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ENVIRONMENTAL NOISE ASSESSMENT
FOR PADEL TENNIS COURTS
AT LOWER FARM, ROWDE

Prepared for

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1. INTRODUCTION

An environmental noise survey has been conducted to assess the effect of the proposed new padel tennis courts at Lower Farm, Devizes Road, Rowde on the nearby residential areas.

A planning application has been submitted by Rowdey Cow Ltd to Wiltshire Council, to demolish an existing open plan storage area and replace it with a new agricultural storage building with 2 padel tennis courts inside.

The survey was conducted on the 17th February 2026 and the results are presented in this report. The survey covers background noise measurements around the area and padel tennis noise predictions, based on data measured by the Author of this report at other padel tennis courts in Southern England. These courts included Roehampton, Bournemouth, Kings Somborne, Winchester and Oxshott, and the data is included to show how much padel tennis noise can vary depending on circumstances such number of players, intensity of games, presence of reflecting walls etc. The measurements at these other padel courts are described in some detail in this report, in order for the reader to fully understand the manner in which the data was aquired.

2. SITE DESCRIPTION

Figure 1 shows the general layout of Lower Farm in Devizes Road, not far from Rowde village centre. The farm is accessed by a tarmac track approximately 200 metres long, with the nearest residential properties alongside the main road to the south west and in Conscience Lane to the north west. There are a large number of farm buildings at the end of the access track, some of which are used for agricultural reasons by the farm, whilst others are rented out for commercial reasons.

The site application boundary for the proposed padel tennis building is shown in the diagram, and the farm complex includes an on site café, a children's play area, farm animal viewing areas, a large car park, a fresh milk machine, and the farm house to the rear. One of the buildings near the car park may be used by an organisation providing mentoring for children's special needs skills. (see figure 1).

Figure 2 shows the storage area in plan view, where the proposed padel court building is intended to be located, and figure 3 shows the completed building in ground floor plan view, together with the 2 internal padel courts plus toilets and shower facilities. The building will have a roller shutter door at the front, which will remain closed. Access to the padel courts will be via a side door.

The new barn has approximate size 27m by 23m, with height to eaves of 7m and height to apex of 10m. It is due to be constructed of plastisol coated vertical profiled insulated composite panels for the 4 walls and roof. The whole area is relatively flat and figure 4 shows the various distances from the new barn to the residential areas of interest in the north west to south east directions. Any residential areas to the north and north east will receive acoustic shielding from the existing farm buildings, and hence are not of concern.

3. PADEL TENNIS NOISE CHARACTERISTICS

Padel tennis is essentially a cross between tennis and squash using hard bats and softer balls with the balls bouncing off glass walls. Each padel court has a size of 20m by 10m and is marked out like a standard tennis court, although smaller in size than a tennis court. There is a 3m high transparent glass wall at each end of the court and partly along the sides. Some courts at tennis clubs around the country have a form of roof canopy, which allows the courts to be described as all-weather use and producing less noise, but the latter claim is disputed, as the cover of white translucent PVC is highly unlikely to provide any acoustic benefit. Some other courts subject to

objections from residential gardens in the immediate vicinity, are considering enclosing their padel courts in purpose built buildings.

Some consultants claim that the character of padel tennis noise is not dissimilar from normal tennis noise, that the frequency contents are similar, and that the impacts from padel bat and ball are quieter than tennis bat and ball. This statement is considered to be incorrect and not supported by other consultants including the Author of this report. It is also not supported by local residents at many clubs, as otherwise there would be a lot less complaints and objections to new padel court applications. Frequency content is important and, where low frequency noise tends to dominate, low frequency impacts are attenuated less with distance than mid and high frequency impacts. Consequently, it is important that potential new padel courts are assessed properly in order not to upset local residents.

The approach adopted in this report for assessing padel court noise is to compare the measured or predicted padel tennis Leq noise levels with the existing L90 background noise environment. Consequently, it is important to take into account any variation in source noise levels that have been experienced at other courts.

4. MEASUREMENT PROCEDURE

4.1 Background Noise Measurements

The background noise measurements at Rowde involved 5 freefield measurement positions as shown in figures 1 and 4. Figure 1 shows positions 1 and 2, whilst figure 4 shows positions 3-5 including distances to the local residential areas. Position 1 was located in the front garden of the farm house at Lower Farm. Since this property is owned by the client/applicant, it is not a reception point of concern, but it was useful to see how the background noise levels varied well away from the main Devizes Road.

Position 2 was located outside the office being used by the mental health assistance group (check). This could be a reception point of interest, but it is well shielded from the proposed padel courts by several agricultural buildings on route.

Position 3 was located alongside the Buena Vista house in Devizes Road. It was basically a pavement location, unfortunately, next to the main road, as access was not possible to any of the gardens. The road was extremely busy, however, with approximately 45 vehicle passbys per 5 minute period, so that padel tennis noise would not be an issue for houses close to the road.

Position 4 was located alongside Buena Vista in a bungalow estate off Conscience Lane, to the north west of the farm, and position 5 was located on a farm track to the south of the farm, in an attempt to move away from Devizes Road. Position 5 basically covered the rear garden area of Lakeside House, which also contains a fishing lake etc (check). The other potential residential area would have been the few houses (21-26 Devizes Road) at the junction of Conscience Lane and Devizes Road, but this would have been another noisy pavement type location, and access was not possible to rear gardens.

The background noise data was acquired in the form of the Leq, L10, L50, L90 and Lmax levels over 10 minute measurement periods during the morning period of 10am to midday. The measurement equipment consisted of a CEL 593C Precision Computing Sound Level Meter and the weather conditions were sunny/cloudy with no wind or a slight breeze.

4.2 Padel Tennis Measurements at Roehampton

As already indicated in section 1, the Author of this report visited Roehampton to obtain some padel tennis noise data. The site visit took place during the early evening period of 13.7.23.

Access permission was kindly given by the padel test manager, but only for the early evening session as a corporate event was taking place earlier in the day and there were no court bookings until 6pm. Data was acquired at 2 locations around the semi enclosed padel court with a canvas roof canopy.

Since the court was surrounded on 2 sides by the 4m high brick walls and the club house on a third side, the choice of measurement positions was limited. Position X was located 1.4m from the glass screen at the end of the court, and position Y was located 1m from the side of the court in line with court net (see figure 5). Whilst position X was 2.3m from the adjacent brick wall and hence was a freefield location, position Y was only 0.8m from the adjacent brick wall and hence was effectively a façade position. Both positions, however, are likely to be affected by acoustic reflections off the brick walls and the clubhouse walls.

There was only minor activity at the other padel court, so the measurements had to be conducted at semi enclosed padel court with its reflection complications.

Data was obtained in the form of consecutive 1 minute Leq and Lmax levels over short periods at each position. The padel tennis activity consisted of 4 male players on court, with hard fought games involving much ball lobbing and smashing. Several sets of data were obtained over periods of 3-10 minutes with the first 3 minute period being a game warm up session.

