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MOONWALK LONDON 2020 - WALK THE WALK AGRONOMY REPORT

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23 August 2019 **TAL**

MOONWALK LONDON 2020 - WALK THE WALK
AGRONOMY REPORT

1 INTRODUCTION

An agronomy report was requested to assess the general ground and surface conditions of the area of a public park to be used for a significant outdoor event, Moonwalk 2020. The event is to take place next May 2020. Site construction will commence on 6 May 2020 and the site is to be cleared by 21 May 2020.

The event is to take place over an area of Clapham Common, London. Appraisal of ground conditions before the event was necessary partly in order to pre-determine what measures, if any, should be undertaken beforehand and to anticipate what renovation procedures are likely to be required to restore the ground conditions to their previous state afterwards.

Agrostis' client is…

Walk the Walk Worldwide
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… and the report was commissioned by Ian Baker, Health and Safety consultant,

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1.1 Site Location

The site forms part of Clapham Common, south London.

Nat. Grid: TQ290751
OS X (Eastings) 529060, OS Y (Northings) 175130
Nearest Postcode: SW4 9DD
Latitude: N 51 : 27 : 38 (51.460441)
Longitude: W 0 : 08 : 37 (-0.143668)

Figure 1-1 Location of Winterville event, Clapham

2 EXISTING CONDITIONS

2.1 The Event

The Event, known as ‘Moonwalk, requires the enclosure of a part of the Park shown in the Google Earth image of Figure 2-1. This represents an area of approximately 5.5 hectares.

Figure 2-1 Area occupied by the Event

The Event plan, shown in Figure 2-2, was provided. This indicates the location of various features to be incorporated including a stage, bars, eating establishments, toilets, etc.

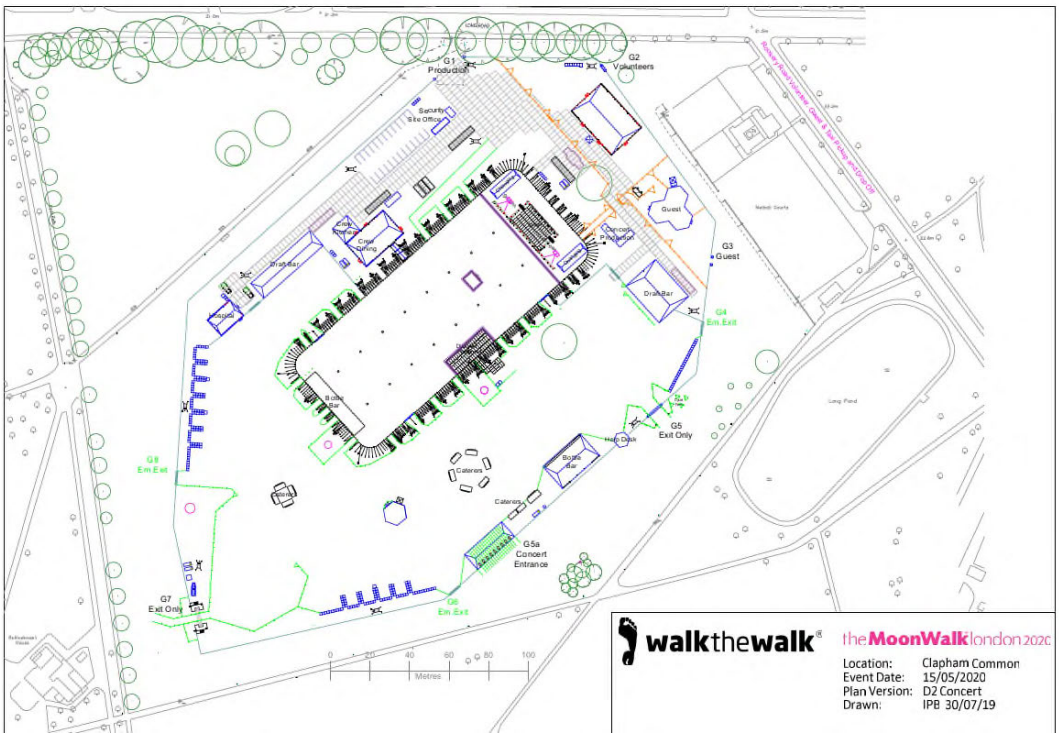

Figure 2-2 Event plan (reduced version of provided drawing)

2.2 The assessment

The assessment of ground conditions was undertaken by means of a walk over the area of the Event, noting features of the ground cover and possible soil-related factors.

In addition to the general observations made during the walk itself, ground cover and species composition was assessed by eye and photographed at different points over the area with example pictures shown in Figure 2-3.

