Horsham Enterprise Park

Consideration of Building 3 Paper

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Appendices - Supporting information

Appendix A_Arch Associates Structural Survey – October 2025 – includes Construction Evaluate Report Appendix B as referenced

This document is supported by a technical video which can be found at:

https://f.io/-r0zYNWA

Introduction and background

In January 2023, Lovell Partnerships submitted two separate applications for the phases known as P1 and P2 (P2 being the existing buildings).

The reserved matters application was progressed well with HDC but finally stalled in August 2023. It was frustrated when emerging legal advice on water neutrality dictated that a site-wide solution must be provided in order for the application to be determined. The water neutrality mitigation strategy submitted as part of the application for P1 and P2, outlined the intention to offset water requirements through a retro-fit solution on offsite affordable housing, a strategy which could not be applied site-wide.

This legal position left P1 and P2 undeliverable without P3 coming forward accompanied by a robust site-wide water neutrality mitigation strategy. P3 itself was stalled as the intended commercial use of the land was proving challenging and parties were considering the change of use to residential.

During the course of the next 6 months, a re-evaluation of the site-wide delivery strategy was undertaken to establish the most viable and feasible delivery routes. New applications were prepared across all phases to be submitted concurrently, thus offering the community, members and HDC, full insight into the emerging plans for site wide delivery.

On Phases 1 and 2 of the site, the layout and plans were updated to reflect feedback from the January 2023 RMA:

- Given their poor condition and limitations on life expectancy, the cedar trees are to be removed, and the layout re-aligned to maximise the opportunity for exceptional public realm space and future proofing the development
- Demolition of the C20 building (to the rear of building 3) as broadly accepted and included

Prior to the application submission, Warranty Providers were approached to establish the feasibility of obtaining insurance for new homeowners following the refurbishment of B3. Lovell held a meeting with Cassandra Codling, NHBC Regional Director – Southeast to discuss warranty feasibility for Building 3. Cassandra advised that whilst it can be possible to obtain a refurbishment warranty with the NHBC on older buildings, she advised that this can be incredibly costly and time consuming to assess. Even to obtain a warranty quotation from NHBC, detailed structural improvement specifications would be required (the output established from significant intrusive investigations) to evaluate the insurability of the refurbished building. Cassandra also advised that NHBC's warranty appetite for refurbishment projects has significantly diminished, due to the inherent risk associated with insuring properties of this nature.

With this warranty issue in mind, and with a site wide strategy for delivery more certain, Lovell instructed extensive and intrusive surveys on the Art Deco building (building 3). Concerning initial results emerged around the time of the planning submission.

With this new information emerging, it was agreed that the application would be submitted with the building retained, but that a structural engineers note to be included within the planning application highlighting the need for further detailed investigation on the structural integrity of the building.

This demonstrated the applicant's genuine intent to convert and refurbish the whole building as per the original application and bring forward new homes at pace. Undertaking additional

technical surveys, prior to submitting the application, would have resulted in a further delay of more than 6 months to one phase of the development.

The report from GTA Consulting Engineers Ltd contained specific wording to identify testing on the building was ongoing (see extract below):

Any areas that were excluded in the existing reports due to access constraints or other factors will be investigated further to ensure all aspects relating to the structural integrity of the buildings are checked and addressed prior to the proposed building conversions.

All structural elements and their properties will be considered in the refurbishment. These include concrete aggregate and cement properties, capacity of existing foundations, columns, walls, beams, and slabs. Strengthening measures will be implemented to ensure the capacity of all elements are suitable for the proposed building use.

Informally, the planning officers acknowledged that further structural information was required to confirm the delivery strategy for P3.

The rationale for proposing a change in strategy on Building 3 at this point in programme, and the associated benefits were as follows:

- Ensuring full compliance with latest building regulations, including fire safety
- Creating a building that is more affordable for residents without excessive maintenance, management fees and insurances
- Warranting a building to a minimum of 60 years, whilst enhancing a heritage asset
- Creating a building that is more architecturally significant and enhancing the central tower
- Delivering a new sustainably built and energy efficient residence
- Ensuring viability and commitment to the delivery of affordable housing

The Planning Application

Following submission of the application, further detailed structural engineer and specialist survey investigations have been undertaken to update existing information. In summary, this concludes that the building is in a very poor condition; the quality of the existing concrete and reinforcement are in severe disrepair, it has degraded further and would need extensive specialist remediation.

