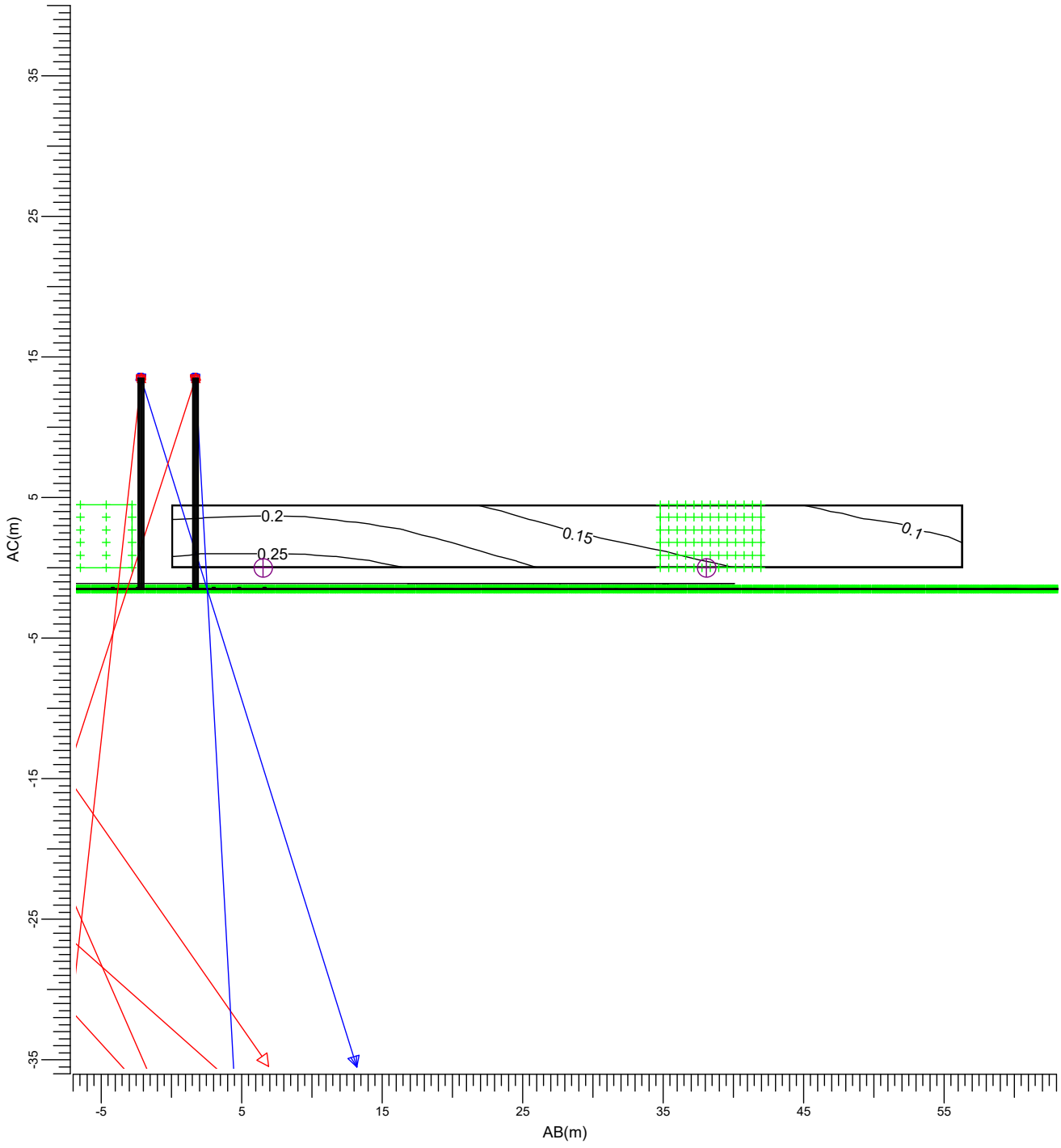
A BVP525 OUT T15 100K A-WB/3 B BVP525 OUT T15 100K A-NB/30
H BVP525 OUT T15 100K A-VWB/ O BVP651 T25 DW10 BL1

Average	Minimum	Maximum	Min/Ave	Min/Max	CV	Project maintenance factor	Scale
0.17	0.09	0.28	0.55	0.33	0.311	0.90	1:400

3.12 Ev NWest house @1.5m-6m: Iso Contour

Performance

Grid : Ev NWest house @1.5m-6m
Calculation : Surface Illuminance (lux)



(-77.12, 33.38, 6.00) C-----D (-80.29, 89.63, 6.00)
(-77.12, 33.38, 1.50) A-----B (-80.29, 89.63, 1.50)

A BVP525 OUT T15 100K A-WB/3 B BVP525 OUT T15 100K A-NB/30
H BVP525 OUT T15 100K A-VWB/ O BVP651 T25 DW10 BL1

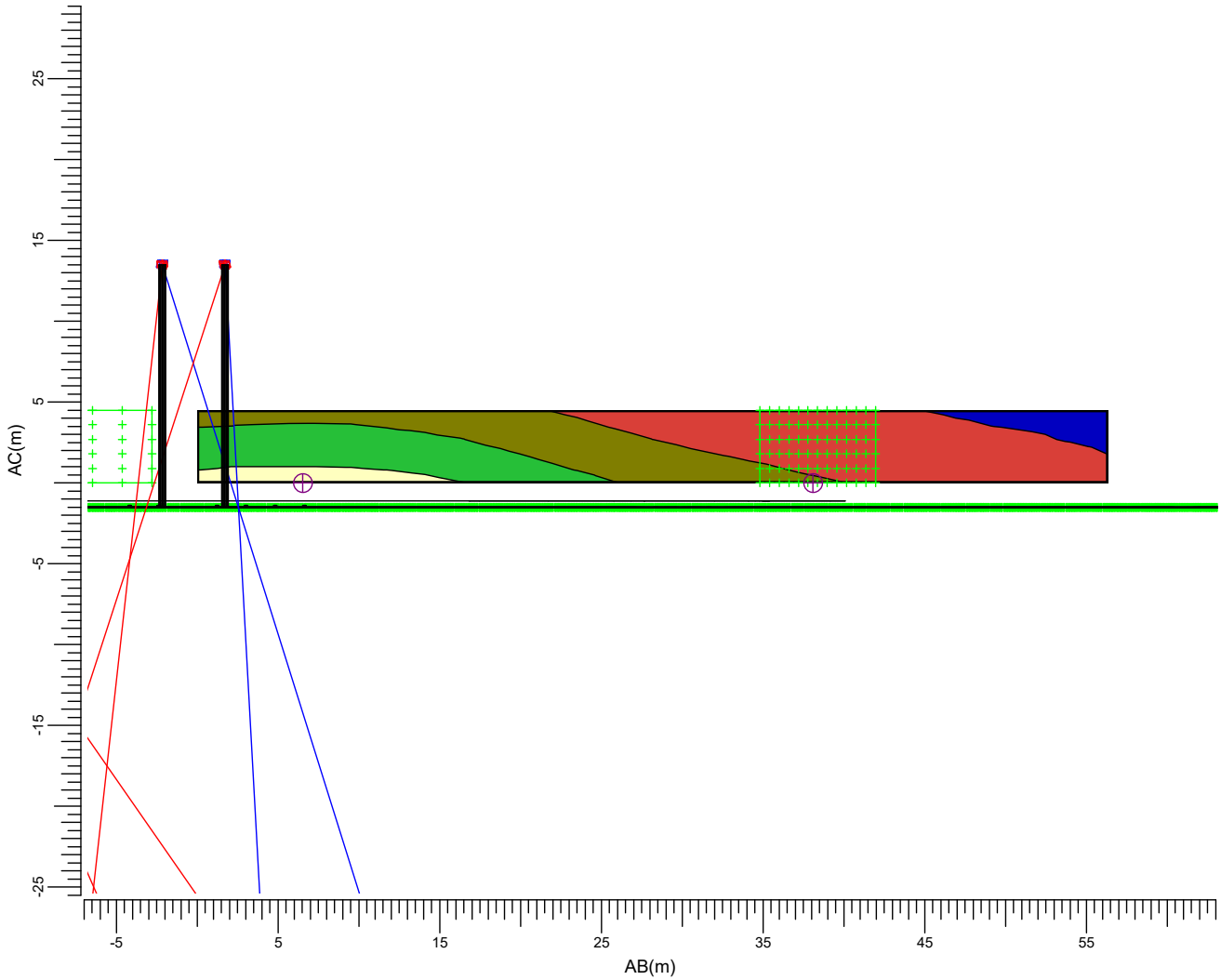
Average	Minimum	Maximum	Min/Ave	Min/Max	CV	Project maintenance factor	Scale
0.17	0.09	0.28	0.55	0.33	0.311	0.90	1:400

3.13 Ev NWest house @1.5m-6m: Filled Iso Contour

Performance

Grid : Ev NWest house @1.5m-6m
Calculation : Surface Illuminance (lux)





(-77.12, 33.38, 6.00) C-----D (-80.29, 89.63, 6.00)
(-77.12, 33.38, 1.50) A-----B (-80.29, 89.63, 1.50)

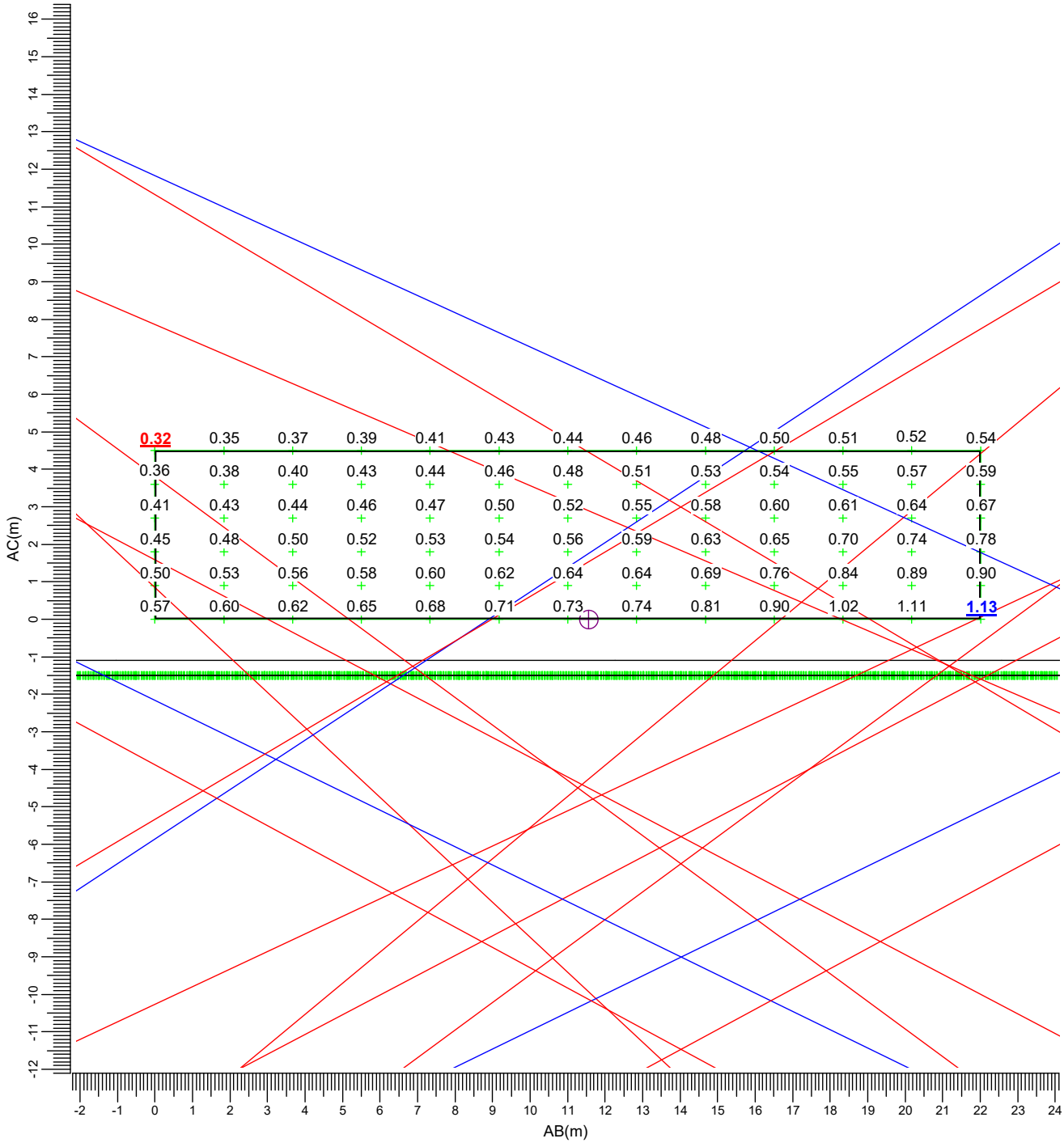
A BVP525 OUT T15 100K A-WB/3 B BVP525 OUT T15 100K A-NB/30
H BVP525 OUT T15 100K A-VWB/ O BVP651 T25 DW10 BL1

