Dormansland War Memorial Hall Condition Report: February 2022

Introduction

When we were canvassing the Parish for your support in electing us as Trustees, it was our clear intention that we establish the true physical condition of the existing hall and report back to the residents of Dormansland. We are grateful to Colin Jones, Bryan Williamson and Peter Kirkness for contributing their time and skills in preparing the contents of this report.

The Memorial Hall has been unused and neglected for approximately 4 years and the condition of the building reflects this. In fact, in most areas of maintenance it has not received the attention it deserved for many years before that. It is quite clear that much of the previous maintenance that had been carried out was done in a less than ideal way with repairs, in various places, being makeshift and lacking the application of professional experience.

It was claimed by the previous Trustees that the condition of the Memorial Hall was beyond salvation and that it should be demolished to make way for a new building and new housing developments. This is quite clearly not the case.

Best wishes,

Philip Davy, Nicola O'Riordan, David Birchall, Tracey Morris, Lindsey Bell, Bertie Nichols and Sarah Comber

The Trustees of Dormansland War Memorial Hall

The Exterior of the Hall (with thanks to Bryan Williamson)

- The guttering needs replacing and a section of the fascia board has fallen off on the road side entrance and is allowing water ingress.
- The pitched roof upon visual inspection is in good order and does not leak. The flat roof requires renewal at some point in the near-future. An estimate to renew this is circa £15k.
- The flashings need to be patch repaired fairly urgently to prevent water ingress.
- The rendering around the building has cracking in places and the paint is flaking. It has been recommended to carry out a hammer test, repair and power wash the render and the brickwork, apply one coat of primer and two coats of masonry paint to the rendered areas.
- There are some single glazed windows on the car park elevation and they will need replacing .

- A disabled access needs to be incorporated

Internal Works (with thanks to Bryan Williamson)

- There was a leaking section of flat roof and fascia board causing damage to a ceiling to the meeting room on the car park elevation.
- The plumbing and boiler need testing and bringing up to date. There is a leak to the cold main in the loft which requires a minor repair. The hot and cold water system will need to be chlorinated. A water risk assessment in accordance with ACOP L8 will need to be put in place. (Heat Company (Lingfield) have donated their work to complete this).
- The fire alarm needs testing and bringing up to date.
- A disabled toilet to modern specifications needs to be installed
- Ventilation needs incorporating in the basement to alleviate the damp issue
- Apart from the above, the Hall needs painting and decorating, new flooring or carpets laid.
- The sprung dance floor needs sanding and re-sealing with Bourne Seal
- The Hall needs a new lighting system.

"It is definitely not beyond repair"

Bryan Williamson, specialist in the renovation, extension and refurbishment of period properties

Electrical system (with thanks to Colin Jones)

Overview

The electrical system consisted of 4 different Consumer Units / Distribution Boards. This is an indication that it had been added to in an "ad hoc" fashion. Of these four boards only one showed any indication of which circuits it controlled. This board was vague in its description.

The location of the boards were in a cupboard in what can be described as the Bar Office itself located at the back of the Bar serving area. One board was high up just above the top shelf, this board was the one with some indication of its circuits. The other three boards were located above the middle shelf. There was no indication of what circuits they controlled.

The incoming supply was clearly a 3 phase and neutral arrangement with no indication of an earth. It was also apparent that only one phase had been connected when it was last operational as there was a single-phase meter. The supply was live on each of the phases but was not connected to the meter. The meter tails had been removed and each phase fused connection was sealed so it could only be reconnected by a *bona fide* supply company.

The lack of power to the system and the lack of any indication of where the various circuits of the installation could be isolated made it difficult to be able to test individual circuits e.g. sockets in the main hall.

The starting point was to begin drawing plans of the building, both the top floor and the lower rooms to a reasonable level. That required:

1. The measurement of all rooms, the position of window, doors, columns etc.
2. Drawing the floor plans for
   2.1. Top Floor
   2.2. Lower Rooms
3. Print plans and check against building for mistakes or omissions.
4. Repeat process

Identifying the location of electrical fittings and fixtures

(a) Preparing plans

Using printed copies of the top floor plan draw the location of all the light fittings on the top floor. Go to drawings on computer add lighting fittings on separate (lighting) layer.

Using printed copies of the lower floor plan draw the location of all the light fittings on the lower floor. Go to drawings on computer add lighting fittings on separate (lighting) layer.

Repeat this for sockets on a sockets layer and then miscellaneous items (fire alarm, thermostats, Fans etc.) on a miscellaneous layer.