Given the updated structural information, and in conjunction with discussions with WSCC and Horsham District Council around the status of the current heritage buildings condition (notably the level of architectural merit), a change has been proposed to demolish and rebuild the existing ‘wings’ but crucially retaining the ‘tower’ component.

As evidenced above, the driver for change has not been based on cost evaluation, rather it is based on the structural integrity of the building given these further investigations. The current poor condition of the building is a combination of the age of the building, the quality of construction in the 1930’s which has further degraded due to it standing vacant as shell and core since 2014.

Lovell recognises the Heritage value of the tower, and acknowledges the existing mass and form of Building 3, contributes to the overall development of the entire site. (see Fig 1&2).

The proposal to not refurbish the wings of the building and to rebuild them (but in similar form) has been based on the positive engagement with the officers at HDC, and on the premise that this will provide a better legacy building and enhanced placemaking opportunity.

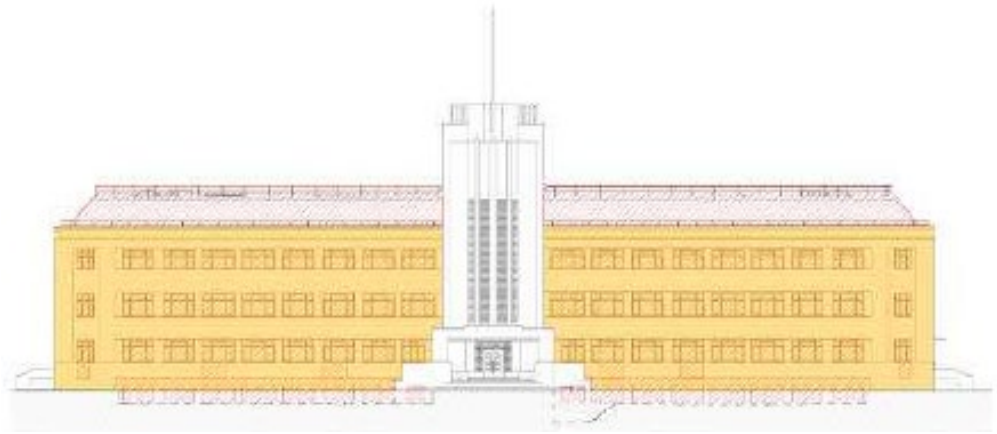

Fig.1. Existing Building 3 elevation

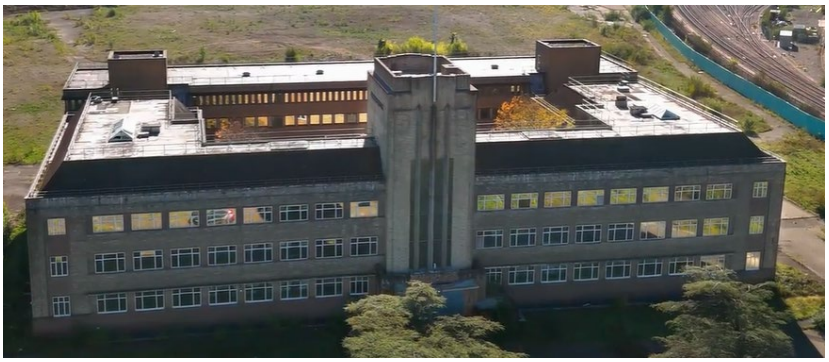

Fig 2. Existing Building Oct 2025

Structural surveys and further testing

A series of structural inspections and surveys were previously undertaken as described further below.

A visual, non-intrusive inspection of the buildings was undertaken by Hampshire County Council in October 2018 (full report available on request).

A separate intrusive investigation was carried out by Constructive Evaluation (CE) on behalf of West Sussex County Council, also in 2018. CE were commissioned by Lovell and returned in 2025 to take similar samples to those taken in 2018 to gain an understanding of whether the structure had deteriorated in the subsequent period. Anecdotally, the CE site team stated that '*carbonisation testing of the foundation slab was good, but the concrete condition was 'terrible'. Out of 5 core samples, only 1 is suitable to send for compressive strength testing, the others crumbled suggesting poor structural integrity of the foundations'* ***(see Appendix B of the*** **Arch Structural Condition Report**).