Average	Minimum	Maximum	Min/Ave	Min/Max	CV	Project maintenance factor	Scale
0.17	0.09	0.28	0.55	0.33	0.311	0.90	1:400

3.14 Ev Nth houses @1.5m-6m1: Graphical Table

Performance

Grid : Ev Nth houses @1.5m-6m1
Calculation : Surface Illuminance (lux)



(-43.90, 70.10, 6.00) C-----D (-23.54, 78.45, 6.00)
(-43.90, 70.10, 1.50) A-----B (-23.54, 78.45, 1.50)

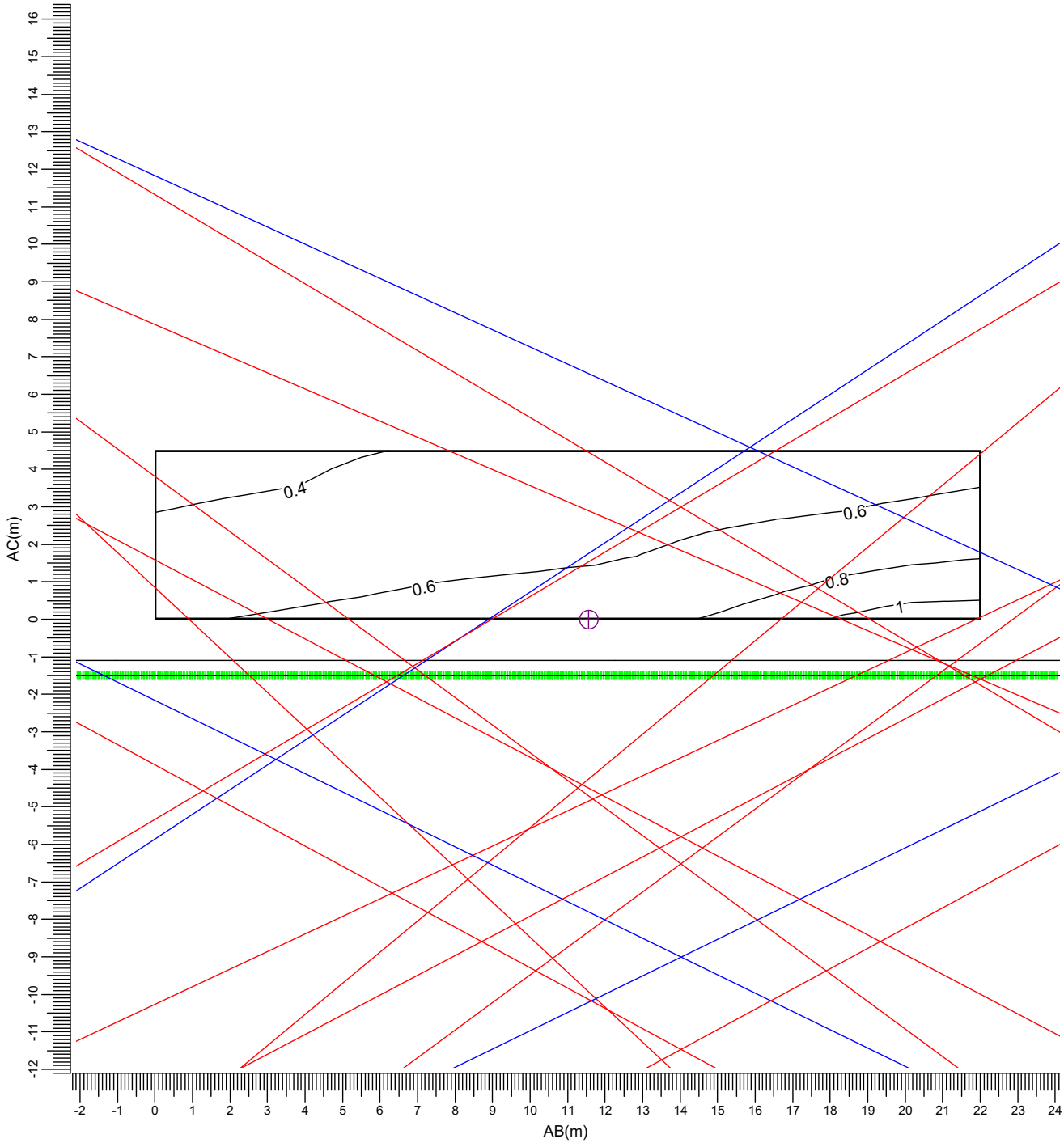
A BVP525 OUT T15 100K A-WB/3 B BVP525 OUT T15 100K A-NB/30
H BVP525 OUT T15 100K A-VWB/ O BVP651 T25 DW10 BL1

Average	Minimum	Maximum	Min/Ave	Min/Max	CV	Project maintenance factor	Scale
0.58	0.32	1.13	0.55	0.29	0.281	0.90	1:150

3.15 Ev Nth houses @1.5m-6m1: Iso Contour

Performance

Grid : Ev Nth houses @1.5m-6m1
Calculation : Surface Illuminance (lux)



(-43.90, 70.10, 6.00) C-----D (-23.54, 78.45, 6.00)
(-43.90, 70.10, 1.50) A-----B (-23.54, 78.45, 1.50)

A BVP525 OUT T15 100K A-WB/3 B BVP525 OUT T15 100K A-NB/30
H BVP525 OUT T15 100K A-VWB/ O BVP651 T25 DW10 BL1

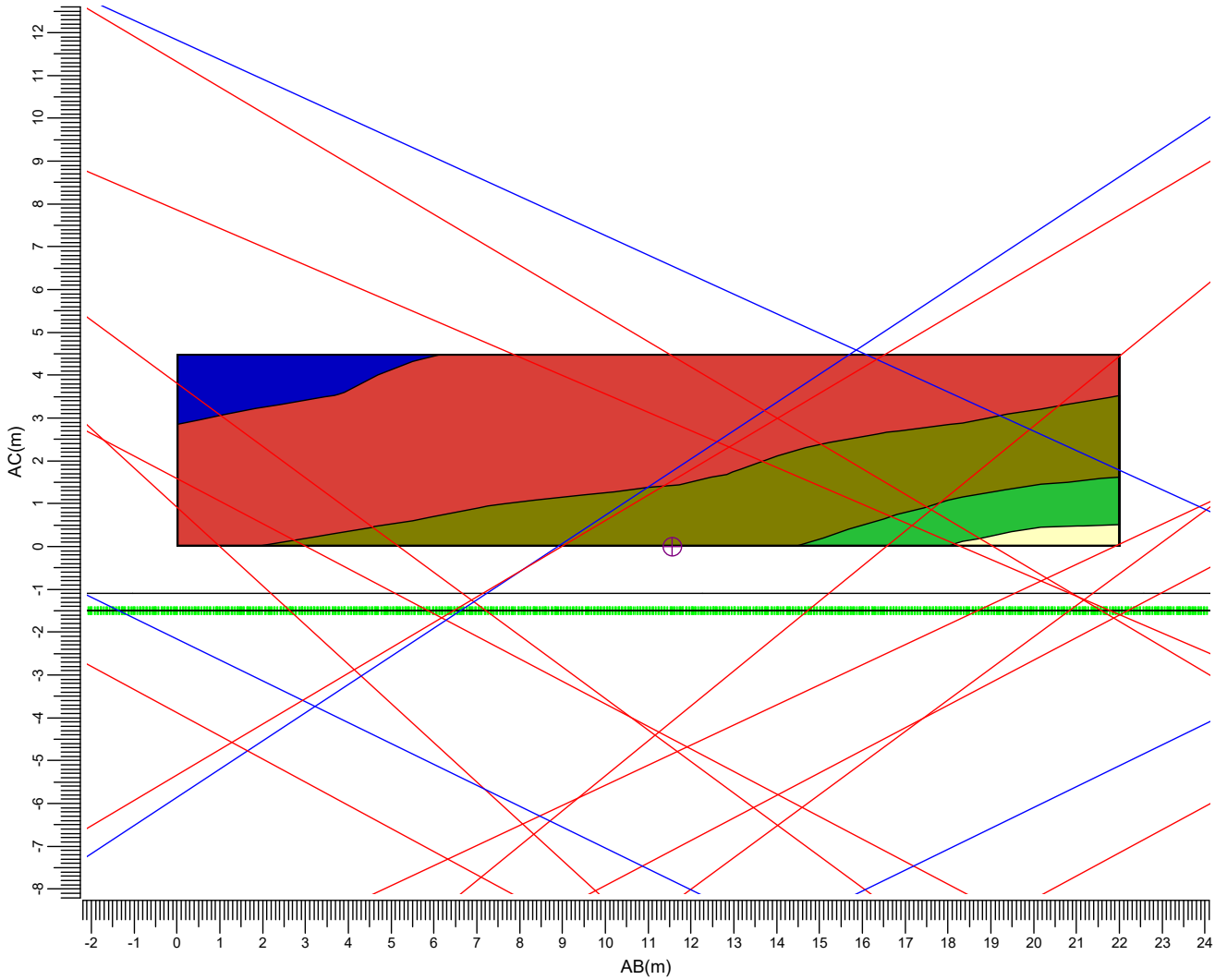
Average	Minimum	Maximum	Min/Ave	Min/Max	CV	Project maintenance factor	Scale
0.58	0.32	1.13	0.55	0.29	0.281	0.90	1:150

3.16 Ev Nth houses @1.5m-6m1: Filled Iso Contour

Performance

Grid : Ev Nth houses @1.5m-6m1
Calculation : Surface Illuminance (lux)





(-43.90, 70.10, 6.00) C-----D (-23.54, 78.45, 6.00)
(-43.90, 70.10, 1.50) A-----B (-23.54, 78.45, 1.50)

A BVP525 OUT T15 100K A-WB/3 B BVP525 OUT T15 100K A-NB/30
H BVP525 OUT T15 100K A-VWB/ O BVP651 T25 DW10 BL1

Average	Minimum	Maximum	Min/Ave	Min/Max	CV	Project maintenance factor	Scale
0.58	0.32	1.13	0.55	0.29	0.281	0.90	1:150

4. Luminaire Details

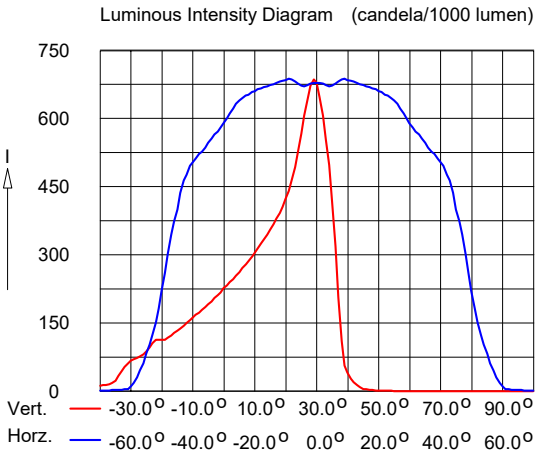
4.1 Project Luminaires

OptiVision LED
BVP525 OUT T15 100K 1xLED1940/740 A-WB/30 +LO

Light output ratios
- DLOR : 0.65
- ULOR : 0.00
- TLOR : 0.65

Ballast : N/A
Lamp flux : 183674 lm
Luminaire wattage : 1375.4 W
Measurement code : LVA1409005

Note: Luminaire data not from database.