Weather conditions were cloudy with a slight breeze initially, but then rain arrived and the measurement session had to be terminated around 6.45pm. There was no interference from aircraft noise movements related to nearby Heathrow Airport, but owing to the weather problems, site attendance was limited to an approximate 30 minute period.

4.3 Padel Tennis Measurements at Bournemouth

The first site visit to the Bournemouth tennis club took place in January 2020, when measurements took place alongside an existing padel tennis court and in neighbouring residential gardens. A friendly game was taking place between 4 players.

The second site visit to the Bournemouth club took place September 2020 during a padel tennis tournament for experienced players. Similar measurement positions were used for both site visits and, since the measured Leq and Lmax values were similar to the first visit, only the second site visit data is presented in this report. The first site visit, however, included some frequency content measurements in the form of 1/1 octave band Leq levels at one position, and this data is reproduced in this report. The Bournemouth tennis club had one padel tennis club, but was seeking to build some more padel courts, hence the need to assess the situation on behalf of the local residents.

Several measurement positions were selected at Bournemouth site, in order to cover the gardens of concern, but the most important one was a road pavement position to the side of the padel court, at a mid court location near to the net (see figure 6). Unfortunately, a 1.7m high non acoustic timber fence was located between the padel court and the pavement, which complicated the assessment situation, but it was not possible to choose a location on the other side of the padel court, owing to normal tennis use. Similarly it was not possible to conduct meaningful measurements at either end of the court, owing to access problems and traffic noise interference.

On the other hand the boundary fence was useful, because it enabled data to be obtained without the problem of being observed by the players. The pavement location was about 7m from the court side glass panel, or 12m from the centre of the court.

The measurement equipment again consisted of a CEL 593C Precision Computing Sound Level meter, set to record data in the form of consecutive 1 minute Leq and Lmax levels over long

periods. This approach was adopted partly to see how the padel tennis varied, and partly to see the effect of passing vehicles. Weather conditions were cloudy with a slight breeze.

4.4 Padel Tennis Measurements at Kings Somborne

The single padel tennis court at Kings Somborne, near Stockbridge is privately owned, but permission was given for a site visit in early February 2024. Six players were on court initially, including an instructor, who proceeded to rotate the players around after each game. Two measurement positions were selected, with position A along the side of the court at 1m distance and position B at the end of the court, also 1m distance (see figure 7).

The court was open on 2 sides, apart from the glass screen, with a 4.3m high building facade at the rear end of the court and a 1.3m wall, plus 1.5m garden fence on top, on the remaining side. It had been intended to conduct some measurements either side of the wall/fence combination, to see what acoustic attenuation might be forthcoming, but play terminated earlier than expected.

Data was acquired in the form of 1 minute Leq and Lmax levels over an approximate 20 minute session. The weather conditions were cloudy with no wind.

4.5 Padel Tennis Measurements at Winchester

The Winchester Racquets & Fitness Club has 3 padel tennis courts and a site visit was made in early February 2024, again with access permission from the club management. Measurements were conducted at 5 locations around the courts, with different standard of play taking place on all 3 courts. The 3 courts are located in line with each other, open on the 2 sides, but with a club building opposite one end and a disused care home opposite the other end (see figure 8).

Position C was located 3m from the end of court A, position D at 3m from court B, and position E 3m from court C. All 3 positions were at the end of the respective courts. Positions F and G were located at the side of court C at distances of 1m and 3m from the court wire surround.

All 3 courts were in use, mainly with 4 players on each court, but not necessarily at the same game intensity, hence the opportunity to measure alongside courts A to C in turn. In the case of the position 5 measurements, two experienced players were just hammering the ball backwards and forwards across the net in court C.

Data was acquired in the form of 1 minute Leq and Lmax levels over an approximate 1 hour session. The weather conditions were cloudy with no wind.

4.6 Padel Tennis Measurements at Oxshott

The Oxshott Sports Tennis Club has 2 padel tennis courts, and an evening site visit was made in October 2023 to measure the noise levels from the court nearest to the residential properties in Steel's Lane. Permission to conduct measurements close to the courts was refused by the club management, and so it was necessary to choose 2 measurement positions on a public footpath behind a Leylandii hedge at one end of the court. Another position was located in the rear garden of one of the residential properties.

Three freefield measurement positions were selected as shown in figure 9, with positions J and L alongside the north western and north eastern ends of the padel court respectively, and position K in the residential garden, with kind permission of the owner.

Owing to the darkness and not being permitted access to the court area, it was difficult to judge the distances from the court edge to positions J and K. The distance between positions J and K was estimated at approximately 20m and, from observations on site, the hedge was believed to be about 2m thick with a further 2.5m gap to the end wire fence of the nearest padel tennis court.

Thus positions J and L were about 4.5m from the end of the court and position K was about 24.5m from the end of the court.

Data was obtained in the form of consecutive 1 minute Leq and Lmax levels over periods of 10-30 minutes at each position. Two CEL 593C Precision Computing Sound Level Meters were used, so that it was possible to conduct measurements at 2 locations simultaneously. Despite the evening darkness and the thick hedge, it was possible to determine that 2 players were using the padel court initially, followed by 4 players later on. It was not possible, however, to determine how many breaks were taken between games or what sort of warm up periods were taking place.

Weather conditions were cloudy with no wind. There was some minor interference from aircraft noise movements related to nearby Heathrow Airport.

5. RESULTS

A considerable amount of 1 minute Leq and Lmax noise data was collected at the various padel tennis courts, and it is not intended to present this measurement data in great detail in this report. Instead, the data is summarised in terms of the cumulative Leq levels and Lmax values per court location, and then compared between courts in section 6, so that the overall variability of padel tennis noise can be assessed. Whilst the data at each position was measured in 1 minute intervals, and hence contains all the rise and fall in noise levels during the monitoring period, the sound level meter also provides the cumulative Leq value over the total measurement period.

Leq is essentially the average noise level of a time varying signal. It is used to assess and compare different noise sources, and involves specifying the time period over which the signal was measured. In contrast L90 is the noise level occurring for 90% of the time and represents the troughs of the time varying signal, so the L90 level is usually much lower than the Leq level. Lmax level is the highest noise level in the measurement time period.

5.1 Background Measurements

Table 1 provides the background noise levels at Rowde for the 10 minute measurement periods. The late morning background noise environment well away from Devizes Road generally consisted of birdsong, distant road traffic and the occasional aircraft activity. Other noise sources consisted of children playing, farmyard animal noise (donkeys), and plant noise from the fresh milk machine (position 2) and air conditioning units (position 1).

Levels of 41-50 dBA Leq (10 minutes) and 34-42 dBA L90 (10 minutes) were obtained at positions 1-2 and 4-5. Position 3 next to Buena Vista in Devizes Road recorded much higher levels of 72 dBA Leq (10 minutes) and 47 dBA L90 (10 minutes) owing to its proximity to passing vehicles.

Although not measured, the 21-26 Devizes Road location would have experienced slightly lower levels than position 3 at Buena Vista, owing to its greater distance from Devizes Road.

