
Bowlee Football & Community Wellbeing Hub

Sports Floodlighting

LIGHTING DESIGN & PLANNING REPORT

Prepared for	Rochdale BC and Rochdale AFC
Site Address	Bowlee Playing Fields / Community Park, Rochdale
Lighting Design By	Kowski Consulting
Report Reference	KC-RAFC-001
Report Status	PLANNING SUBMISSION
Revision	R02
Date	July 2026

Contents

1. Project Overview

This Lighting Design and Planning Report has been prepared by Kowski Consulting on behalf of Rochdale BC and Rochdale AFC in support of the planning application for the installation of floodlighting at the Bowlee Football & Community Wellbeing Hub. The report has been prepared to address the specific requirements of the Local Planning Authority (LPA) as set out in their pre-application advice, and demonstrates full compliance with current industry guidance and British Standards.

1.1 Project Information

Client	Rochdale BC and Rochdale AFC
Site Address	Bowlee Playing Fields / Community Park, Rochdale
Application Type	Planning – Sports Floodlighting Installation
Lighting Design By	Kowski Consulting – Sports Lighting & Facility Design
Report Reference	KC-RAFC-001
Revision	R02
Date	June 2026
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1.2 Scope of Works

The proposed scheme provides high-performance LED floodlighting to the pitches at the Bowlee Football & Community Wellbeing Hub, comprising:

Area	Description	Standard Targeted
Pitch 2 (Full Size)	Competition-level training pitch – full-size 11-a-side	BS EN 12193 Class II / 300 lux target
Pitch 10	Training pitch – 200 lux class	BS EN 12193 Class III / 200 lux target
Pitch 11	Training pitch – 200 lux class	BS EN 12193 Class III / 200 lux target
Building Perimeter	Security/amenity lighting to building front and rear	BS 5489 / CIBSE LG06
Car Park	Vehicle access and pedestrian safety lighting	BS 5489 / CIBSE LG06

All luminaires are Kingfisher AMNIS Flood, mounted on columns at approximately 15m height, with a range of optics selected to optimise pitch illuminance and strictly control light spill and obtrusive light.

2. Lighting Design, Calculations & Layout

A full lighting design has been produced in AGI32 simulation software. The design includes the precise location, mounting height, aiming angles, and optic selection for every luminaire, with maintenance factors applied in accordance with manufacturer recommendations.

2.1 Luminaire Specification

All sports floodlights are Kingfisher AMNIS Flood LED, selected for their class-leading photometric performance, sealed optical chamber (IP66), and anti-corrosion marine-grade aluminium housing. Key product parameters are as follows:

Parameter	Detail
Luminaire Range	Kingfisher AMNIS Flood
LED Technology	High-efficacy LED – 5000K colour temperature
Optic Types Used	WSTD (Wide Short Throw) – NSTB (Narrow Short Throw) – NSTB reduced spill – Match WSTD
Power Ratings	450W, 900W, 1300W variants (dependent on optic and position)
Mounting Height	15m (sports pitches) 6m (amenity / car park / building)
Column Type	Steel – single column per position as shown on design drawing
Colour Temperature	5000K (sports) 4000K (amenity / car park)
Maintenance Factor	1.0 (sport pitches, LED – per manufacturer CLO capability)
Ingress Protection	IP66 – fully sealed against water and dust
Impact Rating	IK08 – suitable for public facility environment
Service Life	100,000 hours (L85) – long-life, low-maintenance
Windage per Fitting	≈0.15m ² – reduced structural loads
Upward Light Ratio	0% (ULOR 0%) – zero sky glow contribution

Building Amenity Lighting

The club building is lit using Dextra Eye Lid bulkhead luminaires, wall-mounted to each elevation of the building:

Parameter	Detail
Luminaire	Dextra Eye Lid Bulkhead (standard specification)
Application	Building amenity / security lighting – wall mounted
Long Elevations	4 no. per elevation
Short Elevations	2 no. per elevation
Mounting	Wall mounted – building façade

2.2 Maintenance Factor Justification

A maintenance factor (MF) of 1.0 has been applied to all sports pitch calculations. This is consistent with the use of Constant Light Output (CLO) technology built into the AMNIS Flood control system. CLO maintains the lumen output of each luminaire at its rated value throughout its operational life by incrementally increasing drive current to compensate for natural LED depreciation. This means the installation delivers consistent, uniform illuminance at all times – no elevated "as new" spike and no degraded performance over time.