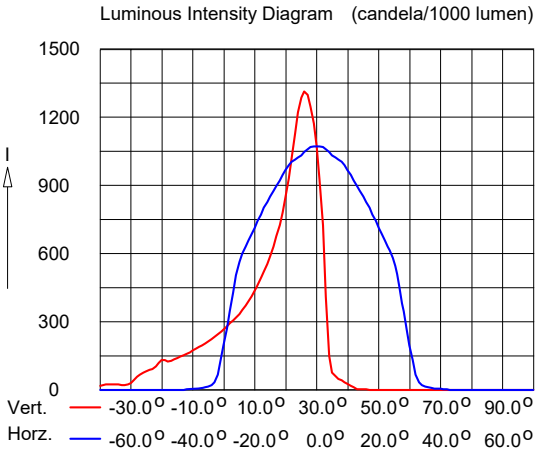


OptiVision LED
BVP525 OUT T15 100K 1xLED1940/740 A-NB/30 +LO

Light output ratios
- DLOR : 0.53
- ULOR : 0.00
- TLOR : 0.53

Ballast : N/A
Lamp flux : 183674 lm
Luminaire wattage : 1375.4 W
Measurement code : LVA1409003

Note: Luminaire data not from database.



5. Installation Data

5.1 Legends

Project Luminaires:

Code	Qty	Luminaire Type	Lamp Type	Flux (lm)
A	12	BVP525 OUT T15 100K A-WB/30 +LO	1 * LED1940/740	1 * 183674
B	4	BVP525 OUT T15 100K A-NB/30 +LO	1 * LED1940/740	1 * 183674

Arrangements:

Code	Arrangement
1	End Columns
2	Centre Columns
3	Centre Columns plus 1m
4	End Columns plus 1m
5	Half way line 1
6	Half way line 2
7	Half way line 3
8	Half way line 4

Switching Modes:

Code	Switching Mode
1	Performance
2	Spill Ltg

5.2 Luminaire Positioning and Orientation

Including Aiming Points:

Qty and Code	Position			Aiming Points			ULR	Arr.	Switching Modes	
	X (m)	Y (m)	Z (m)	X (m)	Y (m)	Z (m)			1	2
1 * A	-34.50	-37.50	15.00	-5.87	-34.24	-0.00	0.00	1	+	+
1 * B	-34.50	-37.50	15.00	-0.11	-40.27	0.00	0.00	1	+	+
1 * A	-34.50	37.50	15.00	-5.87	34.24	-0.00	0.00	1	+	+
1 * B	-34.50	37.50	15.00	-0.11	40.27	0.00	0.00	1	+	+
1 * A	34.50	-37.50	15.00	5.87	-34.24	-0.00	0.00	1	+	+
1 * B	34.50	-37.50	15.00	0.11	-40.27	0.00	0.00	1	+	+
1 * A	34.50	37.50	15.00	5.87	34.24	-0.00	0.00	1	+	+
1 * B	34.50	37.50	15.00	0.11	40.27	0.00	0.00	1	+	+
1 * A	-34.50	-12.50	15.00	-6.21	2.81	0.00	0.00	6	+	+
1 * A	-34.50	-12.50	15.00	-0.20	-21.01	0.00	0.00	6	+	+
1 * A	-34.50	12.50	15.00	-6.21	-2.81	0.00	0.00	6	+	+
1 * A	-34.50	12.50	15.00	-0.20	21.01	0.00	0.00	6	+	+
1 * A	34.50	-12.50	15.00	6.21	2.81	0.00	0.00	6	+	+
1 * A	34.50	-12.50	15.00	0.20	-21.01	0.00	0.00	6	+	+
1 * A	34.50	12.50	15.00	6.21	-2.81	0.00	0.00	6	+	+
1 * A	34.50	12.50	15.00	0.20	21.01	0.00	0.00	6	+	+

Including Aiming Angles:

Qty and Code	Position			Aiming Angles			ULR	Arr.	Switching Modes	
	X (m)	Y (m)	Z (m)	Rot.	Tilt90	Tilt0			1	2
1 * A	-34.50	-37.50	15.00	6.5	62.5	0.0	0.00	1	+	+

Qty and Code	Position			Aiming Angles			ULR	Arr.	Switching Modes	
	X (m)	Y (m)	Z (m)	Rot.	Tilt90	Tilt0			1	2
1 * B	-34.50	-37.50	15.00	-4.6	66.5	0.0	0.00	1	+	+
1 * A	-34.50	37.50	15.00	-6.5	62.5	-0.0	0.00	1	+	+
1 * B	-34.50	37.50	15.00	4.6	66.5	-0.0	0.00	1	+	+
1 * A	34.50	-37.50	15.00	173.5	62.5	-0.0	0.00	1	+	+
1 * B	34.50	-37.50	15.00	-175.4	66.5	-0.0	0.00	1	+	+
1 * A	34.50	37.50	15.00	-173.5	62.5	0.0	0.00	1	+	+
1 * B	34.50	37.50	15.00	175.4	66.5	0.0	0.00	1	+	+
1 * A	-34.50	-12.50	15.00	28.4	65.0	0.0	0.00	6	+	+
1 * A	-34.50	-12.50	15.00	-13.9	67.0	0.0	0.00	6	+	+
1 * A	-34.50	12.50	15.00	-28.4	65.0	-0.0	0.00	6	+	+
1 * A	-34.50	12.50	15.00	13.9	67.0	-0.0	0.00	6	+	+
1 * A	34.50	-12.50	15.00	151.6	65.0	-0.0	0.00	6	+	+
1 * A	34.50	-12.50	15.00	-166.1	67.0	-0.0	0.00	6	+	+
1 * A	34.50	12.50	15.00	-151.6	65.0	0.0	0.00	6	+	+
1 * A	34.50	12.50	15.00	166.1	67.0	0.0	0.00	6	+	+

Appendix B

Appendix 10

Waterman Infrastructure & Environment Limited
2nd Floor, South Central, 11 Peter Street, Manchester, M2 5QR
www.watermangroup.com

Stag Brewery – Sport England Response

Noise Summary Note - Additional Information

Date: 3 October 2019

Client Name: Reselton Properties Ltd

Document Reference: WIE10667-106-BN-1.5.1-SE_Acoustics

This document has been prepared and checked in accordance with
Waterman Group's IMS (BS EN ISO 9001: 2015, BS EN ISO 14001: 2015 and BS OHSAS 18001:2007)

Issue	Prepared by	Checked & Approved by
	Ellen Smith	Innes Urbanski
001	Senior Consultant	Associate Director

1. Introduction

The Briefing Note is in response to Sport England queries on noise impacts from the new sports facilities on both the existing surrounding residents and the new residents to the north of the proposed sports pitch.

2. Likely Effects

The predicted noise impact from usage of the Multi-Use Games Area (MUGA) and 3G Football Pitch reported in the 2018 ES ranged from insignificant to intermittent moderate adverse.

For those receptors introduced as part of the Development which have no prior knowledge of the existing noise climate assessment against the absolute criteria of 50dB L_{Aeq} as recommended by Sport England has been undertaken for assessment of effects in the 2018 ES. The assessment results are presented as **Table 9.14** of the 2018 ES and provided below (amended to provide distances of the sensitive receptors – to the 3G Football Pitch and MUGA, as illustrated on plan *16019_16019-SQP-ZZ-SK-033* in **Appendix A**).

Table 9.14: Assessment of Noise Effects Associated with Sports Facilities

SR (Figure 9.1)	Distance of Receptor to 3G Football Pitch & MUGA	Existing Ambient Noise Level (dB(A))	Predicted Noise Level from Sports Pitches (3G Football Pitch & MUGA) (dB (A))	Combined Ambient and Predicted 3G Football Pitch & MUGA Noise Level (dB (A))	Change in Noise Level (dB (A))
SR A – Watney Road	3G Football Pitch: 47m MUGA: 121m	60 day	61	64	4
		58 evening	61	63	5
SR B – Williams Lane	3G Football Pitch: 24m MUGA: 147m	60 day	63	65	5
		58 evening	63	64	6
SR C – Lower Richmond Road	3G Football Pitch: 98m MUGA: 56m	71 day	63	72	1
		69 evening	63	70	1
Closest Future SR (Block 18)	3G Football Pitch: 24m MUGA: 127m	n/a	63	n/a	n/a

Note: Daytime period 07:00-19:00; evening period 19:00-23:00, although this does not necessarily reflect operational (usage) times of 3G Football Pitch and MUGA.

With reference to the assessment in **Table 9.14** it can be seen that there would be a maximum increase in noise levels of 4dB for SR A – Watney Road and 5dB for SR B – Williams Lane, as a result of noise from use of 3G football pitch and MUGA sports facilities. A 1dB increase is predicted for SR C – Lower Richmond Road. These temporary increases in noise levels, during usage of the facilities, would give rise to **insignificant** effects at receptors on Lower Richmond Road. This is in part due to the relatively high prevailing noise levels at this location due to road traffic on Lower Richmond Road. At SR A the effect is considered to be **long-term, local, intermittent adverse** of **minor** to **moderate adverse** significance and at SR B **long-term, local, intermittent adverse** of **moderate adverse** significance, based on predicted change in prevailing noise levels. It should be noted however that a noise level of 63dB(A) is within the noise level range for normal conversations, which ranges from 55 to 65dB(A). Furthermore, the existing ambient noise level does not take into account the intermittent noise from the existing sports on the fields (two existing pitches), which residents already experience. The intermittent noise levels of the proposed 3G Football Pitch and MUGA is not expected to be any higher than the existing intermittent noise levels of play on the two existing sports pitch which currently do not have any fencing or noise mitigation in place.