5.2 Padel Tennis Measurements at Roehampton

The padel tennis activity was very audible and measurable and consisted mainly of the bat thumping the ball and the players shouting to each other. There were several occasions when the ball thumped the glass walls of the court, particularly during the overhead smash impact. The side of court noise levels were generally higher than the end of court noise levels.

As will become clearer in the next sections, the data measured at the Roehampton club shows much higher noise levels than the data measured at padel tennis clubs. The reason for this is not entirely clear.

The presence of the brick walls etc will clearly lead to an increase in noise level from acoustic reflections, which in the case of a façade location next to one wall would be expected to produce a 3dBA increase. With 3 walls and the glass sides of the court, there are likely to be multiple reflections, however, which could mean a 6 dBA difference maybe.

5.3 Padel Tennis Measurements at Bournemouth

The padel tennis activity was clearly audible and measurable and consisted mainly of the bat thumping the ball and the players shouting to each other. There were very few occasions when the ball thumped the glass walls of the court, although ball lobbying/overhead smashing was not part of the game process, unlike the Roehampton visit.

During the measurements at Bournemouth, the opportunity was taken to listen to the impacts from the court for a short period of time. It was noted that, out of approximately 105 impacts, 90 impacts were due to the racket hitting the ball, 12 impacts were due to the ball hitting the glass screen and 3 impacts were from the ball hitting the court wire fence. Whilst it was not possible to see the impacts and confirm the numbers (owing to the timber fence), the listening tests were sufficient to indicate that most of the noise at Bournemouth was caused by the racket hitting the ball. This is important because it suggests that mitigation measures such as an acoustic fence around the outside of the court may not be effective, because the glass screen could already be acting as an acoustic fence

Obviously, the acoustic attenuation of the glass screen will depend on its mass/unit area and height, and the fact that the screen has gaps and does not go all the way round the court. It is worth noting, however, that approximately 11% of shots rebound from the glass walls and so would not be attenuated by the walls themselves.

Table 2 shows the frequency content of the padel tennis measured over several minutes at Bournemouth in the form of unweighted 1/1 octave band Leq value between 31.5 Hz and 8000 Hz for the pavement position. The frequency content tends to peak in the low to mid frequency bands, showing that low/mid frequency noise is an important characteristic of padel tennis noise.

5.4 Padel Tennis Measurements at Somborne

The padel tennis consisted mainly of bat and ball impacts, together with talking/shouting from the instructor. The instructor was present on court and rotated the players around after each game.

5.5 Padel Tennis Measurements at Winchester

With 3 padel tennis courts in action, the various measurement positions monitored a variety of scenarios in terms of game intensity and player ability. All 3 courts were in use, mainly with 4 players on each court, but not necessarily at the same game intensity, hence the opportunity to measure alongside courts A to C in turn. The highest Leq and Lmax levels tended to occur for the position 5 data, where the two experienced players were just hammering the ball backwards and forwards across the net in court C.

5.6 Padel Tennis Measurements at Oxshott

As previously noted, the darkness, hedge screening, and lack of court side permission made it difficult to observe the playing activity. The padel tennis was clearly audible and measurable, however, and several sets of data were obtained during normal playing activity.

6. DISCUSSION OF RESULTS

6.1 Padel Tennis Data

Five sets of padel tennis measurements have been covered in this report, based on the data previously acquired at Roehampton, Bournemouth, Somborne, Winchester and Oxshott by the Author.

The Roehampton data produced levels of 68 dBA Leq (17 minutes) and 80-92 dBA Lmax at a distance of approximately 1m from the end of the court, and levels of 72 dBA Leq (8 minutes) and 89-93 dBA Lmax at a distance of 1m from the side of the court. As previously noted, however, there was the potential for multiple reflections owing to the presence of the glass sides and the high brick walls on 3 sides of the court.

The Bournemouth data produced levels of 50-59 dBA Leq (1 minute), or 55 dBA Leq when averaged over 34 minutes, and Lmax levels of 60 to 79 dBA, at a distance of 7m to the side of the court. Using the 20 log d1/d2 relationship from the centre of the court, this level becomes 61 dBA Leq (34 minutes) for a distance of 1m from the side of the court. The corresponding Lmax levels become 66-85 dBA. There were no measurements at the end of the court.

The Somborne data produced a level 66 dBA Leq (1 minute) when averaged over 23 minutes, and Lmax levels of 71-89 dBA, at a distance of 1m to the side of the court. At a distance of 1m from the end of the court the Leq level was 54 dBA when averaged over 15 minutes. The corresponding Lmax levels were 60-83 dBA.

The Winchester data for positions C to E, produced a combined level of 53 dBA Leq (1 minute) when averaged over 33 minutes, and Lmax values of 60-82 dBA, at a distance of 1m from the end of the court.

To the side of the court the cumulative levels were 60.5 dBA Leq (1 minute) at 1m distance during normal padel tennis play, and 63.7 dBA Leq (1 minute) at 3m distance during the ball hammering activity. The corresponding Lmax values were 77-82 dBA. Correcting the 3m distance data to 1m distance using a 20 log d1/d2 distance relationship from the centre of the court, gives levels of 66 dBA Leq (1 minute) and 79-84 dBA Lmax. Combining the 2 sets of 1m distance data gives values 62.1 dBA Leq (1 minute) and 77-84 dBA Lmax.

The Oxshott data for positions J and L was assessed for games with 2 players and 4 players. In the case of 2 players on court, position 1 had a cumulative value of 50.1 dBA Leq for a 22 minute period. In the case of 4 players on court, position 1 had cumulative values of 50.7 dBA for 17 minutes and 51.6 dBA Leq for the next 9 minute period. Position 3 had a cumulative value of 49.4 dBA Leq for 13 minutes.

Whilst hedges are not normally expected to provide much noise attenuation, if any, the Leylandii hedge is very thick and mature. Technical literature indicates that 3-5 dBA attenuation may be possible in this case. Thus the padel tennis noise levels without the hedge attenuation could be approximately 4 dBA higher than those measured. The various levels can be corrected to 1m distance after first correcting the 4.5m distance values to 1m distance, using the 20 log (d1/d2) relationship from the centre of the court, as well as excluding the hedge attenuation

Comparing all 5 sets of data, table 3 shows the various values for the 2 locations of 1m from the end of the court and 1m from the side of the court, with a 6 dBA reduction being applied to the Roehampton data to account for the multiple acoustic reflection issue. Clearly there is a wide spread of data, with data from Roehampton being higher than the other sets of data at comparable distances from the padel court. On the other hand, the 2 sets of data for Somborne and Winchester are fairly similar.

Table 4 compares the Lmax values from the 5 sets of data. Again there is a wide spread of data, with the data from Roehampton (including the 6 dBA reduction for reflection), whilst the Somborne and Winchester data are again similar. There are various possible reasons for these differences.

