

Ref: HBA/NE//NT/1769

Dear Ian/ freeholders and D Greet,

**Update from findings started on Friday, 11 March
with the full exposure of the base perimeter timber frame
supporting the lantern's cast iron frame legs.
Inc. 17 March assessed with
costed outcomes, P-8**

The base of the lantern was found to be made of pitch pine in 50" sections curve cut and moulded to fit the ellipse, with its section cut to include for the glazing rebate and external sill.

This carries the entire weight of the frame. It has lost most of the external sections and where its uprights or "legs" were trenched into. The rot has, at various times been replaced with cement mortars tarred over and then over that with asphalt as part of the roof layover.

Internally the timber has core has rotted where water has seeped in and pooled in the areas of the foot of each U/right/leg. Many attempts over many years to "fill in" with various soft white gypsum fillers (Polyfillers etc), have exacerbated the situation by acting as sponges with all being painted over many times locking in the moisture. These activities blinded us to the failures now fully exposed.

The drawing P- 3 drawn to scale was created from the observed to allow a full understanding of the construct. It fully demonstrates the construction inc. the numbered progression of the base.

Photo 1 general view



Photo 2 rotting out and silicone "blob"



Photos 3 & 4 demonstrate scale of rot out beneath the feet of the lantern frame.

Note the biscuit tongue and rotted sill nosing to the right of pic.

The iron bar has rusted out, inc. the screws of both the foot of leg, all saturated.

Photo 3



Photo 4

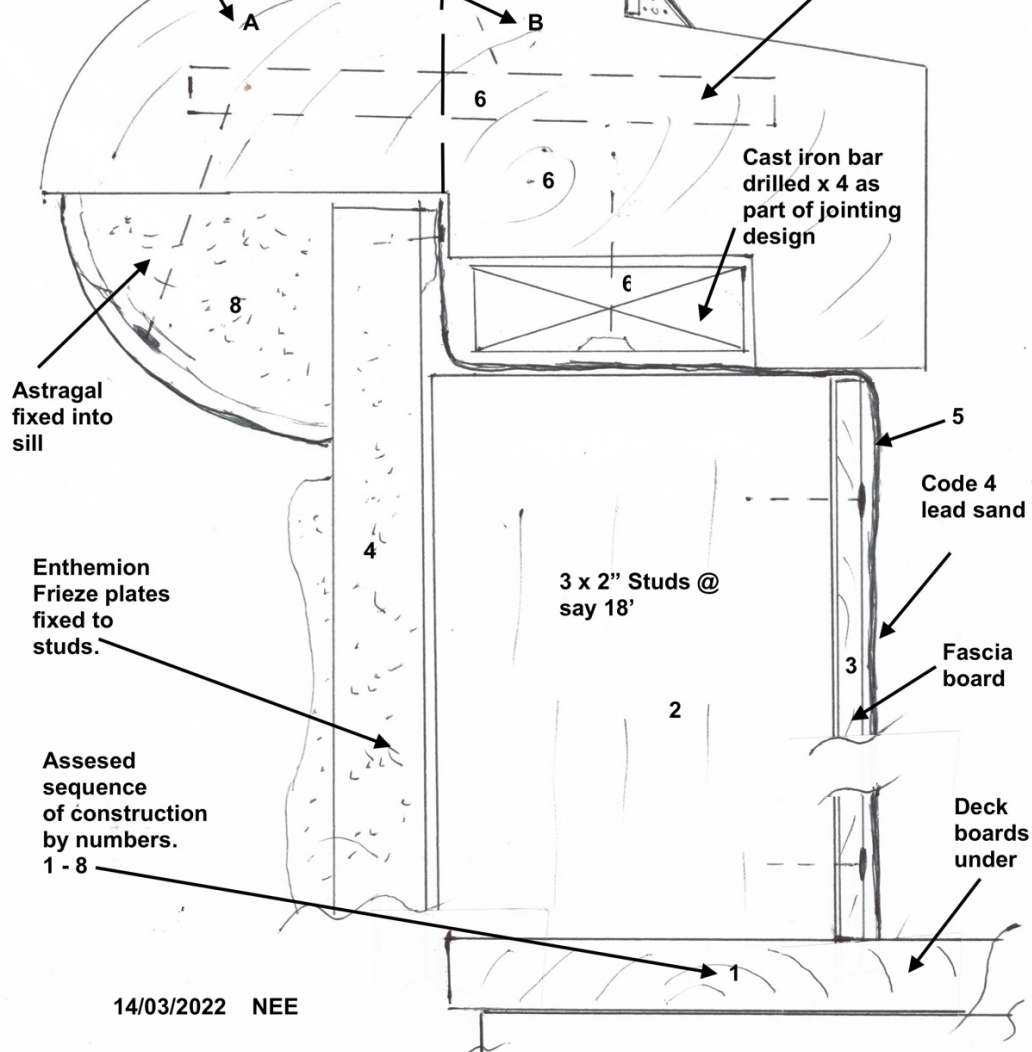


32 Sussex Sq Lantern base in section. Scale 1 - 1 @ A4

Pitch pine section designed to be resting sole plate for lantern G bars into inc weathering detail S/plate curved to follow ellipse in 7 pieces @ approx 50" each.