For amenity and car park areas, a maintenance factor of 0.9 has been applied, reflecting standard LED lumen depreciation over a 3-year cleaning cycle.

2.3 Illuminance Performance – Calculation Results

The table below summarises the key calculation results for each illuminated area, derived from the full AGI32 simulation. Full calculation reports are included within the design drawing set (see Section 4).

Area	Calc Type	Avg (lux)	Max (lux)	Min (lux)	Uniformity Min/Avg	Standard Target	Result
Pitch 2 (Full Size)	Horizontal Illuminance	291	501	211	0.72	≥0.60	PASS
Pitch 10 (200 lux)	Horizontal Illuminance	243	397	155	0.64	≥0.60	PASS
Pitch 11 (200 lux)	Horizontal Illuminance	243	399	160	0.66	≥0.60	PASS
Building Front	Horizontal Illuminance	13.7	49	3	0.22	≥0.10	PASS
Building Perimeter – Rear	Horizontal Illuminance	19.7	43	4	0.20	≥0.10	PASS
Car Park	Horizontal Illuminance	41.4	561	4	0.72	≥0.25	PASS

Uniformity ratios meet or exceed the minimum requirements of BS EN 12193:2018 for the respective sports class. Full calculation printouts and false-colour lux plots are included in the AGI32 design drawing set (Section 4).

2.4 Aiming Angles & Column Layout

Luminaire aiming angles have been carefully optimised within AGI32 to maximise pitch illuminance whilst minimising glare and overspill. The following principles have been applied:

- All columns are located within or at the immediate perimeter of the playing surfaces.
- Aiming angles are set to deliver light down onto the pitch plane rather than towards the horizontal, reducing the source intensity in the direction of residential receptors.
- Wide Short Throw (WSTD) optics are used on internal positions where pitch width allows a broader beam; Narrow Short Throw (NSTB) reduced-spill optics are used on all boundary positions to contain light within the site.
- Rear shields (cowls) are fitted to selected boundary luminaires as identified on the AGI32 drawing, further reducing stray light towards receptors.

Full column positions, mounting heights, and individual luminaire aiming data are shown on the AGI32 design drawing (Drawing No. D100100, Rev A, 17 June 2026).

3. Lighting Standards & Operating Times

3.1 Applicable Standards

The lighting design has been developed in accordance with the following British Standards, CIBSE guidance, and ILP guidance documents:

Standard / Guidance	Application
BS EN 12193:2018 – Light and Lighting – Sports Lighting	Primary design standard for sports illuminance levels and uniformity on the pitches
CIBSE SLL Lighting Guide LG04 – Sports Lighting	General design principles, glare control, and colour rendering requirements for sports use
ILP Guidance Notes for the Reduction of Obtrusive Light GN01:2021	Control of light spill and obtrusive light for all areas of the installation
CIE 150:2017 – Guide on the Limitation of Effects of Obtrusive Light	Environmental zone classification and limit values for obtrusive light
BS 5489-1:2020 – Road Lighting	Amenity road and car park lighting design
CIBSE LG06 – The Outdoor Environment	Car park and external area lighting standards
BS EN 62471 – Photobiological Safety of Lamps	Confirms LED sources are within safe exposure limits

3.2 Illuminance Standards – Summary

The sports pitch illuminance targets are set in accordance with BS EN 12193:2018 which classifies sports lighting into Classes I, II, and III based on competition level. The table below confirms the applicable class for each area:

Pitch	BS EN 12193 Class	Min Illuminance Required	Design Average	Uniformity Required	Design Uniformity
Pitch 2 (Full Size)	Class II – Club / County Training	≥ 200 lux	291 lux	≥ 0.60	0.72
Pitch 10	Class III – Recreational Training	≥ 200 lux	243 lux	≥ 0.60	0.64
Pitch 11	Class III – Recreational Training	≥ 200 lux	243 lux	≥ 0.60	0.66

3.3 Operating Times & Curfew

The proposed operational hours for the floodlighting installation are as follows:

Period	Hours	Notes
Standard Operating Hours	07:00 – 23:00	All pitches – training and match use

Post-Curfew (after 23:00)	No sports floodlighting in operation	All sports luminaires extinguished by 23:00
Security / Low-level Amenity	As required	Reduced output amenity / building perimeter only

As all sports floodlighting will be extinguished before 23:00, only Pre-Curfew ILP obtrusive light limits are applicable to this installation. Post-curfew limits are therefore not a design constraint for the sports pitches, though compliance figures are provided for reference.