Firstly the Bournemouth data included acoustic screening from the standard timber fence between the court complex and the pavement. This might be expected to give some attenuation (maybe 3-5 dBA), particularly near the centre of the court where there are no glass sides, although standard timber fences are not as effective as acoustic fences. Secondly the Roehampton data was subject to multiple reflections off the surrounding walls

Thirdly and most importantly, the padel tennis games measured at Roehampton included much ball lobbing and ball overhead smashing, plus rebounds of the end glass walls sometimes resulting in the ball reaching the other side of the court without touching the ground.

It is not just the absolute level of padel tennis noise or the increase in level relative to background noise, however, since the impulsive and frequency characteristics of the racket/ ball impact are also important. As noted earlier the frequency content tends to peak in the low/mid frequency region, and low frequency noise is attenuated less with distance than high frequency noise.

6.2 Padel Tennis Predictions for Lower Farm

Based on the measured levels of tables of tables 3 and 4 from 5 different padel court locations, it is possible to determine an average level, or a range of levels, at distances of 1m from the court edges. This information can then be used to predict the padel tennis noise at other distances around Lower Farm for comparison with the measured background noise levels.

Using the 20 log d1/d2 distance relationship where d is the distance from the centre of the court, table 5 shows the average predicted freefield Leq noise levels, over an averaged time period, at the residential areas of interest for one padel tennis court in operation. The predicted Leq levels vary between 28 and 42 dBA depending on reception point. Table 6 shows the average predicted freefield Lmax noise levels for one padel court in operation, with levels varying between 42 and 56 dBA.

Both tables show the predicted levels based on the end of court data and the side of court data, although each reception point will be receiving a contribution from the end of the court or the side of the court, depending on its orientation relative to the court layout. For example, position 5 near Lakeside House will mainly receive contributions from the end of court noise, whilst position 3 at Buena Vista will mainly receive contributions from the side of court noise. Since table 5 shows only small Leq differences between end of court predictions and side of court predictions, it does not matter whether the end of court or side of court data is adopted for any given reception point.

The predicted values in tables 5 and 6 generally apply to the operation of only one padel court. With 2 padel courts in operation, the predicted noise levels could be a little higher than the values in tables 5 and 6, although it depends on the playing activities on both courts and the orientation of the reception points to both courts. Since 2 identical noise sources would normally be expected to have a total noise level 3 dBA higher than a single source, then the predicted levels might increase by up to 3 dBA with 2 courts in operation.

So far the predictions do not include the sound insulation benefits of the barn structure enclosing the 2 courts. Also the predictions do not include any acoustic shielding from other farm buildings on route between the courts and the reception points.

From a knowledge of the noise levels inside the new building and the attenuation characteristics of the walls and roof, it is possible to predict the noise levels at the reception points. The required formula is:-

$$\text{SPL}(d) = \text{SPL}(\text{rev}) + 10\log S/4 - \text{T.L.} - 10\log 2\pi d^2 \quad (1)$$

where S = area of intervening wall, d = distance from wall to nearest reception point, T.L. - transmission loss of wall and SPL (rev) = reverberant noise field inside building.

This formula only applies to noise levels external to adjacent properties. Further calculations and formulae apply for the transmission from outside to the inside of residential properties.

As the values vary with frequency, it is necessary to perform the calculation at octave band frequencies between 63 Hz and 4 kHz. Ideally this frequency range should include the 31.5 Hz and 8 kHz frequency bands, but textbook information on structural transmission loss values are often not available at these frequencies.

The walls and roof of the new single storey building are due to be constructed of 0.7 mm single layer steel with some sort of fibre cement insulation. According to the building supplier/manufacturer, the 0.7mm thick panels without insulation have reasonable transmission loss characteristics, with the following values:-

1/1 octave freq	63	125	250	500	1k	2k	4k	8k
T.L. (dB)	10	13	15	22	24	24	30	32

When these are inserted into equation (1), together with the frequency content of table 2, adjusted for the particular dBA values assumed inside the barn, the predicted Leq values of table 5 should decrease by about 15 dBA, bearing in mind that the reverberant field inside the barn will be higher than the direct field, owing to reflections off the walls and roof. Barn attenuations of about 15 dBA will result in the predicted Leq noise levels being well below existing background L90 levels at all 5 reception points.

In addition some of the reception points will benefit from acoustic shielding by the other buildings on site, as noted in section 2.

The background noise environment was measured during a late morning period, but it should also be noted that late evening background noise levels are often lower than normal daytime levels. Consequently, the opening times and closing times of the padel courts can be important.

7. CONCLUDING REMARKS

Based on the visits to the various padel tennis courts in southern England, it is the Author's experience that padel tennis noise varies considerably in level depending on the number of players, the type of game, the intensity of the game, and the extent to which the glass sides are used during the game etc. To some extent padel tennis is a cross between tennis and squash, so it is not surprising that residents find padel tennis noisier than normal tennis. Hence the comments by residents about unacceptable noise levels from various padel tennis courts around the country.

Some consultancy companies claim that the character of sound from padel tennis is not dissimilar from normal tennis, on the grounds that whilst there are more impulsive impact sounds due to some impacts on the glass surrounds, the ball has a lower pressure and the impacts are quieter than the sound of a tennis racquet hitting a ball. This view is not supported by the Author of this report. Padel tennis noise has a more perceptible acoustic character (repetitive thuds), resulting in large differences between the Lmax and Leq noise levels and an under estimate of the potential disturbance impacts.

Fortunately, the assessment has shown that the installation of 2 padel tennis courts inside a new barn at Lower Farm should not be a problem for local residents. This result is due to the large distances between the new barn and the residential areas, and the acoustic shielding provided by the existing farm buildings.

Statement of Disclaimer

The Consultant cannot guarantee that the objectives of the investigation have been achieved, but every reasonable effort has been made to provide expert advice and measurement assistance during the investigation and preparation of the report, based on information made available by the client and the agent.

TABLE 1 – MEASURED BACKGROUND NOISE LEVELS (dBA)

Position	Period	Leq	L10	L50	L90	Lmax	Observations
1	10.10-10.20	46.7	47.5	42.5	41.5	63.6	Birdsong, air handling plant, distant road traffic
1	10.20-10.30	42.4	44.0	41.0	39.5	57.6	Birdsong, air handling plant, distant road traffic, 10.27 noisy donkey
2	10.36-10.46	48.4	50.0	43.5	39.5	75.4	Children playing, distant road traffic milk machine hum, 10.43 car arrival & parking, 10.44 noisy donkey
3	11.06-11.16	72.0	77.0	61.0	47.0	92.9	Road traffic
4	11.23-11.33	41.2	44.5	38.5	34.0	63.2	Distant road traffic, distant aircraft, 11.32 local car movement, car door bangs
5	11.45-11.55	49.5	52.5	48.0	40.5	65.1	Birdsong, distant road traffic, occasional aircraft

TABLE 2 MEASURED UNWEIGHTED 1/1 OCTAVE BAND LEQ LEVELS FOR BOURNEMOUTH PADEL TENNIS

Frequency	Position
c/s	B
31.5	61.0
63	58.3
125	53.2
250	53.5
500	51.8
1000	50.9
2000	45.7
4000	40.1
8000	33.8
dBA	54.5