As before, check each against the building and correct any omissions or errors

This should resulted in a set of plans:

- Top floor Lighting
- Top floor Sockets
- Top Floor Miscellaneous
- Lower Floor Lighting
- Lower Floor Sockets
- Lower floor Miscellaneous

This will give you a visual record of potential circuits that can be checked against the circuits in the boards.

The lighting circuits will usually be controlled by 5amp breakers

The sockets circuits will usually be controlled by 32amp breakers

Miscellaneous circuits will vary:

- 15 Amp for Dryers, heaters etc,
- 5 Amp for Fans (as well as lighting)

Other breakers present 1 x 10 Amp (TBA).

(b) Identifying circuits controlled by an individual breaker

To match circuits to the breakers in each of the boards it was necessary to identify each board and its associated breaker. It was decided to label them DB1, DB2, DB3 and DB4 see attached board diagram.

If we take DB3 as an example it has, from left to right,

DB3.1 A 5 Amp breaker with the cable coming in to this consists of Mineral Insulated Copper Clad (MICC) so is likely to be for the Fire Alarm.

DB3.2 A 32Amp breaker – A Ring Main

DB3.3 A 32Amp breaker – A Ring Main

DB3.4 A 32Amp breaker – A Ring Main

It has 3 circuits that are likely to be for sockets. So, this was the good place to start.

Testing the circuit for

- Continuity between legs
    - L across L
    - N across N
    - E across E
- Insulation between (link L1 to L2 and link N1 to N2 and E1 to E2)
    - L across N
    - L across E
    - N across E
- Crossover Test (Link L of leg 1 to E of leg 2 and link L of leg 2 to E of Leg 1)
    - L1 E2 across L2 E1
    - Test impedance at each socket in the ring

If the socket is on the ring the meter will give an impedance value, if it is not on the ring no value will be found. This assumes that the sockets all function correctly. This is a method of identifying which sockets are associated with an individual breaker. This method also means that we can identify circuits that will and will not meet current regulations as they stand at present.

On attached Table 1: Distribution Boards (Consumer Units), Circuit ID and descriptions are given if identified.

Lighting circuits and location linking was achieved by connecting a generator to a board, switching on one lighting circuit breaker at a time, then switching on light switches at various locations untill the lights came on. Not all lighting circuits could be identified this way so other methods will need to be used. This method may show which circuits work but does not mean that they have been thoroughly tested to meet necessary regulations therefore these circuits will need to be tested for Impedance and Insulation values.

On attached Table 2: Items present (in the building) but not clearly linked to an individual breaker.

These items have yet to be linked.

Electrical recommendations and improvements

Keeping in mind priorities:

To get the Hall up and running it will require:

1. New 3 phase Main Board, etc., installed, tested, and working.
2. Main Hall Sockets tested, connected, and working.
3. Main Hall Lighting tested, connected, and working.
4. Kitchen Sockets tested, connected, and working.
5. Kitchen Lighting tested, connected, and working.

These circuits will have to meet the current regulations.

1. New 3 phase board: a grant award that has been applied for and we are awaiting the outcome.
2. The Hall Sockets have been tested for Continuity, Insulation, and Impedance the results look good with reservations on some of the Insulation values which may require further investigation. The testing of polarity at the sockets showed that there was no indication of an earth being grounded. Further investigation established that the whole system lacks an earth. Having established this fact, the question of providing us with an earth was first put to Eon the Electricity supply company and this was passed to their metering team and we are waiting to hear from them. We also contacted UK Power who are responsible for the physical incoming supply

equipment. We arranged for UK Power to visit on Wednesday 19th January 2022. The result of the visit was an updating of their supply equipment which included them providing us with an earth connection. It may be prudent to wait to connect this new earth to the 4 old boards and wait till we have installed the single new 3 phase board. I have since examined the six sockets in the hall by removing socket tops. I have visually checked polarity (as opposed to using a tester) at each socket i.e., red cable to L terminal, black cable to N terminal and green / yellow cable to E terminal. While the tops were off, I also checked if an earth wire was attached to each metal backbox and each socket top. It was not present, so I have added an earth wire, sheathed with Green / yellow sheathing, between each backbox and each socket top. I have replaced one socket top in the hall because the existing one was cracked in a few places. Retesting of this circuit will take place prior to connecting to the new board for final test certificate. It has now been decided to also reinvestigate the insulation readings for the Hall sockets as these are on the low side.