Figure 2-3 Ground cover assessment

2.3 Ground cover

The ground cover of areas subject to regular mowing were examined. In general, the ground cover was very well established and maintained. During the visit the effects of some aeration works (probably verti-draining) that had been carried out recently were noted. This suggested that the park was being maintained appropriately.

Figure 2-4 Aeration holes

2.3.1 Grass coverage

Examples of the appearance of the sward are shown in Figure 2-5.

The great majority of the site supported a full cover of healthy grass, often growing quite vigorously, as determined by the stripes left by the last mowing operation. Some areas provided better cover than others due to different factors as footfall, water movement and retention in the soil, differing grass species, nutrient availability and so on, but in general, the coverage was good for a public park.

Figure 2-5 Example ground cover samples

The species represented included perennial ryegrass which was by far the most abundant. Annual meadow grass tended to be found in the mown areas of reduced ground cover. Other species occurred in a scattered distribution across the site.

2.3.2 Broad-leaved species

There were not many broad-leaved species and those that were found tended to be in areas where the grass cover had slightly less density. These areas were placed mostly in the southern part of park where sward density was lower. Pineapple weed (*Matricaria matricariodes*) was the most common weed found across the area

Figure 2-6 Pineapple weed

2.3.3 Other points

Some long-established fairy rings were noted as shown in Figure 2-5. This disease, created by a fungus, is very common in old amenity grassland and pasture. There are different kinds of fungus forming such rings and these have varying degrees of impact on the turf. The effects are brought about chiefly by the water repellence which the fungus imparts to the soil and thereby prevents the grass from absorbing sufficient moisture. The consequences therefore tend to be most apparent in late summer when the soils generally are at their driest.

Figure 2-7 Fairy rings

There was some evidence of locally reduced growth of grass. This may be due to a variety of causes, uneven fertiliser distribution being one possible cause. The issue is unlikely to be persistent, however, and is readily resolved with subsequent fertiliser applications.

Figure 2-8 Yellow grass

2.4 Soil conditions

An excavation was carried out to determine the topsoil conditions. The soil was very compacted, and it was hard to hand excavate beyond 200 mm due to the nature of materials, a great deal of landfill with stones, bricks, etc.

The topsoil was of a generally silty texture and soil structure was poor.

Figure 2-9 Topsoil

3 THE IMPACT OF THE EVENT

The event is likely to affect the grass coverage by:

- Occlusion of sunlight
- Prevention of gaseous exchange across leaf surfaces
- Direct footfall damage and compaction

The occlusion of sunlight alone is unlikely to bring about any long-lasting damage in areas affected solely by this. The grass should recover over a week or two after being in darkness for 15 days although it will become very pale and weak for this period.

The direct connection between ground protection units and the grass prevents gases from moving in and out of the leaves and this brings about the death of grass quite rapidly. Most ground protection units are designed to minimise the area beneath them that is in direct contact with the surface but some such areas are of course essential and so the phenomenon cannot be avoided.

Direct footfall occurs to varying degrees depending now many people and how often they pass over particular areas. This variability is usually reflected in the consequences for the turf. In addition to the direct abrasion caused to the grass, the human foot is able to achieve a very considerable degree of compaction to the soil. That compaction is made very significantly worse if ground conditions are wet at the time of the event.

Figure 3-1 Different kind of damage caused by events. Damage caused by tracks (left) preventing gaseous exchange, structures and tents (middle) occluding light, and footfall (right, a grass protected area surrounded by footfall) wearing and compacting the turf

Likely areas to be affected by these various processes during the Moonwalk event are suggested in Figure 3-2.

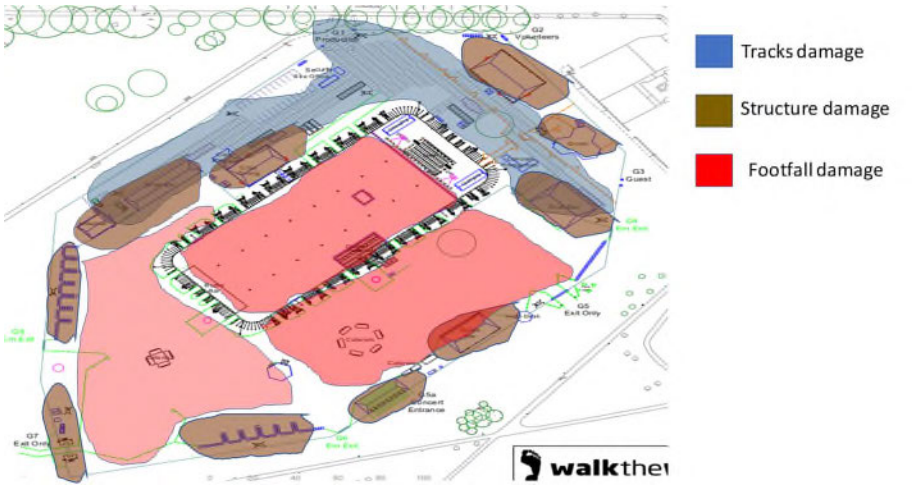

Figure 3-2 Likely areas with different kind of damage to the grass cover

4 PRE-EVENT RECOMMENDATIONS

The intention during the growing season should be to strengthen the grass cover so that as much of the site as possible is able to withstand the rigours of the Moonwalk event.