TABLE 3 COMPARISON OF PADEL TENNIS LEQ NOISE LEVELS (dBA)

	<u>1 m from end of court</u>	<u>1m from side of court</u>
	Leq/minutes	Leq/minutes
Roehampton data	62dBA / 17 min	66 dBA / 8min
Bournemouth data	No data	61dBA / 34 min
Somborne data	54 dBA /15 min	66 dBA / 23 min
Winchester data	53 dBA / 33 min	62 dBA / 23 min
Oxshott data	57 dBA/48 min	No data

TABLE 4 COMPARISON OF PADEL TENNIS LMAX NOISE LEVELS (dBA)

	<u>1 m from end of court</u>	<u>1m from side of court</u>
	Lmax/minutes	Lmax/minutes
Roehampton data	74-86 dBA / 17 min	83-87 dBA / 8min
Bournemouth data	No data	66-85 dBA/ 34 min
Somborne data	60-83 dBA /15 min	71-89 dBA/ 23 min
Winchester Author data	60-82 dBA / 33 min	77-84 dBA / 23 min
Oxshott data	65-71 dBA/48 min	No data

TABLE 5 PREDICTED LEQ NOISE LEVELS AT RESIDENTIAL LOCATIONS (dBA)

	<u>Approx Distance (m)</u>	<u>End of court</u>	<u>Side of court</u>
		Leq/minutes	Leq/minutes
Farmhouse	100	39 dBA / 28 min	40 dBA / 17 min
SEND office	80	41 dBA / 28 min	42 dBA / 17 min
Buena Vista	227	32 dBA / 28 min	32 dBA / 17 min
Sandfield Tannis	362	28 dBA / 28 min	28 dBA / 17 min
Lakeside House	200	33 dBA / 28 min	34 dBA / 17 min
21-26 Devizes Rd	268	30 dBA / 28 min	33 dBA / 17 min

TABLE 6 PREDICTED LMAX NOISE LEVELS AT RESIDENTIAL LOCATIONS (dBA)

	<u>Distance (m)</u>	<u>End of court</u>	<u>Side of court</u>
		Lmax/minutes	Lmax/minutes
Farmhouse	100	54 dBA / 28 min	54 dBA / 17min
SEND office	80	56 dBA / 28 min	56 dBA / 17 min
Buena Vista	227	47 dBA / 28 min	46 dBA / 17 min
Sandfield Tannis	362	43 dBA / 28 min	42 dBA/ 17 min
Lakeside House	200	48 dBA / 28 min	48 dBA / 17 min
21-26 Devizes Rd	268	45 dBA/ 28 min	45 dBA / 17min

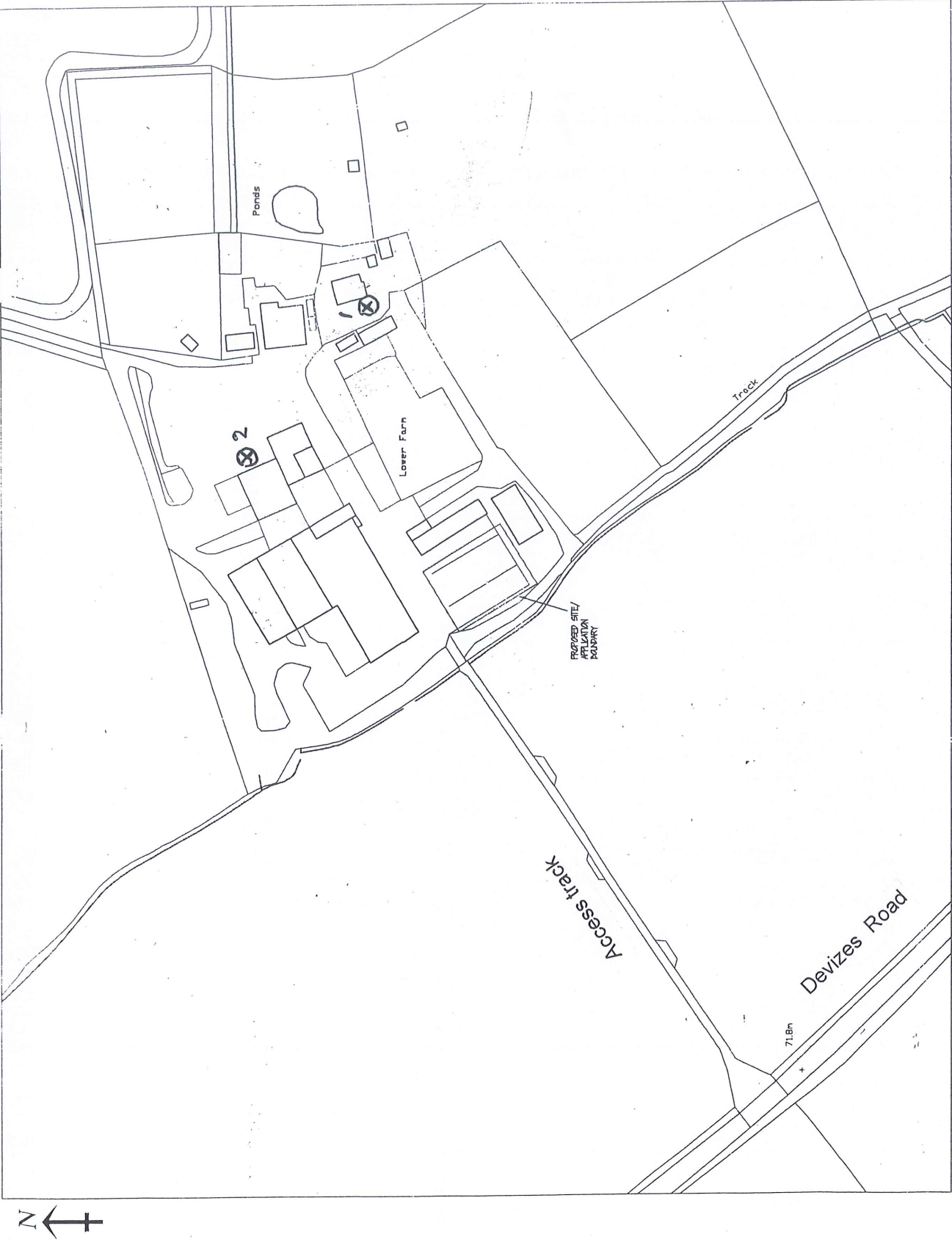


Figure 1 General Layout of Lower Farm & Location of Measurement Positions 1-2.

PARTY WALL
WHERE WORK INVOLVES ALTERATIONS TO A PARTY WALL OR WORKS CLOSE TO A PARTY WALL, IT IS THE OWNERS RESPONSIBILITY TO COMPLY WITH THE NECESSARY NOTICES ETC. REQUIRED BY THE PARTY WALL ACT 1996 NOTICES TO BE SERVED AT LEAST TWO MONTHS BEFORE WORK COMMENCES.