3. The main hall lighting works via the generator but the wiring etc. needs to be tested which requires an 'Indoor Scaffolding /Tower'. The Tower is scheduled to arrive at the hall for 25th Jan 2022. The tower will also be needed to check the Kitchen Lighting which could not be verified working using the generator.
4. The kitchen sockets exhibited numerous continuity issues which were worked through but failed the insulation testing. It was decided rather than waste more time investigating faults to rewire most legs of the circuit. During this process it was established that the kitchen circuit had been added (at later date) to the committee room ring main by joints in the cables (these joints [more than 1 per leg] were found in the void). This to my mind is lazy wiring / penny pinching and prone to problem. It can cause reduction in quality of conductivity, reduction of Insulation quality etc. Further evidence of lazy wiring was found when replacing various legs of the kitchen ring main circuit. As old wiring was revealed it showed insulation had been ripped off, probably as these cables were being pulled in under floors between joist and through walls or floorboards. I added a socket where I found a blanking plate covering a backbox and cables joined inside. I also replaced 2 Switched, Fused, Spur Tops, the replacements included a neon warning light to indicate it was switched on.

It was decided to make the kitchen ring main a separate ring main from the committee room sockets. This was for 2 reasons:

a. The committee room has a leak, and a socket outlet is in very close proximity to that leak. Any delay in dealing with repairing the outside roof, inside ceiling, and surrounding wood enclosure could delay getting the kitchen functioning.
b. If the kitchen is to be expanded in the future having fewer sockets on this ring will make it a lot safer and easier to add additional sockets for kitchen use, if needed.

Having rewired most legs of the kitchen the testing showed significant improvement in results. The issue of polarity was again checked physically / visually when socket top etc were taken off. As all the back boxes in the kitchen were Plastic and not metal earthing of back boxes is not required.

Other Ring main circuits tested need to be investigated thoroughly as quite a lot of problems seem to be present. These are not on the priority list so can be dealt with at a later date.

Electrical Conclusion

This is a progress report and refers to where we are at this moment in time. It is quite clear that a lot of work has been necessary to get to this point. This will likely continue to be the case going forward.

Priorities are testing the lighting for the Hall and Kitchen and with a tower coming Tuesday that can begin.

Table 2 includes a list of items present in the building but as yet I am not able to link them to a controlling breaker. These will need to be located and identified. This may include creating new/additional circuits.

There has been a practice of doubling up on some breakers e.g., 3 Twin and earth cables connected in a 32 Amp breaker. A ring main will have 2 Twin and earth cables to maintain a ring arrangement. The cable for a ring main is 2.5mm^2 and is rated as 24 Amps. In a ring you have 2 such cables so the current carrying capacity of the ring is 2 x 24 = 48Amps. It can be easily seen that a single cable of current carrying capacity of 24 Amps is not protected by a 32 Amp breaker and so it is unsafe. A new or additional circuit and Breaker will be needed with a smaller breaker e.g., 15/16 (old/new) Amp

Looking further ahead probably rewiring of other ring mains seems likely given the experience of those looked at so far. The testing of Kitchen and Hall lighting will give some indication of the condition of other lighting circuits' cable.

General concerns: All socket tops will need to be lifted to inspect for earth wires between metal back boxes and the socket tops. This will include Switched Fused Spur units and light switches if they have metal back boxes, and the earth cables will need to be covered with green and yellow sheathing.

Any wiring showing poor insulation values will need to be inspected thoroughly were possible given the poor condition of some cables found so far.

Summary and thoughts for the future (with thanks to Peter Kirkness, architect)

In summary, the building fabric, having been left and neglected for a number of years seems to be in generally sound condition, aside from the obvious roof leak. There appear to be no

real structural concerns - either subsidence, or with the superstructure. There is a bit of damp in the basement area, where it is retaining, but it didn't look too bad, and some ventilation is maybe all that is required. And what appears to be some superficial cracking on the exterior walls. The windows seemed sound.

There is work that needs to be done straight away, and work that can be left - until we know what the long term plans are. Once the residents of Dormansland have decided the future of the building, via the forthcoming public consultation, this will get the ball rolling. It is likely that the Hall, whatever form it takes, ends up being used for various functions requiring different types of spaces.

The building actually has loads of potential, and could be transformed with some relatively simple work. While this depends on the budget and other priorities, possibilities include reinstating the staircase from the basement, opening up the basement to the outside; a new entry lobby from the car park with a new platform lift (which will be fairly essential); removing the suspended ceiling in the main hall and creating some useful outside spaces. It would be good to remove, or at least relocate, the recycling facilities and reconfigure the car park with the vehicular entry remaining in its existing location.