
ECB Appendices

A. Appendix 1

1. ECB Report on Overshadowing Impact of Accrue Proposal on LCCC Training Facility (f) 2021 08 24

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ECB report on the potential impact on the fine turf net facility at Old Trafford of planning application 100400/OUT/20 - Former B&Q, Old Trafford

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Dr Iain James joined the England and Wales Cricket Board as Head of Facilities Services in 2020. Prior to this he was Technical Director at TGMS Ltd – a sports pitch design consultancy and was Senior Lecturer in Sports Surface Engineering at Cranfield University. Prior to joining the ECB his consultancy work included the design and operation of natural turf facilities, and clients included Surrey CCC at the Kia Oval, the MCC at Lord's, the development of the new tennis training facility for the All England Lawn Tennis Club at Wimbledon and Lancashire County Cricket Club at Emirates Old Trafford – including the design of the net training facility refurbishment to a world class facility in 2018.

This report considers the potential impact of the Accrue appeal proposal on the fine turf net facility at Old Trafford. The author has considered the STRI Report dated November 2020 and addresses that report below.

The net facility supports training by England and visiting international teams, Lancashire County Cricket Club, Manchester Originals, the Thunder regional women's team, county age group and pathway cricketers. The facility is world class and needs to be of the highest quality as part of Emirates Old Trafford's provision as an international cricket venue. The quality of the facility cannot be compromised without degradation of the venue's role as an international venue for elite sport.

The facility comprises two netblock areas, one to the north, one to the south, with a run up area in between. This means that there are very intensively used areas of the grass facility at both the southern and northern ends.

Because usage and wear are high, significant end of season renovation is required to repair the wear. The professional cricket season in England and Wales will typically extend to the end of September and as a consequence these renovations, including the seeding of grass, take place in October.

This is a critical period for grass establishment in marginal conditions due to low temperatures and rapidly decreasing day length near to the autumn equinox. Therefore the sensitivity to increased shading comes from both light effects (as considered in the STRI study) and temperature effects. The challenge for any cricket grounds manager is to establish grass in this late autumn/early winter period and then to sustain that through winter dormancy to then encourage growth as early as possible in the February-March period in preparation for the start of training in March.

The effect of increasing shade in this period is three-fold:

1. There is a reduction in the quantum of photosynthetically active radiation (PAR) received by the plant (as described in the STRI report).
2. There is a reduction in temperature of the microclimate and a delay in thawing of frost. This is a particular challenge in early spring when this can mean the difference between grass plants growing and developing (through growth stages delayed by winter) to achieve a durable sward that can resist the intensive wear of cricket training.

3. The reduction in temperature also reduces evaporation meaning that the perennial ryegrass sward will take longer to dry encouraging disease and sustaining colder roots within the predominantly clay soil used for the cricket playing surface.

At this time of year the temporary stand is not in place and therefore consideration of shade from the temporary stand is not relevant. Therefore only Scenario 1 (Existing) and Scenario 2 (Proposed Flats) are considered in this note.

Figure 1 is a side-by-side comparison of data from the STRI report for the critical months of October and February. The effect of increased shade can be seen by lower quantities of PAR in both months in Scenario 2 at the southern end of the net facility where critical high wear areas exist; however the impact of this on grass establishment, and any temperature effects are not considered by the STRI report.

A combination of trying to germinate, establish and develop perennial ryegrass at that time of year in preparation for intensive wear in early spring, the heavy clay soil and the wetter climate of the Old Trafford location mean that all marginal impacts on light and temperature can have significant effects on the performance of the surface and in particular when it can be used. In the author's view the above effects, which will arise as a result of the appeal proposal, will have an adverse effect on the renovation and performance of the fine turf playing facility and this will necessitate mitigation in the form of growth lighting for both light and temperature and that without this mitigation the appeal proposal will have a significant adverse effect on the performance of the fine turf facility.

Mitigation of this type would incur significant cost. A standard growth light rig suitable for this area would be approximately £32,500 +VAT and could be ca. £50,000 +VAT for a modified one-off design to reduce damage by wheeling the light rig across soft wet soils in the winter period.

The lighting rig would need to be moved and operated. Operating costs of 100 person-hours/year at £100 /hour would total £10,000 /year. With an operating demand of approx. 25 kW (£3.63 /hr @14.5 p/kWh indicative, and a greenhouse gas emission of 5.3 kg CO₂e/hr over 8 hours a day for the same 100-day period, electricity costs would total £2,904 /year and at a median offsetting cost of £80/t CO₂e, offsetting would require £339 / year. This is a total operating expenditure of £10,787 / year.

