Planners thoughts (written before the event)

I hope Epsom Downs will prove a good area for a night score; I think it's one of the areas that's technically better at night than in the day. The fast runnable grassland can get a bit boring when you can see for miles, but at night the extra speed gives you the opportunity to get more lost more quickly. I put the bulk of the controls in copses, with the idea of forcing you to slow down and navigate carefully into the controls.

I like to use interesting control sites where possible; the Coal Tax posts are a distinctive feature of the area, and have the added bonus of being easy to spot at night once you have reached the centre of the circle, so I used as many of those as possible. And I couldn't resist the tunnel or the cave; I doubt many people will go to the cave, but I expect everyone will punch the tunnel.

Once I'd sprinkled controls evenly over the map, the optimum "purple line" distance came out at 8.28km. I do like a score course to be long enough to keep the likely fastest KNC competitor – I'm thinking Nick Barrable here – in doubt about whether they can achieve the maximum score; in this area I was looking for a speed of about 6.5mins/km, which translates to 9.2km.

So I needed to do something to make the course longer. KNC convention is to divide the controls into two sets to be visited consecutively, but I prefer to avoid making people run around the same area twice if possible. I also wanted to slant the scoring a little in favour of the slower competitors. Hence my decision to use several "dumbbells", which I tried to arrange so that they made they made people looking to visit all the controls run farther, while fitting a natural loop for people wanting a shorter course.

The other problem was what to do about U16 juniors who are not permitted to cross busy roads. I could have squeezed the whole event onto the racecourse, but I wanted to use the golf course too. I could just have banned U16's from the event. I could have allowed them to compete but banned them from visiting the controls on the golf course.

The last option seemed best, but not if it meant they were unfairly deprived of the chance to get a high score. Hence my decision to give bonus points to U16's visiting all the permitted controls and still finishing well early. The bonus rate is calculated on the idea that 20 controls in 60 minutes is 3 controls per minute, so if an U16 gets all their controls and finishes more than 3 minutes early, it seems reasonable to assume that would have got 1 more control if allowed. Or 2 for 6 minutes, and so on. Since they were prevented from seeking 6 points (5 controls and 1 dumbbell), I capped the potential bonus at 6 points (42 minutes early). I hope this will be fair to everybody.

My final decision was to put the Start and the Finish in exactly the same place. I'm hoping this will lead to fairly equal numbers going clockwise and anti-clockwise, rather than the mass doing variations of the same loop.

My ideas for routes (all of them work equally well in both directions), distance quoted is the (impractical) straight line between controls:

- all controls but ignoring dumbbells: 15-14-12-3-10-8-1-7-9-2-4-11-13-5-20-18-16-17-19-6;
  20 controls, 0 dumbbells, 8.28km, 20 points, 2.42 points per km

- all controls and dumbbells: 15-14-12-4-3-10-8-1-2-7-9-11-13-5-6-17-16-18-20-19;
  20 controls, 4 dumbbells, 9.33km, 24 points, 2.57 points per km

- all U16 controls, ignoring dumbbells (but actually getting one "by accident"): 15-14-12-3-10-8-1-7-9-2-4-11-13-5-6;
  15 controls, 1 dumbbell, 6.22km, 16 points, 2.57 points per km

- all U16 controls and dumbbells: 15-14-12-4-3-10-8-1-2-7-9-11-13-5-6;
  15 controls, 3 dumbbells, 6.79km, 18 points, 2.65 points per km

- a good short route: 15-12-4-3-1-2-11-5-6;
  9 controls, 3 dumbbells, 3.88km, 12 points, 3.09 points per km