With regards to future noise sensitive receptors (i.e. the new residential use proposed), noise levels associated with the 3G Football Pitch and MUGA would be in the region of 63 dB at the nearest future SRs, thereby above the recommendations set out by Sport England, however consideration should be given to the future prevailing noise climate when assessing the significance of this. Based on measured prevailing noise levels, it is likely that an increase in noise level would be experienced by the nearest future SRs which are distant from Lower Richmond Road. The increase is likely to be comparable to that predicted from SRs A and B. On this basis, the effect during usage of 3G Football Pitch and MUGA facilities is anticipated to be **long-term, local, intermittent adverse** of **minor** to **moderate adverse** significance. As above, it should be noted that the future residents will be aware of this anticipated intermittent noise, given the school and sports facilities will be operational prior to first residential occupation.

Mitigation measures were not considered necessary in the 2018 ES given the intermittent use of the sports facilities and overall predicted noise levels being within the range of normal conservation, as such temporary increases in the prevailing noise levels should be acceptable.

As noted in the noise technical note submitted to LBRuT (ref: *WIE10667-103-TN-1.1.1-Noise Summary Note*) dated 30 August 2018, the assessment assumed both the MUGA and 3G Football Pitch would be used continuously and simultaneously with no account taken of screening provided by intervening structures or topography. Further to this, the noise assessment was based on higher source noise levels than those stated by Sport England. Waterman have based the assessment on measured noise levels of 66dB(A) at the half way line and 69dB(A) behind the goal compared to the “free-field noise level of 58 dB $L_{Aeq(1\ hour)}$ at a distance of 10 metres (m) from the side line halfway marking” which Sport England regard as being representative for noise from an AGP. On this basis the predicted noise levels and potential impacts are expected be lower than reported within the 2018 ES. For example, the predicted noise level at the nearest receptor on Williams Lane located at approximately 24m from the 3G Football Pitch is 63dB $L_{Aeq,T}$ as presented within Table 9.14 of the 2018 ES, whereas when based on Sport England representative noise level of 58dB $L_{Aeq,1h}$ at 10m, the noise level at the nearest receptor on Williams Lane would be lower than 58dB $L_{Aeq,1h}$. This is lower than what is presented within the 2018 ES, which used a conservative approach based on Waterman measurement data. Furthermore, noise impacts would be controlled through careful management of their use together with restriction in operational hours, as described in Section 3 below.

3. Mitigation Measures

Given the intermittent use of the 3G Football Pitch and MUGA and the overall predicted noise levels being within the range of conversation, the 2018 ES considered mitigation measures were not required as temporary increases in the prevailing noise levels should be acceptable. It should also be borne in mind that the 2018 ES assessment adopted a conservative approach and is based on higher noise source levels compared to those specified by Sport England as typical AGP levels. However, notwithstanding this, following comments from Sport England in July 2019 that measures to reduce noise impact on residents should be provided prior to planning approval (rather than provided via planning condition), the design team have further investigated ways of providing mitigation measures into the design of the Development.

A commitment has been made to include the following inherent mitigation measures as a minimum, which comprise a combination of engineered and operational solutions into the design.

With regard to engineered solutions the following has been considered and included in the design as a minimum:

1. A weld mesh (twin bar super rebound fence noted on page 22 of the updated Landscape Design and Access Statement for Application B – refer to Appendix B) with EPDM rubber inserts and fixings to reduce rattle and ball impact noise during play.

The above product with inclusion of EPDM rubber inserts is quieter to ball impacts compared to rebound boards. Based on test data provided by the manufacturer, impact ball noise levels reduced from 93dB(A) at a measurement distance of 300mm from the fence to 66dB(A) (refer to **Appendix B**). We are confident that the above measure in combination with control of operational hours, both of which could be secured via planning condition, will be more than sufficient to mitigate noise impact and reduce noise to an acceptable level.

A maintenance scheme will be implemented to prevent deterioration in performance of the sports facilities that could result from damaged panels, loose brackets, worn AV bushing and squeaky gates. This would be secured via planning condition by LBRuT.

Page 22 of the Landscape Design and Access Statement for Application B (refer to **Appendix C**) has been revised accordingly to provide the following wording and updated plan:

'In respect of noise, there are a number of design solutions that will be incorporated into the design as a minimum to reduce rattle and ball impact noise, including a weld mesh with EPDM rubber inserts and fixings. A maintenance scheme will be implemented to prevent deterioration in performance of the sports facilities that could result from damaged panels, loose brackets, worn AV bushing and squeaky gates.

Furthermore, residential building will be designed such that internal noise levels do not exceed 35 dB $L_{Aeq,16h}$ during the daytime and 30 dB $L_{Aeq,8h}$ & 45 dB L_{Amax} at night from anonymous sources of noise such as road traffic. As noise levels from anonymous sources will be greater than those expected from the 3G Football Pitch and MUGA, the façade will be sufficient to reduce noise to an appropriate level.'

In terms of operational solutions, the hours of play would also be restricted to up to 9pm Monday to Saturday and 8pm on Sundays and Bank Holidays, reducing the impact of evening noise levels.

4. Conclusions

With incorporation of mitigation measures as detailed above into the design of the Development, in addition to restriction of operational hours, noise impacts on surrounding existing and future sensitive receptors would be reduced as far as reasonably practicable thereby adequately safeguarding existing and future amenity.

Appendix A

- 2018 ES Figure 9.1: Noise Monitoring and Sensitive Receptor Locations
- Sensitive Receptors Distance Plan to the proposed outdoor sports facilities (ref: *16019_16019-SQP-ZZ-SK-033*)

Stag Brewery Component of the Site

Chalker's Corner Component of the Site

ST1 ST2 ST3 ST4 ST5 ST6 ST7 ST8

LT1 LT2 LT3 LT4

A B C D E

MORTLAKE

Sports Ground

Brewery

Mortlake Green

Rosemary Gardens

Lady Elizabeth House

Leyden House

Hammersmith New Cemetery

Crematorium

Chertsey Court

Garage

Sorting Office

Girl Guides Centre

Sea Scouts Centre

N

The Site

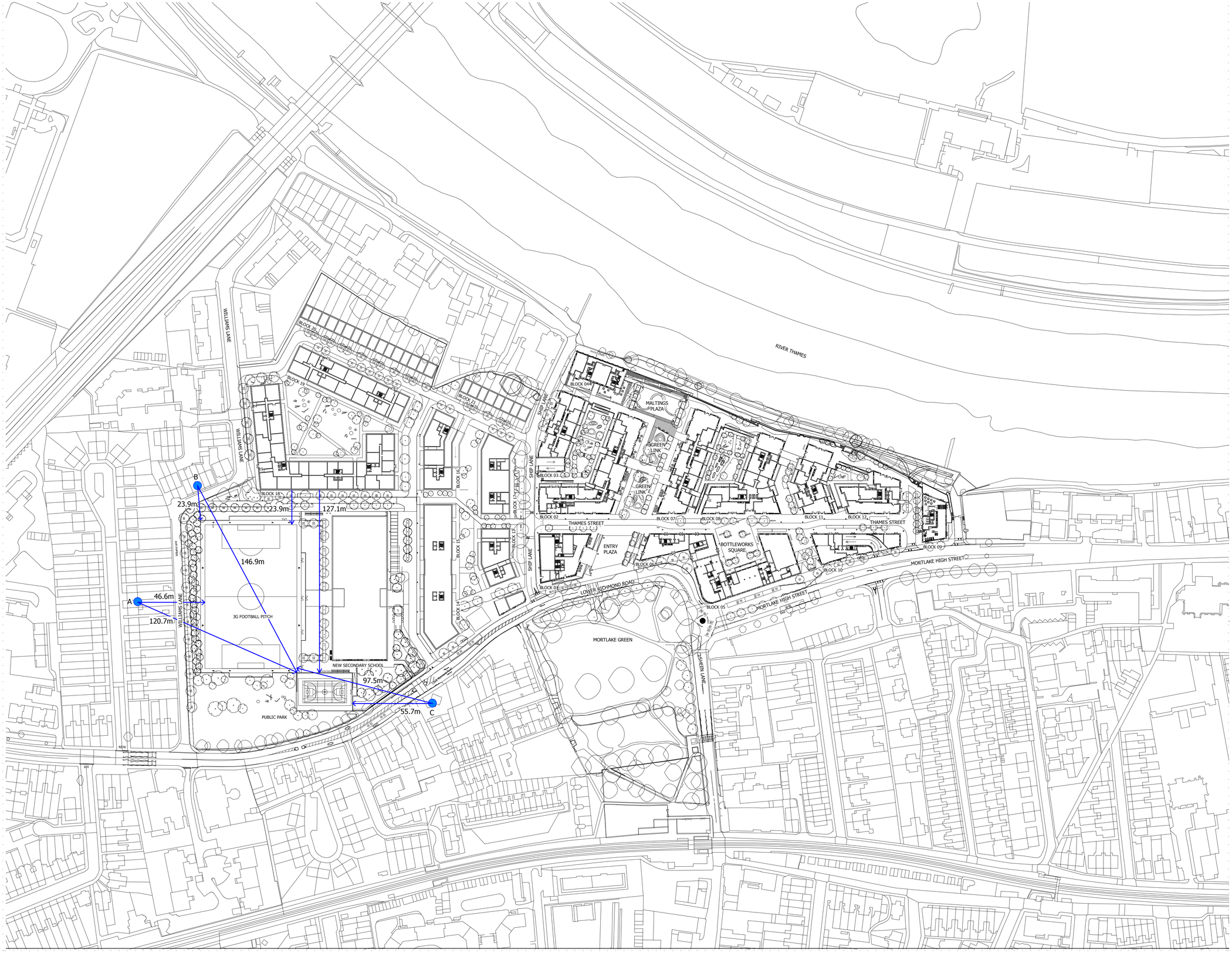
Noise Sensitive Receptor

Long Term Noise Monitoring Locations

Short Term Noise Monitoring Locations

Project Details	WIE10667-101: Stag Brewery, Mortlake
Figure Title	Figure 9.1: Noise Monitoring and Sensitive Receptor Locations
Figure Ref	WIE10667-101_GR_ES_9.1A
Date	2018
File Location	\\s-lncs\wiel\projects\wie10667\101\graphics\es\issued figures

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NOTES:

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NORTH

Revision description	Date	Check	Rev

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Project

Stag Brewery
Richmond

Drawing

SENSITIVE RECEPTORS DISTANCE PLAN

Drawn	Date	Scale
RKL	20/09/19	1 : 1250 @ A1 1 : 2500 @ A3

Job Number	Drawing number	Revision
16019	16019-SQP-ZZ-SK-033	

Appendix B

- EPDM Inserts noise reduction test method and results (Source: Zaun)

EPDM Inserts noise reduction test method and results

The following information has been used recently to support the sale of our products and the use of EPDM inserts, this may assist you in the future.

The analysis has been taken from tests on our Duo sports fencing fixings every 200mm and EPDM inserts. This compared against a Duo 6 fence without the EPDM inserts but with the same 200mm centres. The test was completed by propelling a football at a fence from a distance of 2 metres on four separate occasions. These tests were undertaken in natural sound with a basic reading of between 40-50 db of sound using a mini sound level metre. The readings were taken by placing the noise device at a distance of 300mm from the fence panel, positioned in-line with the post.