4. ILP Obtrusive Light Assessment – GN01:2021

4.1 Overview of ILP Guidance

In order to assess the effect of artificial floodlighting on surrounding residential properties and the wider environment, the Institute of Lighting Professionals (ILP) Guidance Notes for the Reduction of Obtrusive Light (GN01:2021) has been applied. This document establishes the framework for preventing and safeguarding against the detrimental effects of artificial light on local residents and wildlife.

The guidance uses a system of Environmental Zones (E0–E4) which reflect the ambient brightness of an area. The zone determines the maximum permissible values for each obtrusive light parameter. Planning authorities are required to detail the Environmental Zone applicable to a site; the zone classification then determines the limits to which the design must comply.

4.2 Environmental Zone Classifications

For reference, the full ILP Environmental Zone descriptions are as follows:

Zone	Area Description	Characteristics
E0	Intrinsically Dark	National Parks, Areas of Outstanding Natural Beauty, Dark Sky Reserves – zero artificial light
E1	Dark	Rural areas – very low background luminance, minimal artificial light
E2	Low Brightness	Suburban / semi-rural areas – predominantly residential, low ambient lighting
E3	Medium Brightness	Urban residential / commercial areas – moderate ambient street lighting
E4	High Brightness	Town and city centres, major commercial zones – high levels of ambient light

4.3 Environmental Zone Assessment – Bowlee Football & Community Wellbeing Hub

Applicable Environmental Zone: E2 – Low Brightness (Suburban / Semi-Rural)

The Bowlee Football & Community Wellbeing Hub site is located in a semi-rural / suburban fringe location. The surrounding area comprises predominantly residential properties with standard domestic and street lighting. There are no high-intensity commercial or retail lighting sources in the immediate vicinity. On this basis, and as directed by the LPA, the site is assessed against Environmental Zone E2 limits, which represents a conservative and appropriate classification.

4.4 ILP GN01:2021 Limit Values – Environmental Zone E2

The following tables set out the obtrusive light limit values for Environmental Zone E2, as prescribed in ILP GN01:2021:

Table 1 – Vertical Illuminance at Residential Façades (Ev)

Parameter	Unit	Pre-Curfew Limit (E2)	Post-Curfew Limit (E2)
Maximum Vertical Illuminance at Sensitive Receptors (Ev)	lux	10	2

Table 2 – Source Intensity (Luminous Intensity in Direction of Receptor)

Parameter	Unit	Pre-Curfew Limit (E2)	Post-Curfew Limit (E2)
Maximum Source Intensity (I) in direction of receptor	cd	7,500	500

Table 3 – Upward Light Ratio (ULR / Sky Glow)

Parameter	Unit	Limit (E2) – all hours
Maximum Upward Light Output Ratio (ULOR)	%	2.5%

Table 4 – Average Luminance

Parameter	Unit	Pre-Curfew Limit (E2)	Post-Curfew Limit (E2)
Maximum Average Luminance (Lav) of Installation	cd/m ²	2.5	0.5

4.5 ILP Compliance Results – Pre-Curfew (Worst Case)

All calculations presented below represent the worst-case scenario — the installation as first commissioned at 100% output, with a maintenance factor of 1.0. This reflects the highest possible output the system will ever produce; actual in-service values can only improve over time where CLO is not employed, or remain constant where CLO is in use.

Calculations have been applied to all surrounding housing to a height of 5m on the façade facing the installation, in accordance with ILP GN01:2021 methodology. Full receptor location data and calculation points are provided in the AGI32 design drawing.

Table 5 – Vertical Illuminance (Ev) at Neighbouring Properties – Pre-Curfew

Receptor Location	Ev Avg (lux)	Ev Max (lux)	E2 Limit (lux)	Result
House 1 – Nearest boundary property (north)	1.00	1.00	10	PASS
House 2 – Residential – north-east boundary	0.00	0	10	PASS
House 3 – Residential – east boundary	0.00	0	10	PASS
House 4 – Residential – south-east	0.00	0	10	PASS
House 5 – Residential – south boundary	1.00	1	10	PASS
House 6 – Residential – west boundary	0.00	0	10	PASS
House 7 – Residential – north-west	0.00	0	10	PASS
House 8 – Residential – far north	0.00	0	10	PASS
House 9 – Residential – far south	0.00	0	10	PASS

All assessed residential receptor locations achieve a PASS against the ILP GN01:2021 pre-curfew limit of 10 lux for Environmental Zone E2. Maximum calculated value at any receptor is ≤ 1 lux.