GENERAL NOTES
THE CONTRACTOR MUST COMPLY IN ALL RESPECTS WITH CURRENT BUILDING REGULATIONS & RELEVANT BUILDING STANDARDS & PRACTICE WHETHER SPECIFICALLY STATED ON THIS DRAWING OR NOT.

BEFORE THE START OF WORK ALL SITE MEASUREMENTS, ANGLES & LEVELS MUST BE CHECKED BY THE CONTRACTOR IN THE EVENT OF ANY INACCURACIES ON THIS DRAWING NO LIABILITY OR RESPONSIBILITY WILL BE ACCEPTED ONCE WORK HAS STARTED.

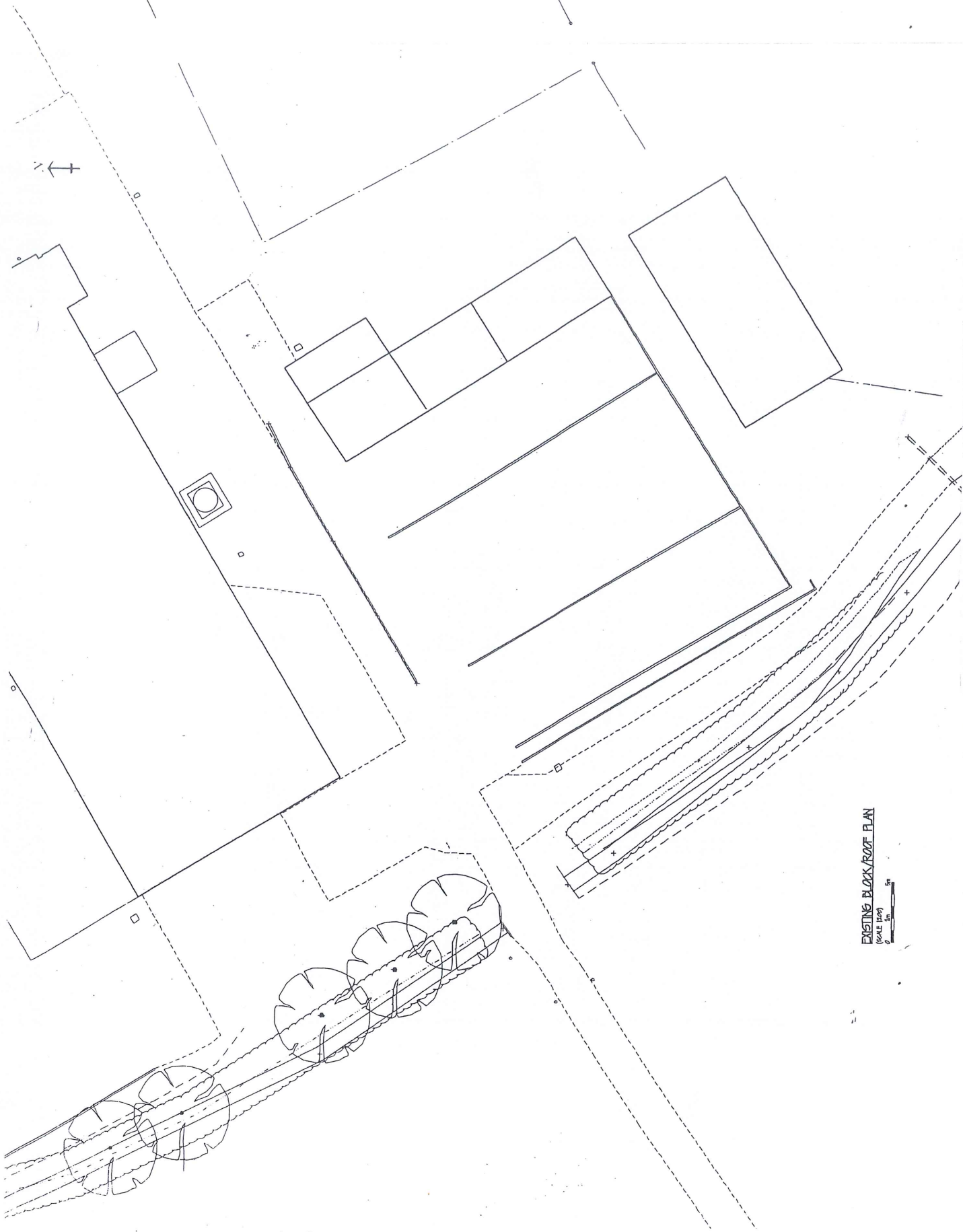
ONLY THE MATERIALS ON THIS DRAWING ARE TO BE USED. ANY SUBSTITUTIONS MUST BE OF A SIMILAR QUALITY & STANDARD AS THAT STATED. ALL MATERIALS ARE TO BE USED IN ACCORDANCE WITH MANUFACTURERS INSTRUCTIONS UNLESS OTHERWISE DIRECTED.

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TENDER
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SCALE 1:1250 @ A3

Client RONDEY CON LTD		Project LOWER FARM, DEVIZES ROAD, RONDE, DEVIZES, SNIZELX	
		Office 107, 11 The Bridge, Chippenham, SN15 1TY 01245 604000 www.acornarchitectural.com	
Title LOCATION PLAN		Dwg. No. 2488-01	Rev. P1
Date. OCT. 25			



EXISTING BLOCK/ROOF PLAN
(SCALE 1:100)

Figure 2 Proposed Location of Padel Court Building

PARTY WILL WHERE WORK INVOLVES ALTERATIONS TO A PARTY...
 GENERAL NOTES
 THE CONTRACTOR MUST COMPLY WITH ALL RELEVANT BUILDING STANDARDS & REGULATIONS...
 BEFORE THE START OF WORK ALL SITE...
 ONLY THE MATERIALS ON THIS DRAWING ARE TO BE USED...
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 THE CONTRACTOR IS TO ALLOW FOR ALL WORKS...
 FOR OBTAINING THE CLIENT'S PERMISSION...
 NECESSARY AND IT IS NOT CLEAR OR NOTED ON...
 THE CONTRACTOR'S TENDER. IT IS TO BE ASSURED THAT...
 OF WORK UNLESS THEY ARE SPECIFICALLY NOTED...
 STANGSON

SCALE 1:100 @ 1/2"	
Client	ROMNEY CON LTD
Project	LOWER FARM, DENIZES ROAD, ROMNEY, DENIZES, SHROPSHIRE
	
Title	
EXISTING BLOCK PLAN	
Date	Oct. 15
Rev.	1/1

PARTY WALL WHERE WORK INVOLVES ALTERATIONS TO A PARTY WALL OR WORKS CLOSE TO A BOUNDARY, IT IS THE OWNERS RESPONSIBILITY TO CLARIFY WITH THE NECESSARY NOTICES ETC. REQUIRED BY THE PARTY WALL ACT. 1996. NOTICES TO BE SERVED AT LEAST TWO MONTHS BEFORE WORK COMMENCES.