With EPDM inserts - the following readings were recorded;

72.7 dB
62.5 dB
65.4 dB
65.0 dB

This works out to an average of **66.4 dB**

The same test has been completed on a Duo 6 fence with fixings every 200mm but without the EPDM inserts on four separate occasions - the following readings were recorded;

93.7 dB
89.3 dB
94.6 dB
95.8 dB

This works out to an average of **93.35 dB**

This is circa a 29% improvement - however the dB scale is not linear, so 66dB is roughly equivalent to talking 1m away or a car travelling on a street. The 93dB is roughly equivalent to a heavy truck passing.

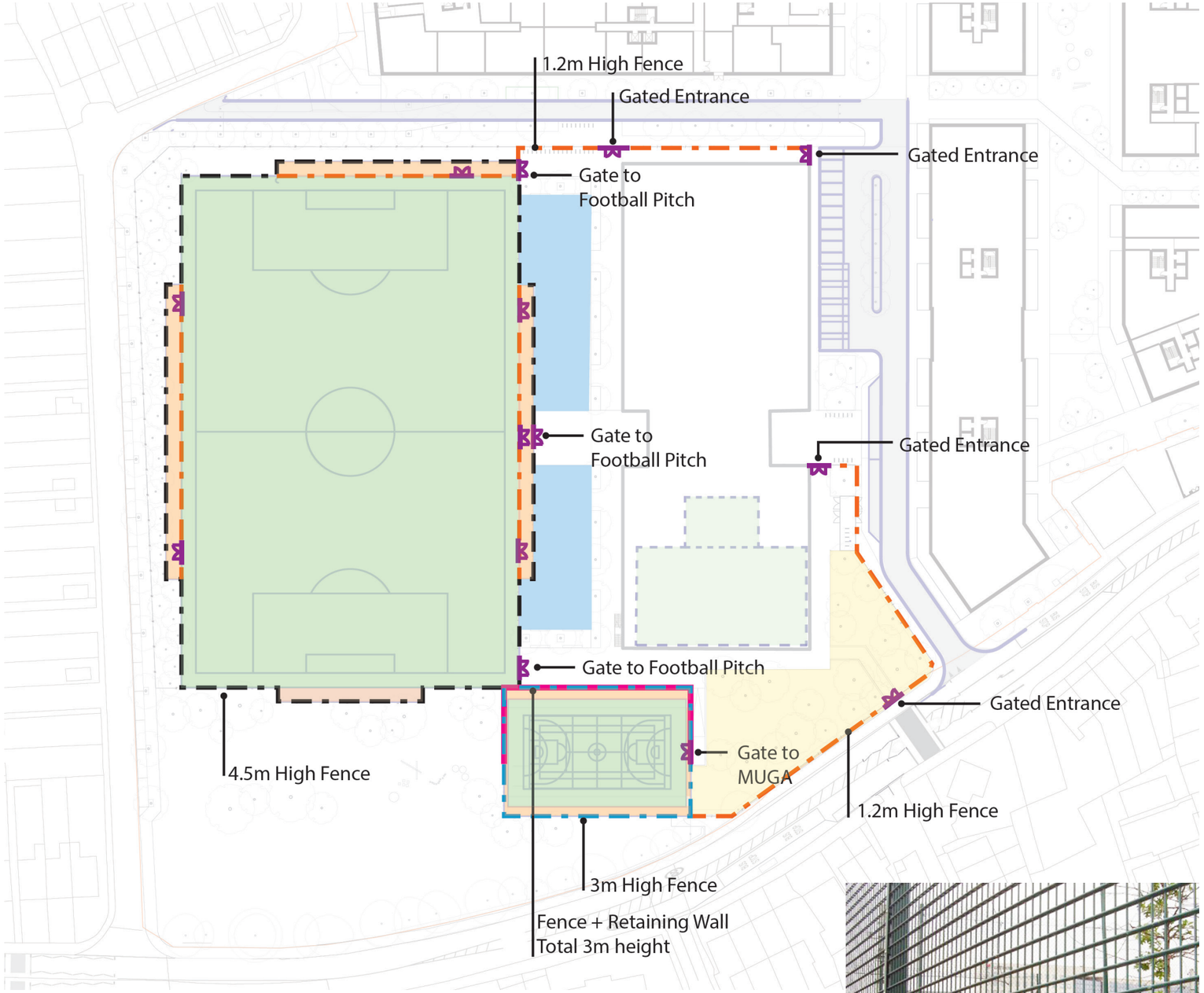
For further explanation see http://www.helpcharts.com/decibel-range-chart-info.html

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Appendix C

- Page 22 of the revised landscape DAS for Application B
- School Landscape GA Plan (Interim) (ref: *P10736-00-001-132*)



Legend

- 1.2m high fence
- 3m high fence
- Fence with retaining wall (3m)
- 4.5m high twin bar super rebound fence



Precedent image from manufacturer ZAUN

5.10 Fencing

The school grounds will be fenced as indicated and include a full size all weather (3G) football pitch, a Multi-use Games Area (MUGA) and Habitat Area – as designated by Department for Education and Education Funding Agency's recommendations, as well as circulation and open space for children during breaks and outdoor activity times. These facilities, along with the second Play Space on the roof of the school building, and the indoor gymnasium, will be accessible to the residents of the site development and the wider community of Mortlake under a Community Agreement (a draft has been submitted with this application). This is covered in more detail elsewhere in this submission.

Fencing Detail

Fencing to Sports Pitch and MUGA, as well as school grounds and Habitat Area is based on industry standards and is in accordance with ESFA requirements and Sport England recommendations.

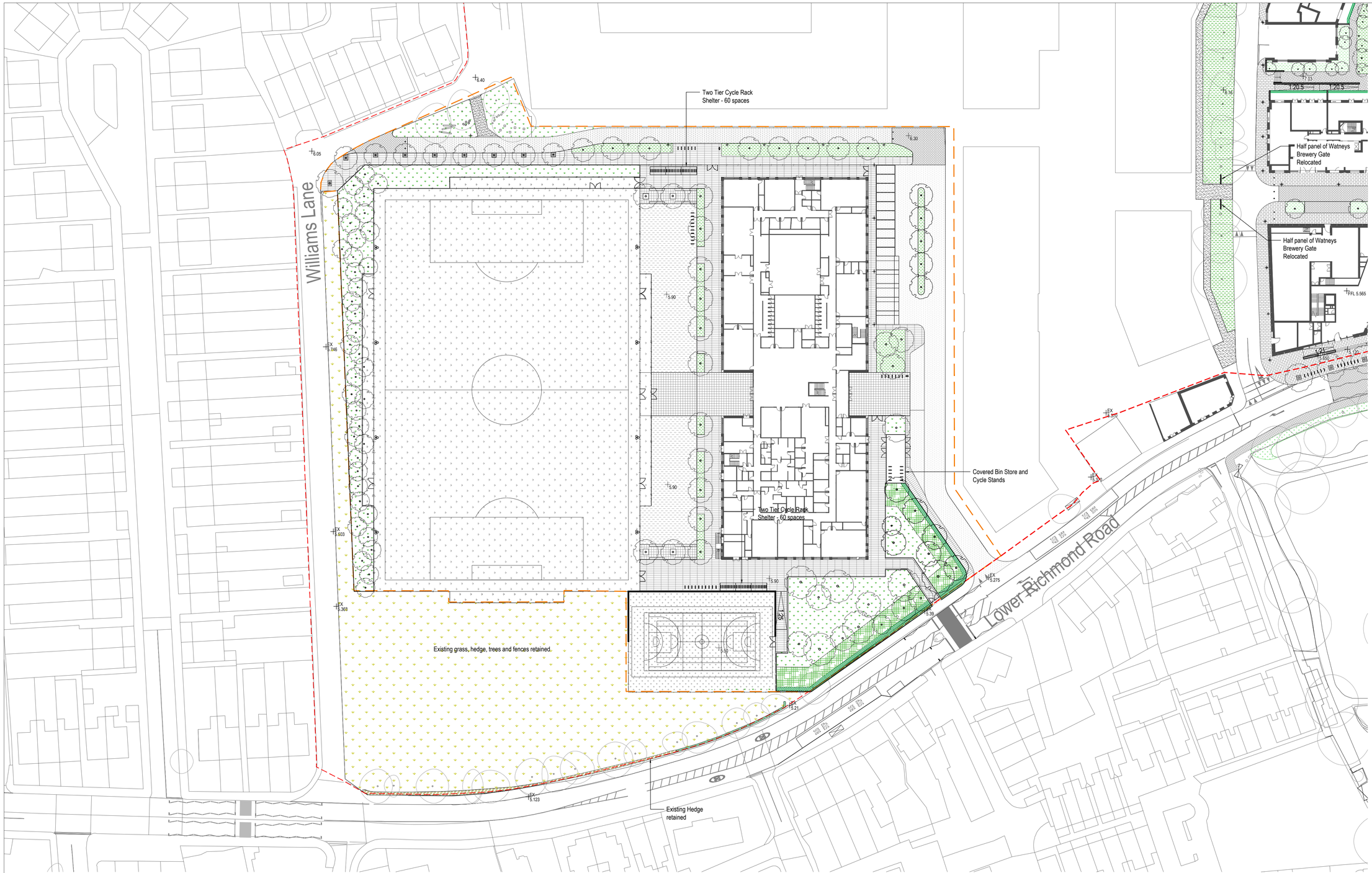
Lighting has been designed for the sports pitch to designated FA levels (Category 2&3) – refer to Sports Pitch Lighting Assessment 547-(010)-RP-EX-LA.

Fencing heights of 4.5m, 3m and 1.2m is in accordance with height requirements under SAPCA (Spots and Play Construction Association)Code of Practice for the Construction and Maintenance of Fencing Systems

All fence types are twin bar super rebound and black in colour. Products from manufacturers such as ZAUN and Sports & Safety Surfaces or similar approved will be used.

In respect of noise, there are a number of design solutions that will be incorporated into the design as a minimum to reduce rattle and ball impact noise, including a weld mesh with EPDM rubber inserts and fixings. If required from further subsequent detailed assessment, an acoustic grade timber fence with sufficient mass (15kg/m2) or barrier made from transparent/opaque plastic material where visual amenity is an important consideration will be incorporated. A maintenance scheme will be implemented to prevent deterioration in performance of the sports facilities that could result from damaged panels, loose brackets, worn AV bushing and squeaky gates.

Furthermore, residential building will be designed such that internal noise levels do not exceed 35 dB LAeq,16h during the daytime and 30 dB LAeq,8h & 45 dB LAmax at night from anonymous sources of noise such as road traffic. As noise levels from anonymous sources will be greater than those expected from the 3G Football Pitch and MUGA, the façade will be sufficient to reduce noise to an appropriate level.