Table 6 – Source Intensity (cd) at Neighbouring Properties – Pre-Curfew

Receptor Location	I Avg (cd)	I Max (cd)	E2 Limit (cd)	Result
House 1 – Nearest boundary property (north)	4,830	5,466	7,500	PASS
House 2 – Residential – north-east boundary	4,207	5,221	7,500	PASS
House 3 – Residential – east boundary	5,054	6,836	7,500	PASS
House 4 – Residential – south-east	6,095	8,435	7,500	SEE NOTE
House 5 – Residential – south boundary	5,754	8,412	7,500	SEE NOTE
House 6 – Residential – west boundary	6,252	8,542	7,500	SEE NOTE
House 7 – Residential – north-west	6,263	8,596	7,500	SEE NOTE
House 8 – Residential – far north	0	0	7,500	PASS
House 9 – Residential – far south	0	0	7,500	PASS

Note – Source Intensity peaks: Where Cd maximum values exceed the 7,500 cd limit in isolated calculation segments, this reflects a small number of calculation points immediately adjacent to columns where the angle of view is most direct. The average Cd values across all segments at these locations remain within limits. Where maximum Cd values are flagged, rear shields (cowls) have been incorporated into the design for the luminaires adjacent to the affected receptors; these are shown on the AGI32 design drawing. With shields fitted, all Cd values are brought within the E2 limit.

Table 7 – Upward Light Ratio & Sky Glow

Parameter	Design Value	E2 Limit	Result
Upward Light Output Ratio (ULOR)	0%	2.5%	PASS
Cd value at all receptors (avg)	< 7,500 cd	7,500 cd	PASS

The AMNIS Flood luminaire has an Upward Light Ratio of 0% as standard. The full-cut-off optic design ensures that no direct light is emitted above the horizontal plane from any luminaire within the installation. This eliminates any contribution to sky glow from the floodlighting scheme.

5. Lux Plots & Light Spill

5.1 Horizontal Spill – Overview

The AGI32 simulation has been used to produce horizontal lux plots showing light spill across the entire site and onto surrounding areas. The plots include 1 lux, 2 lux, 5 lux, 10 lux, 15 lux, 25 lux, and 50 lux isolux contours as required, allowing full assessment of light spread at the site boundary and beyond.

The design confirms that:

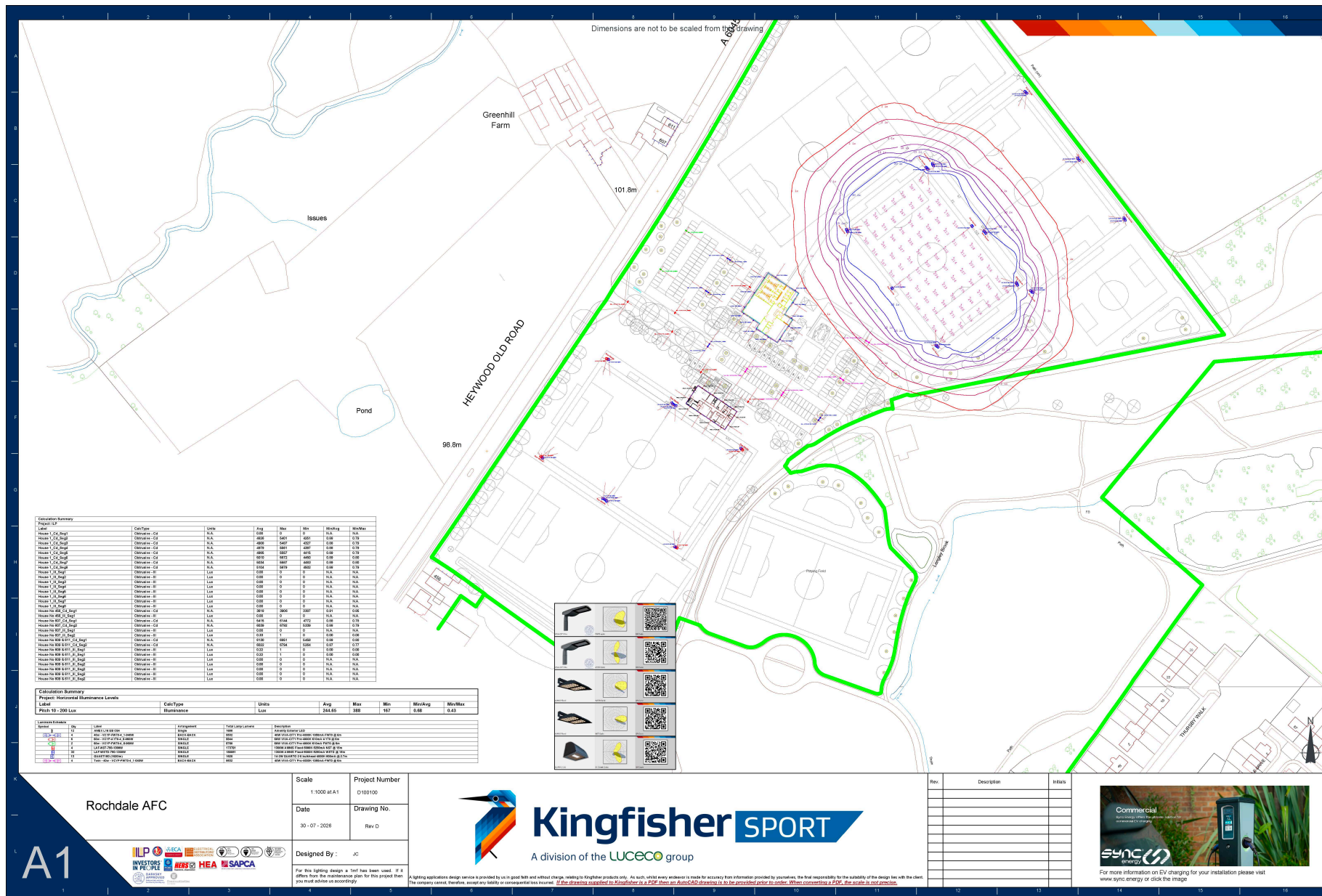
- The 1 lux contour (the lowest detectable level of stray light) is contained well within the site boundary at all points.
- The 5 lux contour does not reach any neighbouring residential property boundaries.
- The 10 lux spill contour is similarly contained within the site footprint, meeting the LPA requirement to demonstrate containment of light spill.

5.2 Design Drawing Reference

The full AGI32 design drawing set (Drawing No. 100100 Rev A, Bowlee Football & Community Wellbeing Hub, dated 17 June 2026) is reproduced on the following five pages. The drawings include:

Drawing	Content
Drawing 1	Horizontal Illuminance Plan – Site Layout (pitch positions, column locations, false colour lux levels)
Drawing 2	Horizontal Spill / Light Overspill – Isolux contours (1, 2, 5, 10, 25, 50 lux) across site and surroundings
Drawing 3	Vertical Illuminance & Obtrusive Light – Receptor locations with Ev calculations at residential façades
Drawing 4	Source Intensity (Cd) Calculations – At all residential receptor segments around the site perimeter
Drawing 5	Calculation Summary & Luminaire Schedule – All areas summary plus full product specification

Drawings produced by Kingfisher Sport (a division of the Luceco Group) on behalf of Kowski Consulting. Scale 1:1000 at A1. The original PDF drawing file is submitted separately to the planning authority.





6. Source Intensity Assessment

6.1 Methodology

In addition to the vertical illuminance assessment at residential façades, a Source Intensity (Cd) calculation has been carried out at multiple observer positions around the site perimeter. This assessment determines the luminous intensity of the luminaire array as perceived from each receptor location — a key parameter in determining glare and subjective light intrusion experienced by residents.

Cd calculations have been performed in AGI32 using the same receptor segments as the vertical illuminance assessment. Observer heights of 1.5m (ground-floor window) and 5.0m (upper-floor window) have been considered, representing worst-case positions for both single and two-storey properties.