On this basis, over a 10-year period the capital and operating expenditure budgets (excluding inflation) would be:

	Off the shelf lighting rig	Bespoke lighting rig
Capital Expenditure	£32,500	£50,000
Operating Expenditure (10 years at £13,243 / year)	£132,430	£132,430
Total (ex VAT, ex inflation)	£164,930	£182,430

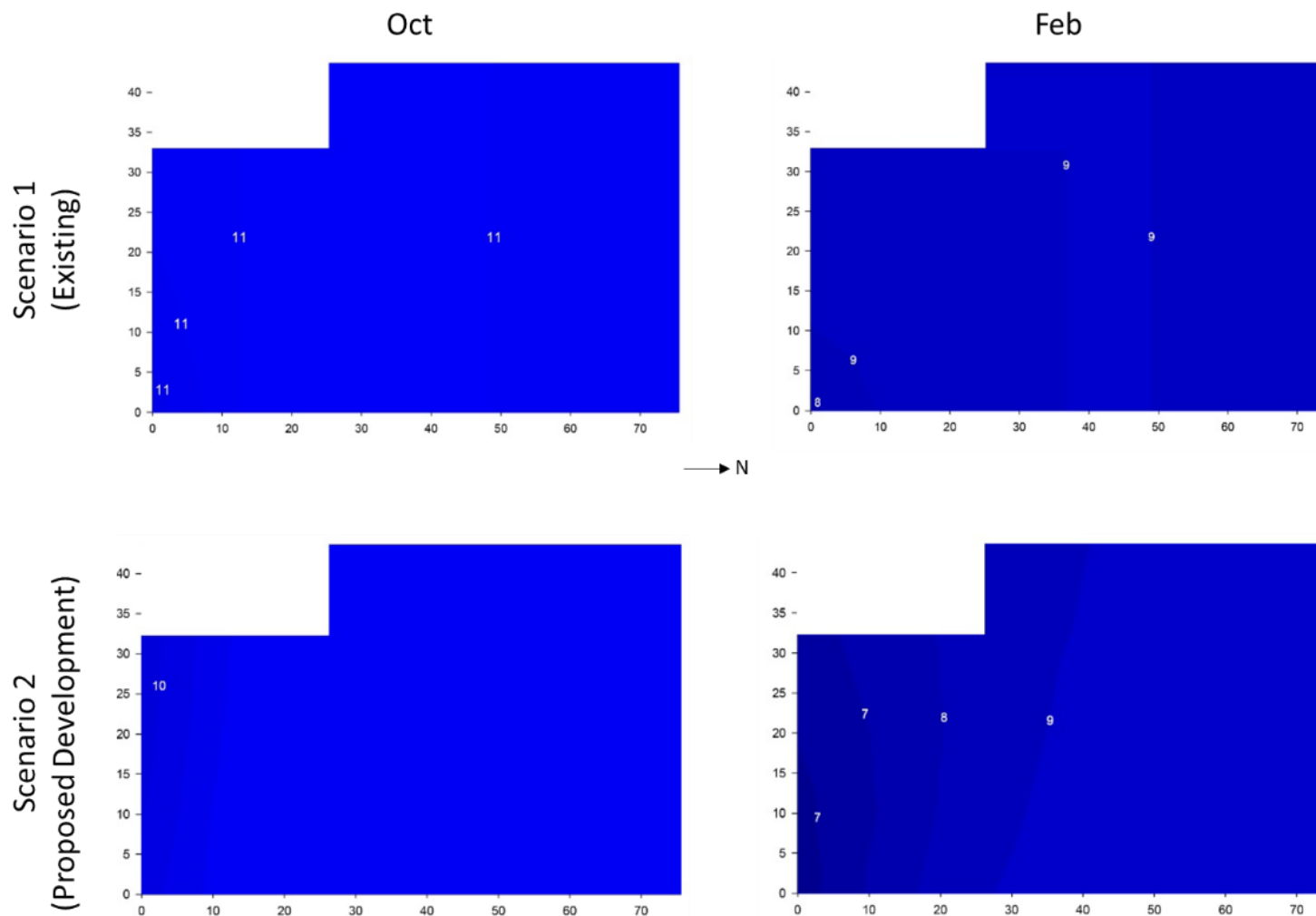


Figure 1 Selected light model output from STRI Report (Appeal Ref APP/Q4245/W/20/3258552-Exhibit 1) illustrating critical months of October and February for grass establishment in cricket nets. Scenario 1 is existing. Scenario 2 is the Proposed Apartments. Contour units are mol/m²/day.

England and Wales Cricket Board
From Playground to Test Arena

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