LEGEND

GENERAL

- Site Planning Application Boundary
- School Planning Application Boundary
- Existing Surface Level
- Proposed Surface Level
- Top of Wall Level
- Finished Floor Level (Internal)

PAVING

- Paving Type 1 — Stone sidba for footpath
- Paving Type 2 — Stone paving for shared surface
- Paving Type 5 — Stone flag paving for plazas and entrances
- Paving Type 8 — Resin bound gravel
- Paving Type 9 — Artificial stone flag paving
- Paving Type 10 — School road asphalt paving with 300mm granite kerb
- Paving Type 11 — Porous Macadam MUGA surfacing
- Paving Type 12 — 3G artificial grass
- Paving Type 14 — Macadam surfacing Colour light green

STRUCTURES

- Fence Type 1 — 1.2m high fence for school
- Fence Type 2 — 3.0m high fence for school
- Fence Type 3 — 4.5m high twin bar super rebound fence for school
- Gate Type 1 — Double door gate for school

FURNITURE

- Seat Type 1 — Concrete bench
- Cycle Stand Type 1 — Sheffield cycle hoop - galvanised steel
- Two Tier Cycle Shelter — 20 space per module
- Retaining Wall — Retaining wall with fence
- Tree Surround Type 1 — Resin bound gravel

PLANTING

- Short Mown Grass
- Existing Grass
- Planting Mix — Mixed perennial and evergreen planting
- Hedge Type 1 — 1.5m high hedge
- Hedge Type 2 — 1m high hedge
- Existing Hedge — Maintained
- Meadow Planting — Mixed meadow planting
- Existing Trees to be Retained — Protected during all works
- Proposed Trees

LIGHTING

- Lighting Column — To lighting designer's details
- Lighting Column — To lighting designer's details
- Sports Lighting Column — To lighting designer's details
- Sports Lighting Column — To lighting designer's details

01 SCHOOL INTERIM DESIGN - PLAN

Scale 1: 500 @A1

rev	details	by	date
D00	Issue for Planning Draft	RJ	16.01.2018
D01	Issue for Information	RJ	17.01.2018
D02	Issue for Planning	RJ	09.02.2018
D03	Issue for Planning	RJ	13.02.2018
D04	Updated for Planning	RJ	19.03.2019
D05	Updated for Planning	GP	26.04.2019
D06	Updated for Planning	CL	24.09.2019
D07	Updated for Planning	RM	30.09.2019

rev	details	by	date

Notes

1.0 Do not scale from drawing, use figured dimensions only
1.1 All dimensions to be checked onsite
1.2 This drawing to be read in conjunction with all other Gillespies drawings and specifications

N

0 5 10 25 50 m

Project title
STAG BREWERY

Drawing title
School Landscape GA Plan (Interim)

Drawing number
P10736-00-001-132

Drawing Status: DESIGN
Revision: D07

Date	Scale	Drawn	Checked
16.01.18	1:500 @ A1	RJ	RC

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\\lon-svr\projectdata\P10736-00-001 Stag Brewery Planning Application\Drawings\01 Design\CAD\P10736-00-001-132 [Interim GA].dwg

Appendix C

Date:

[***Amend as appropriate***]

The [ ] School

London Borough of Richmond Upon Thames Local Authority

Barnes Eagles Football Club

DRAFT

Draft Agreement in relation to arrangements for
community use of sports facilities at [ ] School

In connection with Planning Permissions
18/0547/FUL; 18/0548/FUL and 18/0549/FUL

Contents

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4.	**Arrangements for Community Use**	**6**
5.	**Targets for Community Use**	**6**
6.	**Marketing and Promotion**	**6**
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14.	**No Agency**	**10**
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DRAFT

DATE [ ]

[**Amend Parties as appropriate**]

(1) **THE [ ] SCHOOL** of [*insert address*] ("the **School**")

(2) London Borough of Richmond Upon Thames **LOCAL AUTHORITY** of [Civic Centre, 44 York Street, Twickenham, TW1 3BZ] ("the **Council**")

(3) Barnes Eagles Football Club acting by [First Name of Trustee] of [Address] and [Name of Second Trustee] of [Address] ("Barnes Eagles")

1. Recitals

1.1 Planning Permissions were granted by the Council for the Development subject to conditions and planning obligations. The Planning Agreement [and Condition [*insert number*]] to the Planning Permissions requires that an agreement shall be entered into between the School and Council that sets out the rights of Barnes Eagles and the general public to use the Sports Facilities within the Development.

1.2 The parties wish to enter into this Agreement in order to make the indoor and outdoor Sports Facilities at the Development and/or the wider school site, available (when their use is not required by the School) for use by the local community in compliance with the terms of this Agreement and the Planning Agreement [Condition [*insert no.*]].

1.3 The School is the owner of the School Premises and is responsible for their use.

1.4 The Council has responsibility for the provision of sports facilities in the Richmond area for use by and for the benefit of the community and is desirous of entering into this Agreement in furtherance of that responsibility and as the local planning authority in respect of the Development.

2. Definitions and Interpretation

In this Agreement the following words or phrases have the corresponding meanings ascribed to them unless the context otherwise requires:

Barnes Eagles	means the football club for boys and girls of all ages in Barnes, South West London, which has secured rights of access to the Artificial

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	Grass Pitch and changing room facilities at the time and rates under its Preferential Access Arrangements
Casual Hire	means availability for any individual(s) or groups to book the Sports Facilities for use on a pay-as-you-play basis, where space is available
Community Use	means use of the Sports Facilities by the local community including organised sports clubs, organisations and for Casual Hire.
Development	means the development granted by the Planning Permissions incorporating an Artificial Grass Pitch, MUGA, Sports Hall, Activity Hall and community use facilities
Management Committee[1]	means the management committee as defined in clause [6.1] of this Agreement
Parties	means the parties to this Agreement
Planning Agreement	means the section 106 Agreement dated [ ] between Reselton Properties Limited and The London Borough of Richmond upon Thames under the Planning Permissions
Planning Permissions	means together planning permissions (references 18/0547/FUL, 18/0548/FUL and 18/0549/FUL granted by the London Borough of Richmond Upon Thames on [ ] or any amendment thereof
Preferential Access Arrangements	means the Barnes Eagles' use of the Artificial Grass Pitch exclusively and changing room facilities for two nights a week [between 19.00 and 21.00] and between 09.00 to 15.30 on Sundays during the Football Association football season [August to May] fixed at

[1] Delete definition if no Management Committee.

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	£6,000 per annum subject to the increases in Schedule 2 paragraph 3.4 and Preferential Access shall be construed accordingly, but excluding the use of the MUGA, Sports Hall and Activity Hall.
Review Committee	means representatives of each of the Parties to this Agreement or their nominees
School Core Times	means 8am to 4pm Mondays to Fridays during term time as defined in Schedule 2 to this Agreement
School Premises	means the land and buildings comprising the School and edged red for identification purposes only on plan [ ]
Sports Facilities	means the sports facilities identified in Schedule 1 to this Agreement forming part of the School Premises

3. Aims

The Parties agree to pursue the following aims:

- Providing opportunities for the local community and sports organisations to participate in sport and physical activity for health improvement and development of their skills, particularly amongst low participant groups;
- Operating in line with the national agenda for sport taking into account nationally adopted strategies;
- Generating positive attitudes in sport and physical activity by young people and reducing the drop out rate in sports participation with age;
- Increasing the number of people of all ages and abilities participating in sport and physical activity including people with disabilities;

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- Using the facilities to encourage the range, quality and number of school sports club links and to stimulate competition that is inclusive of young people and adults;

- To provide affordable access to the facilities and to be self financing in terms of Community Use;

- To provide a football development hub for the community and strong school / club links.

4. Arrangements for Community Use

The School agrees to make the Sports Facilities available for Community Use in accordance with the provisions of Schedule 2 to this Agreement.

5. Targets for Community Use

The School shall use reasonable endeavours to support the achievement of making a contribution to local participation targets for sporting and physical activity. The School shall work with London Borough of Richmond Upon Thames and London Sport to provide a range of opportunities and pathways for the community. These may include existing initiatives and will also include new and local activities.

6. Marketing and Promotion

6.1 The Management Committee will be responsible for marketing and promoting the Sports Facilities in accordance with the agreed aims and targets.

6.2 A marketing strategy will be prepared by the School and submitted in writing for approval by the Management Committee (not to be unreasonably delayed or withheld).

6.3 The Review Committee will implement and review the approved marketing strategy on an annual basis.

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7. Management[2]

7.1 A Management Committee will be established within 3 months of the date of this Agreement to develop Community Use of the Sports Facilities in accordance with the terms of reference and constitution of Schedule 3 to this Agreement.

7.2 Membership shall include representative(s) (or their nominee) from each of the following:-

(a) The School[3]

(b) The Council or Sport Richmond[4]

(c) Barnes Eagles

7.3 Under these terms of reference, the Management Committee will, in accordance with this Agreement, seek to establish a practical policy framework for the day to day management and operation of the Sports Facilities in accordance with Schedule 2. This framework should seek to enable:

(a) a policy of affordable pricing to assist in the achievement of the aims of this Agreement. The policy will ensure that prices shall be no greater than similar local authority run facilities in the area;

(b) the promotion and forward planning of development activities, at times which best suit the target groups;

(c) equal opportunities of access;

(d) an easy and accessible booking arrangement for Community Use and block booking, this system to be reviewed on an annual basis;

(e) an appropriate marketing strategy for the marketing of the Sports Facilities for Community Use.

7.4 The School will be solely responsible for the Sports Facilities and shall:-

[2] Delete clauses 7.1-7.3 if a Management Committee is not required.
[3] To be the most appropriate person(s), such as Governor, Head Teacher, Head of PE.
[4] Lucy Thatcher to confirm

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(a) resource, control and routinely ensure the maintenance of the Sports Facilities in a manner that will allow achievement of the agreed aims;

(b) make the Sports Facilities available on the occasions and times specified in Schedule 2;

(c) ensure provision of heat, light and water and such other amenities as required for the Sports Facilities and their intended use;

(d) ensure that the Sports Facilities comply with all legislation and guidance in force at the time of this Agreement relating to access for disabled users; and

(e) cover the cost of gas, fuel, oil, electricity, water, rates and taxes that may be attributable to the use of the Sports Facilities and shall be entitled to deduct the reasonable costs from the hire charges and income received from Community Use.

8. Financial Matters

8.1 The School endeavours to ensure that the costs of operating Community Use at the Sports Facilities will be fully covered by income from such use and any surplus will be utilised to:

8.1.1 Agree to contribute to an agreed contingency or sinking fund for major maintenance, repairs and ultimately renewal of fixed life elements of the Sports Facilities.

8.1.2 Maintain a reasonable stock of sports equipment for use in connection with the Sports Facilities.

8.1.3 Enhance the quality and amenity of the Sports Facilities.

9. Monitoring and Review

9.1 2 months prior to the date on which the Review Committee produces its annual report the School shall make available to the Review Committee details of all usage, bookings, maintenance and financial matters relating to the Community Use of the Sports Facilities to assist with the development and improvement of community access.

9.2 The Review Committee shall undertake an assessment of the adequacy of the implementation of this Agreement in relation to:

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- hours of use of the Sports Facilities;
- pricing policy;
- compliance with targets and aims of this Agreement;
- marketing;
- financial performance of the Sports Facilities during the previous year; and
- maintenance.

9.3 The Review Committee shall prepare a report based on the above assessment and prepare recommendations as to how Community Use of the Sports Facilities can be further developed and improved.

9.4 The School shall implement all reasonable recommendations of the Review Committee as soon as reasonably practicable.

9.5 In the event any significant changes are required to this Agreement as a consequence of each or any annual review prior written approval of each of the Parties to this Agreement shall be required.

9.6 The School shall not materially reduce the level of community access to the Sports Facilities required by the Planning Agreement [and Condition [insert number]] of the Planning Permissions without the prior written approval of the Council following consultation with Sport England.

10. Disputes

The Review Committee and Management Committee shall use reasonable endeavours and act in good faith in the resolution of any disputes that may arise in connection with the carrying out of their duties pursuant to this Agreement.

11. Duration of Agreement

This Agreement shall operate for so long as the School Facilities are provided in accordance with the Planning Permissions. In the event the School should cease to operate the Parties agree to make every effort to secure the continued operation of the Sports Facilities for Community Use.