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BEFORE THE START OF WORK ALL SITE MEASUREMENTS, ANGLES & LEVELS MUST BE CHECKED BY THE CONTRACTOR IN THE EVENT OF ANY INACCURACIES ON THIS DRAWING NO LIABILITY OR RESPONSIBILITY WILL BE ACCEPTED ONCE WORK HAS STARTED.

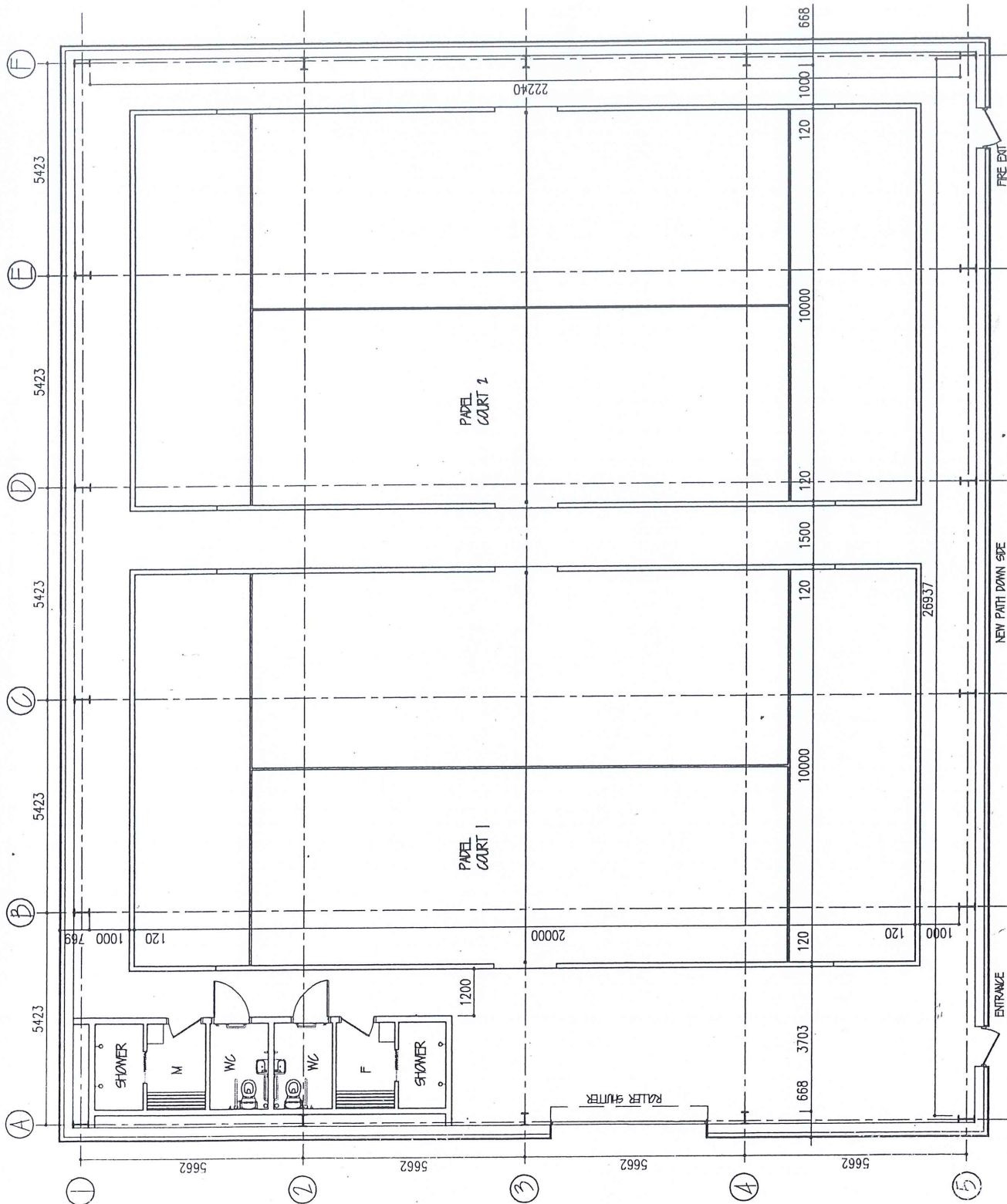
ONLY THE MATERIALS ON THIS DRAWING ARE TO BE USED. ANY SUBSTITUTIONS MUST BE OF A SIMILAR QUALITY & STANDARD AS THAT STATED. ALL MATERIALS ARE TO BE USED IN ACCORDANCE WITH MANUFACTURES INSTRUCTIONS UNLESS OTHERWISE DIRECTED.

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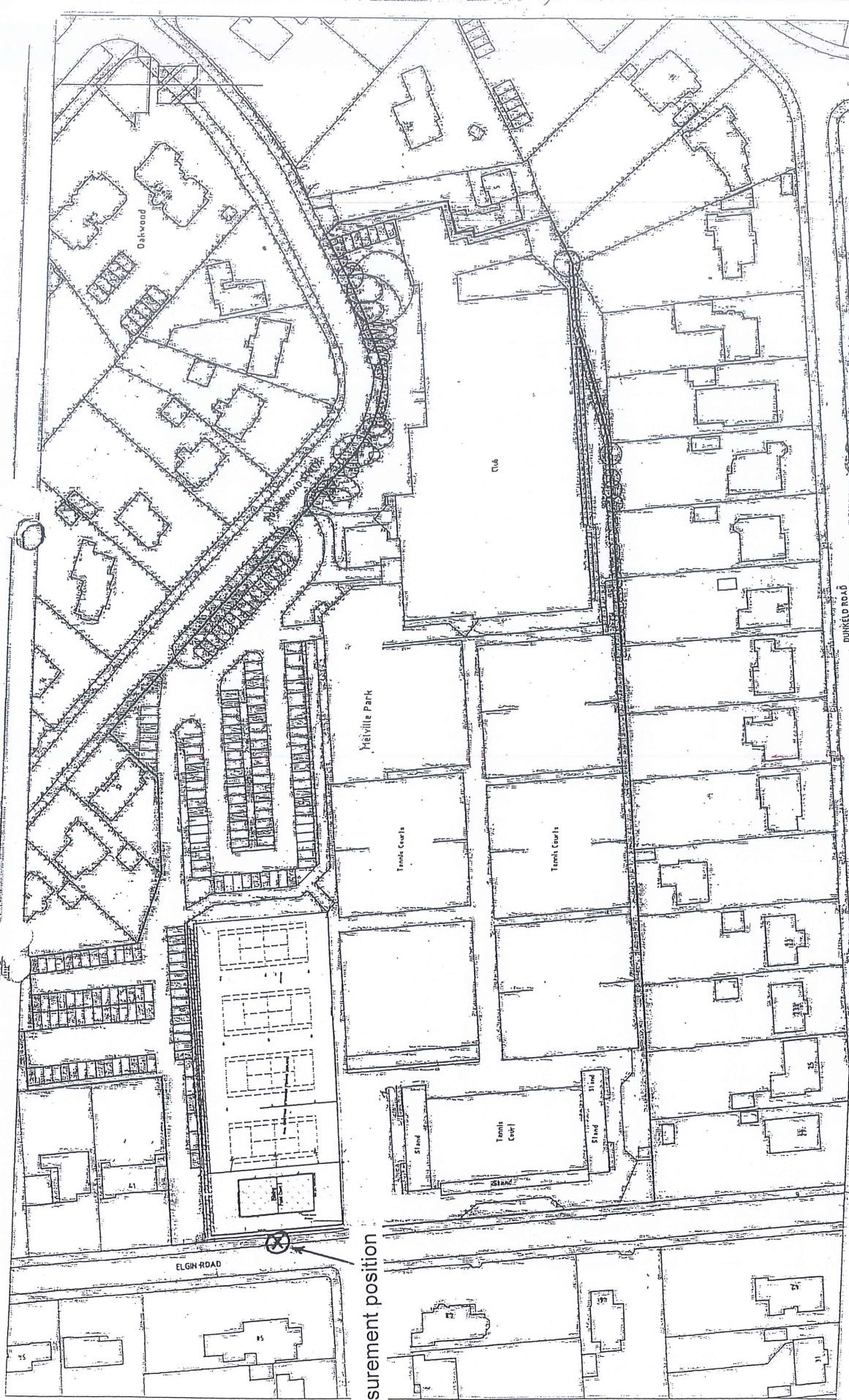
SCALE 1:100 @ A3