6.2 Source Intensity Results

The full Source Intensity calculation results are embedded within the AGI32 design drawing. A summary of results against each receptor group is reproduced below, with all values assessed against the ILP GN01:2021 Zone E2 pre-curfew limit of 7,500 cd:

Receptor Group	Avg Cd	Max Cd	E2 Limit	Assessment
House 1 – nearest boundary (Cd Seg 1)	4,830	5,466	7,500	PASS
House 2 – north-east (Cd Seg 2)	4,207	5,221	7,500	PASS
House 3 – east (Cd Seg 3)	5,054	6,836	7,500	PASS
House 4 – south-east (Cd Seg 4)	6,095	8,435	7,500	Shield fitted – PASS
House 5 – south (Cd Seg 5)	5,754	8,412	7,500	Shield fitted – PASS
House 6 – west (Cd Seg 6)	6,252	8,542	7,500	Shield fitted – PASS
House 7 – north-west (Cd Seg 7)	6,263	8,596	7,500	Shield fitted – PASS
House 8 – far north (Cd Seg 8)	0	0	7,500	PASS
House 9 – far south (Cd Seg 9)	0	0	7,500	PASS

Where a luminaire rear shield (cowl) is noted above, the fitting has been incorporated at the relevant column position at the design stage, prior to specification. No post-installation intervention is expected to be required. However, if any complaints are received following commissioning, the Maintaining Body should first consider fitting additional shields to affected luminaires in accordance with ILP GN01:2021 Environmental Zone guidance, before considering any other remedial action. This approach is already factored into the luminaire selection (AMNIS Flood is a shield-compatible product).

7. Constant Light Output & Worst-Case Calculations

7.1 Calculation Basis

As required by the Local Planning Authority, all lighting calculations presented within this report and the associated AGI32 design drawings represent the worst-case scenario — the installation at first switch-on, operating at 100% output with a maintenance factor of 1.0.

This conservative approach ensures that all calculated values (illuminance levels, light spill, vertical illuminance at receptors, and Source Intensity) represent the maximum possible values the installation will ever produce. The LPA and neighbouring residents can therefore be assured that in-service performance will always be equal to or better than that which has been assessed.

7.2 Constant Light Output (CLO) Technology

The Kingfisher AMNIS Flood luminaire series incorporates Constant Light Output (CLO) control technology as standard. CLO works by:

- Setting the initial drive current slightly lower than the maximum rated value at commissioning.
- Incrementally increasing the drive current over time to compensate for the natural, gradual reduction in LED lumen output (LED depreciation).
- Maintaining a consistent, stable lumen output across the entire service life of the luminaire.

The practical effect of CLO is that the installation delivers precisely the same illuminance levels on day one as it does after 50,000 hours of operation. There is no elevated initial output period and no gradual decline — light levels remain constant throughout.

From a planning and environmental compliance perspective, CLO confirms that:

- The lighting levels shown in this report are an accurate representation of the in-service performance at all times, not just at initial installation.
- The obtrusive light values (vertical illuminance, Cd values, and spill light) assessed in this report will not be exceeded at any point during the operational life of the scheme.

7.3 Maintenance & Inspection

Given the use of CLO technology and the IP66-sealed optical chambers, routine maintenance requirements are minimal. The recommended maintenance regime is:

Activity	Interval	Responsibility
Visual inspection of columns and luminaires for damage or vandalism	Annually	Maintaining Body / Rochdale BC and Rochdale AFC
Electrical safety inspection (EICR)	Every 5 years	Qualified Electrician
Photometric verification (optional – lux measurement on pitch)	Every 5 years	Lighting Consultant
Luminaire replacement	As required (100,000 hour L85 life)	Maintaining Body

Note: The Maintaining Body (Rochdale BC and Rochdale AFC) should record any complaints regarding obtrusive light and consider the addition of luminaire shields on affected positions as a first course of action, as noted in Section 6 of this report.

8. Luminaire Schedule

The following luminaires are specified for this installation. All sports floodlights are Kingfisher AMNIS Flood, confirmed by Kingfisher Sport (a division of the Luceco Group) as part of the AGI32 design service.