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12. Authority

The Parties warrant that they have the full right and authority to enter into this Agreement.

13. No Variations

This Agreement may only be varied in writing by a document executed by all the Parties hereto.

14. No Agency

Nothing in this Agreement shall be construed as creating a partnership, a joint venture, a contract of employment or a relationship of principal and agent between the parties hereto.

15. Severability

If any term condition or provision contained in this Agreement shall be held to be invalid unlawful or unenforceable to any extent such term condition or provision shall (save where it goes to the root of this Agreement) not affect the validity legality or enforceability of the remaining parts of this Agreement.

16. Waiver

No term or provision of this Agreement shall be considered as waived by any party to this Agreement unless a waiver is given in writing by that party.

17. Non-Assignability

This Agreement is personal to the parties and none of them shall assign sub-contract or otherwise deal with their rights or obligations without the prior written consent of the others.

18. Governing Law and Jurisdiction

This Agreement shall be governed by the laws of England and Wales and the parties submit to the exclusive jurisdiction of the courts of England and Wales.

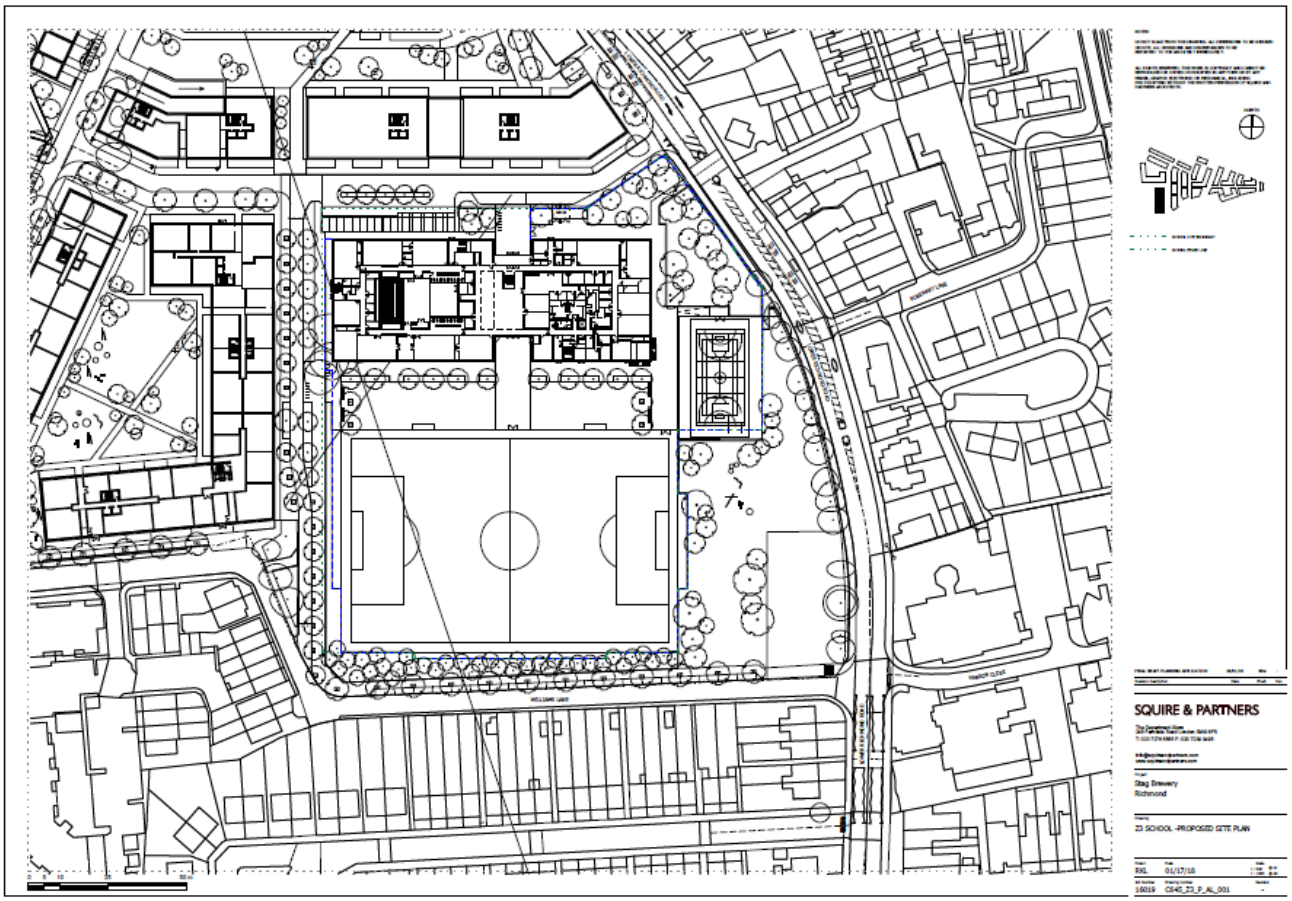
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Schedule 1

1. The outdoor sports areas and facilities to be made available for Community Use shall comprise the following as shown on the attached plan(s)):-

Artificial Grass Pitch (64m x 100m)

MUGA (26.5m x 36.3m)



The indoor sports areas and facilities (together with any ancillary facilities [*toilets, changing rooms etc*]) to be made available for Community Use shall comprise the following as shown on the attached plan(s)):-

Sports Hall (34.5m x 20m)

Activity Hall (10m x 15m)

Changing rooms




VOID OVER MAIN HALL
VOID OVER DANCE STUDIO
VOID OVER DINING AREA

Schedule 2

Arrangements for Community Use

1. Users

1.1 The Sports Facilities shall be made available for Community Use.

1.2 The School shall allow Barnes Eagles' Preferential Access Arrangements to the Artificial Grass Pitch and changing room facilities in this Agreement.

1.3 Barnes Eagles will have Preferential Access to the Artificial Grass Pitch and changing room facilities. This will entitle them to secure their preferred sessions for hire prior to any other users before the commencement of each school year over a minimum term of 25 years from [insert date]. They will forego their right to Preferential Access Arrangements for the season in the event that confirmation of their bookings is not received for the forthcoming football season by 31 July each year. They will still be entitled to the prevailing rates charged by the Council for any bookings made that season.

1.4 Barnes Eagles' Preferential Access Arrangements may only be terminated with their written consent.

1.5 Barnes Eagles may use the MUGA, Sports Hall and Activity Hall by confirming bookings at the prevailing rates charged by the Council.

1.6 The School may enter into a similar arrangement with other local groups for the use of the Sports Facilities for Community Use similar to Barnes Eagles provided that the Preferential Access Arrangements are not affected. The Management Committee will review the status of any arrangements with other local groups (excluding Barnes Eagles' Preferential Access Arrangements) on an annual basis.

1.7 The Management Committee may enter into a similar arrangement to Barnes Eagles with more than one club for the use of the same facility type that does not affect Barnes Eagles' Preferential Access Arrangements.

2. Hours of Access for Community Use

TERM-TIME

Community Use	Mon - Fri :	4pm - 9pm

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	Sat :	9am – 9pm
	Sun* :	9am – 8pm.

SCHOOL HOLIDAYS

Community Use	Mon - Fri :	9am – 9pm
	Sat :	9am – 9pm
	Sun* :	9am – 8pm.

*Including Public Holidays and Bank Holidays

3. Pricing

3.1 A policy of affordable and sustainable pricing shall apply to maximise Community Use and in accordance with the aims of this Agreement. Initial suggested pricing has been included below (excluding Barnes Eagles pricing).

3.2 Initial pricing (excluding Barnes Eagles pricing) will be subject to review and approval by the Management Committee and will be reviewed and set on an annual basis by the Management Committee thereafter.

3.3 The Management Committee will seek to maintain an affordable pricing policy which ensures the sustainability of the facilities.

3.4 Barnes Eagles' fees will be fixed at £6,000 per annum for the Preferential Access Arrangements and subject to a 1% increase per annum from years 2-10 of this agreement and 3% increase per annum from years 11-25. Additional hours will be subject to the Facility Hire charges below unless a discount rate is negotiated by separate agreement.

3.5 If the Artificial Grass Pitch and changing rooms are not available at any time during the Barnes Eagles Preferential Access Arrangements then the Management Committee will use all reasonable endeavours to provide an alternative facility. In the absence of a suitable alternative, the School shall refund part of the Barnes Eagles' fee referred to in paragraph 3.4 above proportionate to the length of time that the facilities are unavailable upon request.

Facility Hire per hour:

Artificial Grass Pitch
Whole pitch hire - £118.00
Third pitch hire - £60.00

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Block booking (10 sessions or more) - £98.33
Weekend match hire (whole pitch – 2 hours) - £118

MUGA
Casual Hire - £20
Block booking (10 sessions or more) - £16.67

Sports hall
Casual Hire - £68
Block booking (10 sessions or more) - £56.67

Activity hall
Casual Hire - £43
Block booking (10 sessions or more) - £35.83

4. Booking arrangements

4.1 An easy and accessible advance booking arrangement for Casual Hire and block bookings shall be established for hire of the Sports Facilities using a standard booking form.

4.2 The agreed booking arrangements shall operate as determined by the Management Committee.

The School to inform Barnes Eagles when booking is available for the next season (depending on the booking arrangements agreed).

5. Parking Arrangements

5.1 The school has 15 car parking spaces which shall be available to park for Community Users on a first come first served basis with other users of the site.

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Schedule 3

Management Committee

Terms of Reference and Constitution

1. Purpose

(a) To monitor progress against agreed aims and targets: programming, usage and financial and to provide regular reports for the stakeholders of the school on those topics.

(b) To arrange and hold six-monthly meetings for the purposes of community liaison.

(c) To decide on policy issues e.g. pricing, the framework of sports programmes and staffing.

(d) To ensure effective partnership working between the organisations involved in school community use.

(e) To determine strategies for future developments at the School and timetables for their implementation.

2. Officers

The Chair shall have the following roles;

- Role of Chair:
  - To direct and control the meetings of the committee.
  - To cast a further vote if necessary to resolve any tied decision(s).
  - To represent the committee at other meetings and functions as necessary.

A Secretary will be elected by the full committee at the first meeting of each financial year (April to March) and will serve for one full year.

- Role of Secretary:
  - To compile and maintain minutes of all meetings.

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- To compile and issue agendas for meetings in timely fashion.

- To take care of all communications to and from the committee.

3. Operation

(a) The full committee will convene at least twice per annum and four times per annum in the first year of operation. Additional meetings will be held as considered necessary by a simple majority of members.

(b) The School will resolve day to day issues.

(c) The School will not make any decisions unilaterally affecting the use and availability of the Sports Facilities that impact on the Preferred Access Arrangements without consulting with Barnes Eagles.

(d) Day to day operation will be the responsibility of the School.

(e) Sub-groups/committees may be formed by the Management Committee if considered necessary or desirable.

4. Reporting

(a) Minutes of committee meetings will be maintained.

(b) A formal annual short briefing report, as set out in paragraph 9 of this agreement, will be issued to cover policy, financial and sports development matters.

(c) Other specific reports requested by other committee members when possible.

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IN WITNESS whereof the hands of the parties or their duly authorised representatives the day and year first above written.

[*Amend as appropriate*]

Signed by ……

Duly authorised by the School

Signed by ……

Duly authorised by the Council

Signed by……..