The structural report (Appendix B) issued by Arch Associates summarises there is widespread carbonation and areas of low compressive strength suggesting the concrete has experienced long-term environmental degradation, likely accelerated by inadequate cover and poor original construction practices. There are localised areas of good core integrity and adequate strength, but the following defects would need to be addressed to ensure the appropriate building design life:

1. Honeycombing and Carbonisation of Concrete

Proprietary concrete repair systems will need to be specified to reinstate the voided concrete and restore the necessary reinforcement cover. Protective coatings and corrosion inhibitors should be applied to reinforcement. This is extensive throughout large areas of the building wings.

Guidance from the Building Research Establishment's Digest 444 and Concrete Society's Technical Report Number 38 would need to be followed for carbonation repairs. This can include the need to remove carbonated concrete, treatment of rebar and then reinstatement of new surface concrete to provide suitable concrete cover.

Fig 3

Fig 4

Fig 5

Figs 3 - 5 - Photographs show honeycombed and carbonised concrete with exposed rusting rebar.

2. Lack of structural fire resistance due to exposed rebar/lack of suitable concrete cover

Proprietary products would be required to be applied to reinstate the appropriate fire protection of the concrete elements. This demonstrates the lack of concrete cover that provides fire resistance to the building.

Fig 6

3. Corroded wall ties and lintels within external brickwork

Due to corroded wall ties and lintels, there is a risk of potential collapse of the masonry outer leaf and further damage to the structure. So, in any eventuality, the external brickwork cladding needs to be completely removed.

Fig 7 – evidence of corroded wall ties

4. Cracking within external brickwork

The external brickwork has instances of severe cracking and damage. Remediation would require the removal and repair using crack injection and stitching. However, because the wall ties and lintels all need to be removed the cracking would be remediated when the brickwork is rebuilt.

Fig 8 – cracking to external walls

5. Basement water ingress

The basement of the building is flooded and has done so for a significant number of years. In a refurbishment scenario this would need to be pumped out to allow a waterproofing system to be retrofitted. Suitable measures for draining of water should be provided and maintenance strategies will also be required to ensure the waterproofing system remains effective.

During on-site testing in the summer, the basement was pumped out to establish the extent of the water ingress. Within 24 hours the basement became flooded again, it is now anticipated to be over 2 metres deep, in a period of relatively dry weather conditions. It is likely that this ongoing water ingress is further damaging the concrete including its reinforcement.

Fig 10

Fig 11

Fig 12

Fig 10 shows water damage and concrete degradation due to water ingress

Fig 11 shows extensive water ingress from unknown source

Fig 12 shows extensive and prolonged water damage in the basement (tideline on railings)

New Homes Warranty and Guarantee

As previously noted, Lovell engaged with their warranty provider and guarantee providers (NHBC) to establish the warranty requirements to enable the properties in Building 3 to be mortgageable and sold. NHBC were unable to provide a definitive answer to whether or not they will warrant the building until structural specifications are provided.

Arch associates would need to provide sufficient guarantee to the warranty providers that, following remediation, a minimum lifespan of 60 years could be achieved. For Arch Associates to essentially underwrite the structure, they would need to be satisfied that the remediation strategy can resolve the underlying issues. It is yet to be confirmed that the remedial options available will achieve this, especially when considering the recent foundations testing results. With the information available at this time, without significant remediation the building is not capable of achieving the relevant requirements to secure warranties for the new homes.

Engagement with HDC and WSCC on Building 3

Whilst the above investigations were ongoing, Lovell attended a meeting on-site with planning and heritage officers (Jason Hawkes and Sean Rix) to discuss the recent findings and practicalities of the remedial works.

The discussion led to an opportunity to potentially demolish the wings of the building, inclusive of frame and basement, whilst keeping the clock tower. The clock tower is the significant element of the building being the key visual/heritage asset, with the rest of the building having little benefit to the historic interest/focal point for the area.

In principle, HDC were supportive that a revised design that emphasised the clock tower and brought more architectural interest to the building, could be achieved. This is so long as wider benefits could be realised such as supporting the affordable housing provision on site (viability issues retaining building as is), efficiencies of modern construction in terms of sustainability, fire protection, resolving basement issues etc.