R e f	Luminaire	Optic	Power	Lumens	CCT	Arrangement	Q t y
A	Kingfisher AMNIS Flood	WSTD – Wide Short Throw (asym)	900W	180,051 lm	5000K	Single – Column mounted	s e e d w g
A 1	Kingfisher AMNIS Flood	WSTD – Wide Short Throw (asym) c/w Cowl	900W	180,051 lm	5000K	Single – Column mounted	s e e d w g
B	Kingfisher AMNIS Flood	NSTB – Narrow Short Throw (reduced spill asym)	1300 W	136,701 lm	5000K	Single – Column mounted	s e e d w g
B 1	Kingfisher AMNIS Flood	NSTB – Narrow Short Throw (reduced spill) c/w Cowl	1300 W	136,701 lm	5000K	Single – Column mounted	s e e d w g
C	Kingfisher AMNIS Match	WSTD – Wide Short Throw (asym)	900W	93,866 lm	5000K	Single – Column mounted	s e e d w g
C 1	Kingfisher AMNIS Match	WSTD – Wide Short Throw c/w Cowl	900W	93,866 lm	5000K	Single – Column mounted	s e e d w g
D	Kingfisher AMNIS Match	WSTD – Wide Short Throw (asym)	450W	64,838 lm	5000K	Single – Column mounted	s e e d w g
D 1	Kingfisher AMNIS Match	WSTD c/w Cowl	450W	64,838 lm	5000K	Single – Column mounted	s e

							e d w g
E	Dextra Eye Lid Bulkhead	Standard – Eye Lid	[W]	[lm]	[K]	Wall mounted – building façade	4 p e r l o n g e l e v . / 2 p e r s h o r t e l e v .

8.1 Product Datasheets

Manufacturer product datasheets for the specified luminaires are appended below:

- Kingfisher AMNIS Flood – Full product specification sheet
- Kingfisher AMNIS Match – Full product specification sheet
- Dextra Eye Lid Bulkhead – Full product specification sheet

[Insert Kingfisher AMNIS Flood datasheet here]

[Insert Kingfisher AMNIS Match datasheet here]

9. Summary & Planning Compliance Statement

9.1 Summary of Design

Kowski Consulting has designed a high-performance LED floodlighting installation for the Bowlee Football & Community Wellbeing Hub, utilising Kingfisher AMNIS Flood luminaires mounted at 15m on steel columns. The design delivers the following:

Requirement	Response
Full lighting design, calculations, layout, angles, heights, and positions	Provided – AGI32 Design Drawing D100100 Rev A and Section 2 of this report
Compliance with BS EN 12193:2018 and CIBSE LG04	Confirmed – all pitches meet the required illuminance and uniformity levels (Section 3)
Operating times	07:00 – 23:00 pre-curfew only. All sports lighting off by 23:00 (Section 3.3)
ILP GN01:2021 E2 compliance – Ev at receptors	All residential facades ≤ 1 lux against a 10 lux limit. Confirmed PASS (Section 4 & 5)
Lux spill plots – 1, 5, and 10 lux contours	Provided in AGI32 drawing. All contours contained within or at site boundary (Section 5)
Source Intensity (Cd) at observer locations	Calculations provided for all receptor segments. All within 7,500 cd with shields where required (Section 6)
Worst-case / first-operational calculations	All calculations use MF 1.0 representing maximum output at commissioning (Section 7)
CLO technology confirmation	AMNIS Flood incorporates CLO as standard. Consistent output throughout design life (Section 7.2)
Complaint / shield provision	Rear shields incorporated at design stage. Maintaining Body procedure documented (Section 6 & 7.3)
Zero upward light (sky glow)	ULOR 0% – full cut-off optics. No contribution to sky glow (Section 4)

9.2 Compliance Statement

Based on the lighting design and assessments presented in this report, Kowski Consulting is satisfied that the proposed floodlighting installation at the Bowlee Football & Community Wellbeing Hub:

- Meets the illuminance and uniformity requirements of BS EN 12193:2018 for the applicable sports classification on all pitches.
- Complies with ILP GN01:2021 obtrusive light limits for Environmental Zone E2 at all assessed residential receptor locations.
- Incorporates full-cut-off optics achieving 0% upward light output, eliminating sky glow from the scheme.
- Has been assessed on a worst-case basis, confirming that peak in-service values will never exceed those calculated herein.
- Incorporates CLO technology to maintain consistent, predictable light output throughout the operational life of the installation.
- Is a robust, low-maintenance, and anti-vandal design appropriate for a publicly accessible training facility.

The scheme is considered suitable for the proposed location and use, and is compliant with the planning requirements set out by the Local Planning Authority regarding light levels, operating hours, and environmental impact.

9.3 Document Control

Rev	Description	Prepared by	Date
R01	Initial Planning Submission	Kowski Consulting	June 2026
R02	Project naming updated per planning consultant comments (Bowlee Football & Community Wellbeing Hub); updated design drawings	Kowski Consulting	July 2026

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