Client RONDEY CON LTD	Project LOWER FARM, DEVIZES ROAD, RONDE, DEVIZES, SNOWIX		 AGORN architectural 105, 8 The Bridge, Chigwell, Essex, SS81 1TY 02088 100000 www.agornarchitectural.com	Title PROPOSED GRAND FLOOR PLAN	Date. OCT. 15	Drg. No. 2688-04	Rev. P1



PROPOSED GRAND FLOOR PLAN
(SCALE 1:100)

Figure 3 Ground Floor Plan of Padel Court Building



Measurement position

location plan

1:1000@A3
OS ref SZ 0893 SW
OS licence no 100017330

Proposed External Alterations

The West Hants Club
Bournemouth
for
THE WEST HANTS CLUB

Drawn Dec 18
Checked Dec 18
Designed Dec 18

ARCHITECTS
LOCATION PLAN AS EXISTING
4557

44.

30 December 2018
CONSULTATION
7-2018-5038-BA
The West Hants Club,
Roslins Road South

Figure 6 Location of Author's Measurement Position at Bournemouth Padel Tennis Court

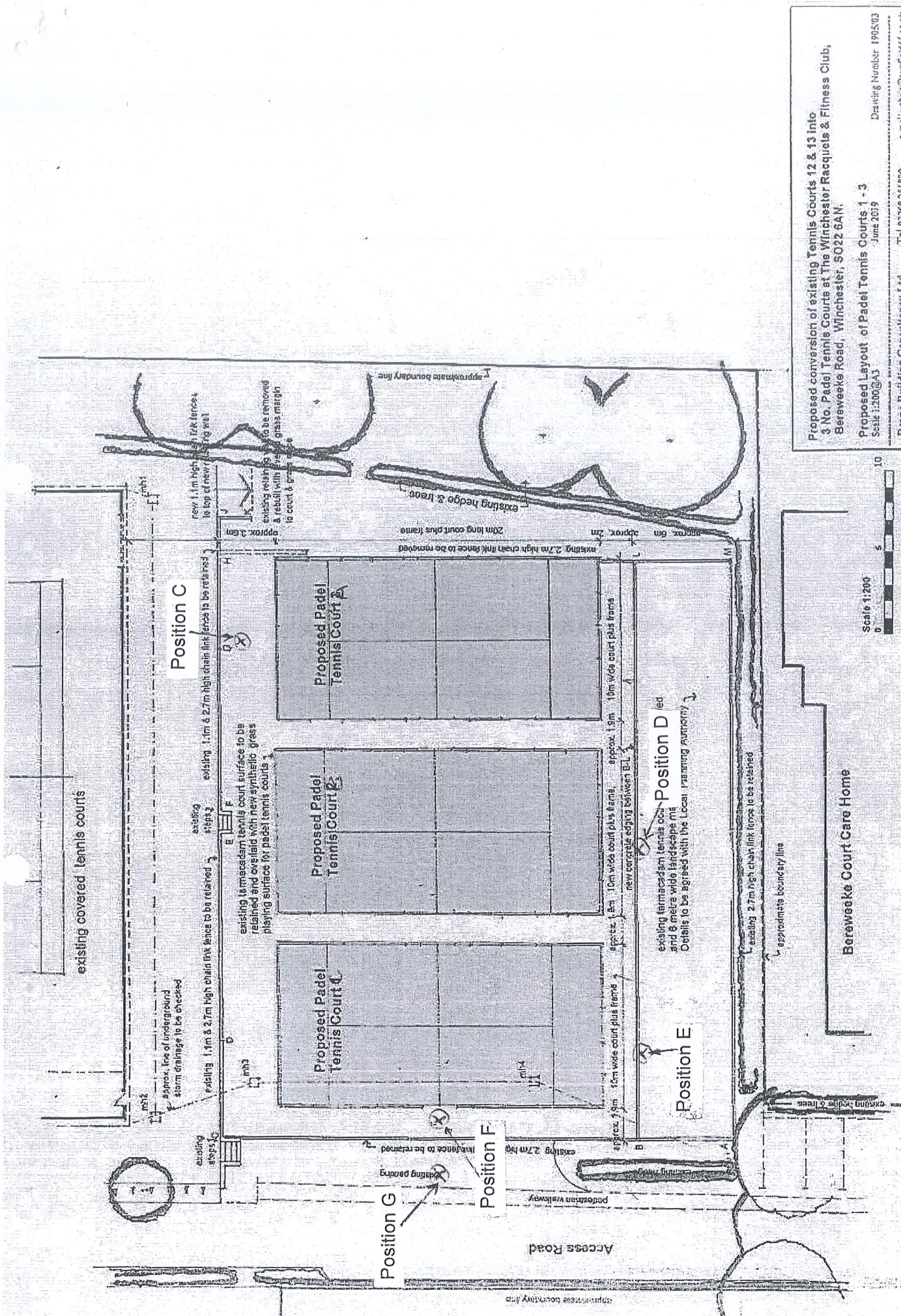


Figure 8 Location Of Author's Measurement Positions at Winchester

Proposed conversion of existing Tennis Courts 12 & 13 into
3 No. Padel Tennis Courts at The Winchester Racquets & Fitness Club,
Berewecke Road, Winchester, SO22 6AN.

Proposed Layout of Padel Tennis Courts 1 - 3
Scale 1:200 @ A3
June 2019

Draughting Number 1905/03
Drawing Number 1905/03
June 2019
Tel 07768 231809
e-mail: dave@sunfire.co.uk



Figure 9 Location of Author's Measurement Positions at Oxshott