Duly authorised by Barnes Eagles Football Club

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Appendix D

Waterman Infrastructure & Environment Limited
Pickfords Wharf, Clink Street, London, SE1 9DG
www.watermangroup.com

Stag Brewery AGP & MUGA

Briefing Note – Noise Emissions

Date: 17 December 2019

Client Name: Reselton Properties Limited

Document Reference: WIE10667-106-BN-6.3.3

This document has been prepared and checked in accordance with
Waterman Group's IMS (BS EN ISO 9001: 2015, BS EN ISO 14001: 2015 and BS EN ISO 45001:2018)

Issue	Prepared by	Checked & Approved by
003	Innes Urbanski Associate	Mark Maclagan Technical Director

1. Introduction

1.1. We have been asked to assess the acoustic benefits to be delivered by the installation of a 2.5m acoustic fence along the northern and western perimeters of the proposed Artificial Grass Pitch at the Stag Brewery.

1.2. Accordingly, this Briefing Note presents the results of the predicted noise emissions from the Stag Brewery AGP and MUGA based on advice within Sport England's 'Artificial Grass Pitch (AGP) Acoustics – Planning Implications[1]'. Sport England advocate that noise emissions where possible should not exceed 50dB $L_{Aeq,1hour}$ from AGPs.

1.3. Noise emissions are predicted based on a source noise level of 58dB $L_{Aeq,1h}$ 10m from the centre-line 1.5m above ground level using CadnaA noise modelling software. Noise contour plots at 1.5m above ground level have been generated for the current mitigation scenario and for an enhanced mitigation scenario. Predicted noise levels incident on the nearest existing and future residential properties are also presented.

1.4. The current mitigation scenario includes provision of EPDM inserts on the mesh weld fence, which will reduce impact noise[2] from 93dB(A) to 66dB(A) as measured at a distance of 300mm from the fence panel. This is considered to represent acceptable noise mitigation for the wider existing and proposed residents.

1.5. In accordance with LBRuT preference, enhanced mitigation consisting of a 2.5m high acoustic barrier set back from the mesh weld fence adjacent to the AGP on the northern and western boundary has been assessed.

2. Results

2.1. Figure 1 presents the noise contour plot with the currently proposed mitigation and Figure 2 presents the noise contour plot with enhanced mitigation, namely 2.5m high acoustic barrier.

[1] Sport England. (2015) Artificial Grass Pitch (AGP) Acoustics – Planning Implications. New Guidance for 2015.
2 Zaun Ltd. EPDM Inserts noise reduction test method and results.

Figure 1: Current Mitigation Predicted Noise Levels dB $L_{Aeq,1hour}$ (1.5m above ground level)

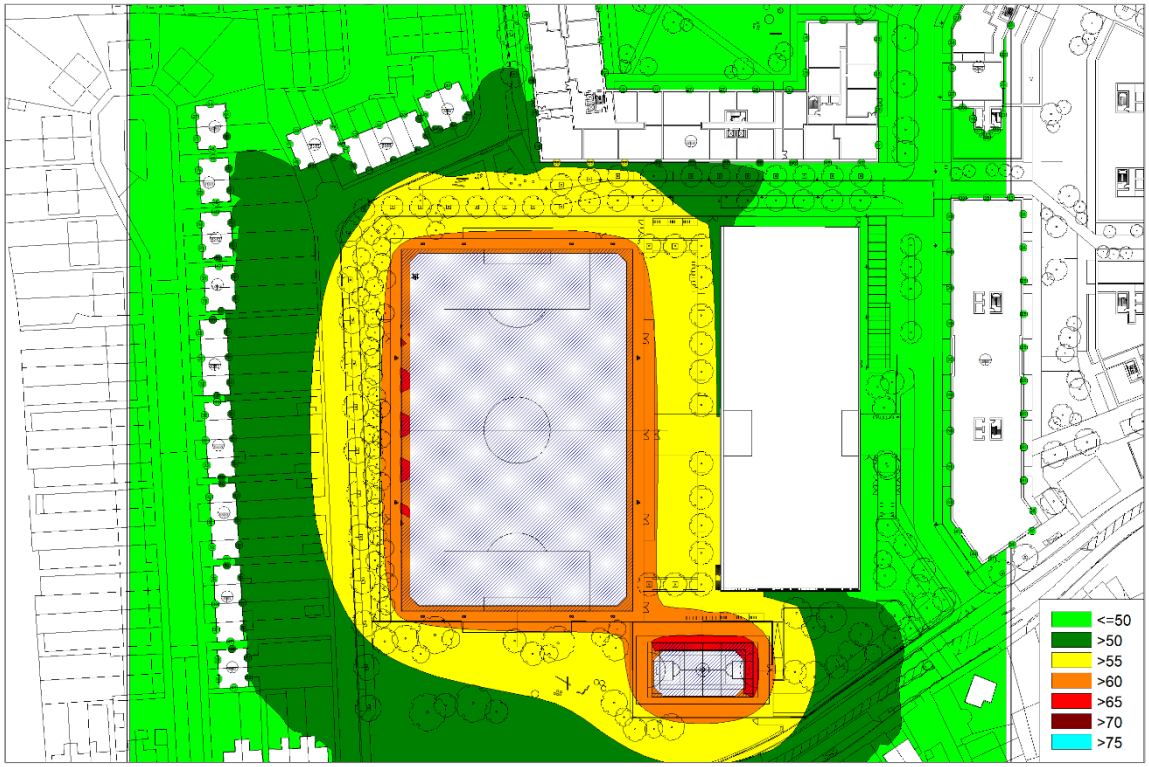
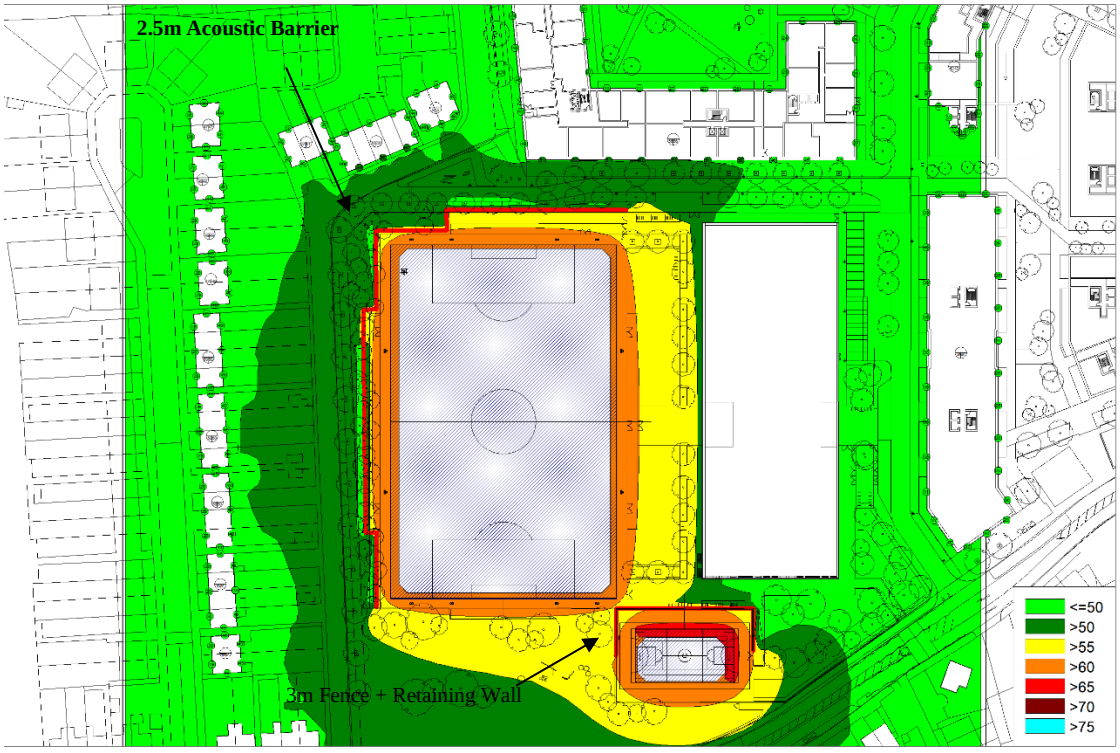


Figure 2: 2.5m Acoustic Barrier AGP Predicted Noise Levels dB $L_{Aeq,1hour}$ (1.5m above ground level)



2.2. Table 1 presents the predicted noise levels incident at ground floor level from AGP and MUGA use on 14-20 Williams Lane (north-west of the AGP), 31-37 Watney Road (rear of properties west of the AGP) and Block 18 (north of the AGP).

Table 1: Predicted Incident Noise Level Ground Floor dB $L_{Aeq,1hour}$

Location	Current Mitigation	2.5m Barrier
14-20 Williams Lane	54	50
31-37 Watney Road (rear)	53	49
Block 18	56	51

2.3. It should be noted that current mitigation does not take account of in-situ screening afforded to residents on Watney Road provided by garden fencing/wall and garden sheds and garages as illustrated in the street view image in Photograph 1. On this basis the predicted noise levels for the current mitigation scenario are likely to be lower than presented within Table 1. Also, the environmental benefit to residents on Watney Road, through provision of an acoustic barrier along the full length of the western boundary of the AGP is likely to be limited due to the existing in-situ screening.

2.4. Table 2 presents the predicted change in the prevailing evening noise level based on the results of the baseline noise survey undertaken in support of the ES. At measurement location LT4, which was at the north-west corner of the redline boundary of the Stag Brewery development at the rear of properties on Williams Lane, the daytime and evening average measured noise levels were 60dB $L_{Aeq,12h}$ and 58dB $L_{Aeq,4h}$ respectively.

Table 2: Predicted Change In Evening Noise Level at Ground Floor dB $L_{Aeq,1hour}$

Location	Current Mitigation	2.5m Barrier
14-20 Williams Lane	1.5	0.6
31-37 Watney Road (rear)	1.2	0.5
Block 18	2.1	0.8

2.5. The results in Table 1 illustrate that the SE guideline noise level of 50dB $L_{Aeq,1h}$ would be satisfied at ground floor level at the existing residential receptors under the enhanced mitigation scenario consisting of a 2.5m acoustic barrier.

2.6. Table 2 indicates that noise emissions from the AGP and MUGA will combine with the prevailing ambient noise levels to cause a slight increase in the prevailing noise level which is however considered to be acceptable.

2.7. It should also be noted that as part of the scheme, visual screening will be provided by planting of trees which form part of the landscape design surrounding the AGP. Obscuring the view of a receptor to a noise source is generally thought to have positive benefits with residents less likely to be bothered about a source they can't see where predicted increases in noise levels are marginal.

Photograph 1: Street View Williams Lane (rear of Watney Road properties) Looking North



3. Conclusions

3.1. Assessment of the potential noise effect of emissions from usage of the AGP and MUGA concurrently, using Sport England guidance, indicates that prevailing noise levels will increase slightly with current mitigation, but based on the measured prevailing noise levels would be less than 3dB and is therefore considered acceptable.

3.2. Provision of enhanced acoustic mitigation, namely a 2.5m acoustic barrier along the western and northern boundary of the AGP is predicted to allow the SE guideline value to be satisfied at existing sensitive receptors at ground floor level. The benefit of the additional proposed mitigation along the western boundary of the AGP is likely to be limited at properties on Watney Road at ground floor level due to the presence of existing in-situ screening from garden fences/walls, garden sheds and garages which are considered to already provide/act as an acoustic barrier to noise.