The requirement to replace as all rotted will involve remaking as 2 pieces A & B due to complexity of fitting into. A from int B from ext

resin glued and screwed



The proposed repair strategy

Note: The work was originally carried out as a progressive element stacking with the lantern being formed up from a precast kit of parts. All held/braced in place with peg ended tops of the uprights fed through the “ring” and the radial G/bars then peened over to lock all into place. Note missing G/bar section to facilitate.

Photo 5



We cannot disturb this “riveted” cast iron frame. So an ideal was agreed as to a **Methodology to restore**.

The new base timbers, when made to original pattern and curve will need to be of two split components, pre-faced to fit against each other. This will allow the inside round nosed section to be fed into place, cutting in the heel trenching as going to re-engage the uprights, wedged up into place to re-load the lantern. The external sill section can then be fed in against the RN sect and glued with high impact resin, then clamped together. Jointing biscuits can be fed into pre-cut mortices, made open at the external face, resin glued and screwed down into with brass screws as fitting proceeds. The proposed process negates the need for disturbing the lantern frame at all.

Note: the shared loading and thickness of the rim plate has ensured its ability to bridge the legs unsupported and will now aid by laying in each of the 9 segments as a miss-one fit-one ideal without sag or deflection.

Materials [As at 11 March]

We contacted a supplier of redwoods and found the prices were prohibitive.
£4,000.00 +

Having viewed fully the options available to us I have investigated the availability of materials and found also that the pitch pine type in required sizes are simply not available.

Oak I deemed to be a worthy second choice.

The required.

9 lengths of 45mm x 210mm at 1.3 or 1.2m long

The thickness is required as milled/finished @ 45mm

The width is to cope with the need to create a nosed sill section to a curve.

Part of an ellipse.

9 lengths of 80mm x 210mm at 1.3 or 1.2m long

This thickness is required as close-to as possible but not critical, one face can remain un-milled.

The width is to cope with the need to create a sill section on a curve.

Part of an ellipse.

In the drawing the iron binding bar only exists at joining points. It is solid past these, so view as a squared-ish section, Now deemed surplus to required, also no way of fixing back. Hidden fixing.

Wemban Smith was contacted and the estimate came back at £3,795.32

K-L West came in at £1937.25 + vat

I am still searching for a somewhat better deal.

The joinery side of this effort will be viewed as dayworks only due to the complexity of the project.

John Zelinskie has guesstimated 10 days of effort with 5 days of semiskilled to assist.

Therefore at

£250.00 per day skilled

£175.00 per day Semi skilled.

The costs to restore £3,350.00 + materials + glues

I advise, along with my charges for attendance to site and this desk effort, will be in the region of + £6,000.00

The cast iron frame is a work of great skill and art. We must take comfort from the knowledge that it has remained essentially intact, in spite of the many attempts at maintenance. However, there is loss through rust out of at least 3 of the spokes at the lower sections. This was found to be caused mainly from repairs using bathroom silicone as a weathering repair. This entrapped the water beneath it.

Photo 5



Photo 6



Fortunately, there is a repair strategy available to us utilizing a product called J B weld this can be used to reform the lost G/bar edging.

Note: none of the losses are total and integrity remains sufficient to grant a repair.

And so, an ideal was agreed as to a. **Methodology to restore.**

Have a pattern made to reform a new curved glazing bar from 3 mm steel. Worked and fitted into place with a 2-pack resin (J B Weld system) grinder massaged into the original form. [As at 14 March]

The iron side of this effort will be viewed as dayworks only due to the complexity of the project.

John Zelinskie has guesstimated 3 days of effort to restore

Therefore at £250.00 per day skilled

The costs to restore = £750.00 + metal profile bars and resins

I advise, along with my charges for attendance to site and this desk effort,

To be in the region of + £1,500.00

Post search efforts and assessments [As at 17 March]

The estimated charges on the exposed to restore.

(Please note. Should further issues arise during removal of the rotted items I.E. Lead flashing and studs compromised. Involved parties will be invited to the platform to review prior to actioning a repair stratagey.

The Iron G/bars.

The steel side of this effort will be viewed as dayworks only because of the complexity of the project.

Cast iron g/bars

John Zelinskie has guesstimated 3 days of effort to restore.

Note, cannot be heated/welded.

The costs to restore =	£750.00
J B weld resin x 3 packs @ £7.00 per =	£21.00
Bar cut to order/profile 2 400mm long x 3 =	£180.00

The timber side of this effort will be viewed as dayworks only because of the complexity of the project.

Timber ellipse base

Form up/fit = 10 days.

@ £250.00 per 8 hrs = £2,000.00

Assistant for 5 days

@ £175.00 per 8 hrs= £875.00

Timber to achieve = C35 26 RPI S.E.Pine = £1,400.00

Milling/cutting charges = £300.00

Glues screws and miscellaneous = £75.00

My charges for attendance this/on-site/timber find/desk effort/report on 15th march etc to this date,

= 5 hours @ £60.50 per £302.50

Projected say 3 hours further = £181.50

Total £6,085.00

Based on the above, set aside say £6,500.00

Please note: VAT is allowed on purchased items.

Timber and labour are VAT non-chargeable. (Not registered).

Purchased timber with cash from a personal stock.