4.1 Fertiliser

Start the growing season in mid March with an application of a 12:6:6 granular fertiliser. These are widely available and a stock should be obtained for occasional stimulation of growth during the growing season when necessary. Apply at 35 to 50 g/m^2.

Repeat this application in late April at 35 g/m^2. This will stimulate a great deal of grass growth which will need to be controlled by regular and frequent mowing throughout May and into June.

4.2 Aeration

Verti-drain the site in early spring, before ground conditions become too hard to allow adequate penetration with the machine. Use the largest available tines, preferably new ones with the machine set to achieve maximum heave. Reduce forward speed to achieve the greatest density of perforation. Ground conditions must be sufficiently firm to allow this but surface disruption may be corrected if necessary by carrying out a light rolling afterwards.

5 GROUND PROTECTION RECOMMENDATIONS

There are many companies providing temporary ground protection systems. The most important areas to protect are those that are to be used for vehicular access routes. No heavy vehicles at all should be permitted to drive over un-protected grass surfaces. In the event of heavy rain, this will become a critical factor in the avoidance of excessive surface damage.

Ground protection systems that allow as much gaseous exchange to take place so that the grass can ‘breathe’ will be most able to reduce the extent of total ground cover loss that will otherwise be experienced beneath such structures.

On no accuount must loose materials, such as bark chippings, be applied to the grass surface. If they are to be used for any purpose the grass surface must be protected with a suitable geotextile and, at the end of the event, all such materials must be removed entirely.

6 ANTICIPATED RENOVATION REQUIREMENTS

The area will require over-seeding to varying degrees after the event. That over-seeding would most effectively be timed to take place in August, late July at the earliest. The reason for this is that the newly sown seed will require a good deal of regular irrigation in order to germinate and establish successfully. Providing adequate irrigation, which would require the use of a bowser there being no pressurised system available on site, would be costly and inefficient. Rainfall cannot be relied upon and there is the risk that grass seed sown in, say late June, could be made to germinate by a heavy rainstorm for example and thereafter be met with a lengthy hot period with no rain. This would most likely kill all of the young seedlings which will have a requirement for very regular watering. In August, the heat has tended to go out of the sun, day length is shorter and there is a much greater likelihood of rain. Usually, grass seed sown in August needs no irrigation at all to achieve a fully successful establishment.

All areas to be overseeded will require the application of a pre-seeding fertiliser. These are typically of a balanced N:P:K composition, for example 7:7:7.

A 'triage' system of over-seeding should be anticipated. The disc seeder used for the purpose should be set to deliver seed at a rate of around 18 g/m^2 with a single pass. Totally bare areas will therefore require 3 passes made at varying angles to one another achieving a net over-seeding rate of 54 g/m^2. This is likely to be required in the most heavily worn areas in front of stages for example.

Trackways may retain some ground cover and so just 2 passes might be necessary over these areas, delivering seed at 36 g/m^2, still a reasonably generous rate.

Areas that have been merely shaded and will have thinned and discoloured a little as a result are likely to recover with just one pass of the over-seeder, delivering seed at 18 g/m^2.

The developing sward would benefit from the application about 4 weeks after sowing when a reasonable ground cover has been re-established of a granular fertiliser containing around 12 % nitrogen as applied during the period leading up to the event.

Aeration will again be required to relieve compaction brought about by the pedestrian activity. The delicacy of the developing grass seed would make these areas unsuitable for verti-draining until a substantial ground cover has been achieved, probably by October at the earliest. In any case, the ground is likely to be too hard to allow the adequate penetration of the machine before November.

The most effective approach would be to review the condition of the site once more some three or four weeks following the Event to determine the nature and extent of any renovation works that may be required. Note that, apart from the resumption of mowing, there are no operations that would be appropriate or effective to be carried out during the weeks immediately following the Event.

In conclusion;

- It is unlikely that the Event will have any consequences for the ground cover of the Park that cannot be fully rectified within the growing season.

- Pre-preparation works as fertilising and verti-draining areas of high footfall will be beneficial before the event
- A review of the site to determine appropriate renovation works would be appropriate during the weeks following.

Signed:

I
Consultant
Agrostis Sports Surface Consulting

23 August 2019