HDC advised that they would require Lovell to clearly and robustly justify the change from conversion to new build, as part of any submission of updated plans showing an alternative re-build strategy. Discussions then took place over Architectural enhancement rather than exact replacement. The Heritage Officer was encouraging lasting heritage value through high-quality architectural improvement to the current form facilitating modern standards of design such as prevention of overheating.

Following this meeting, initial option plans were produced by architects ACG, along with a supporting technical note showing two possible tower retention strategies namely;

1. Exact replica replacement of the existing building in its current form
2. Architectural enhancement of existing form creating a better placemaking opportunity and adherence to current building standards and regulations (such as Future Homes standard).

These options were reviewed with WSCC and the HDC, in both instances the proposals were received well. With consideration of the ACG proposals and the engagement with the heritage officer, the second design option is Lovell's preferred route (improve and enhance). A full report of design evolution has been submitted as part of the revised submission.

Building 3 Options Appraisal

From a construction perspective (setting aside design intentions), three options have been evaluated by Lovell:

Option 1 – 'Retain and refurb'

This would see full retention and refurbishment of the existing wings of the building with the addition of a further storey to the top of the building that is setback. Key factors to consider:

- Poor condition of the building structure and envelope as outlined above.
- Remediation strategies outlined are complex and add significantly greater costs to the project. The likely remediation solutions to elements such as fire stopping and foundations are specialist and will be cost prohibitive with no guaranteed outcome.
- Irrespective of retention of the building it is not possible to address the corroding wall ties and lintels in-situ. The external brick façade would need to be completely removed and rebuilt. Whilst some of the bricks could be kept and reused it would not be possible to keep 100% and replacement bricks would need to be used. Refurbishing bricks adds additional cost to the works.
- Without addressing the issues outlined above, the structural engineer cannot provide security to warranty providers for the desired design life.
- Whilst most of the building regulations could be adhered to, it would not be possible to comply wholly and dispensation will be required.
- As a minimum, the building would need to be fully underpinned and slab reinforced, to achieve the necessary compressive strength.
- Dewatering of basement and capping the source/ingress of the water would be required.
- High management and insurance costs for future residents.
- Programme Impact - A specialist contractor design will be required for elements of the remediation strategy and programme developed when a detailed solution is in place. It is anticipated that this could delay the programme by more than 12 months prior to undertaking the remediation itself.
- Due to the specialist nature of the remediation, full contractor design would be required for all elements. Confirming accurate cost of this remediation needs to be based on structural information available (following recent testing), it is a significant costing exercise which has been instructed but will take 2-3 weeks to complete.

Option 2 – 'Façade retention with new structure'

Façade retention has been considered as part of the building evaluation. However, the existing brick façade is structurally compromised due to widespread corrosion of wall ties and lintels, as well as significant deterioration of the mortar. These defects cannot be remedied in-situ. To ensure structural safety, the entire facing brickwork would need to be dismantled and rebuilt with new wall ties, lintels, and sound mortar.

In addition, due to the age and condition of the bricks, it is highly likely that they would crumble or fracture when dismantled, making them unsuitable for reuse. This further reduces the feasibility of reconstructing the façade to match its existing form.

While external steel retention frames or other temporary support systems are sometimes used to retain façades during redevelopment, such measures are not viable here due to the condition and fragility of the facing brick structure. Even without this fragility, the construction methodology known as needle propping/shoring would hinder the ability to install the new frame to the inside face of the façade.

Retention systems can stabilise existing masonry but cannot resolve the underlying issue that the façade itself requires full removal and reconstruction.

Option 3 - 'new build with retention of clock tower'

This involves the retention and refurbishment of the clock tower and the demolition and new build of the wings of the building to the same mass and form (as illustrated in the live planning application).

As Developer, Lovell are committed to retaining the tower, recognising its Architectural merit and importance to the Heritage Officer, which will be mirrored by the surrounding community. Whilst the tower poses similar condition issues to the main building internally, the condition of the concrete will have been protected by the Art Deco marble envelope, it has not been exposed to oxidisation in the same way as the wings. Equally, the general scale and scope of refurbishment is much less than the wings with considerably less engineering complexities.

Developing the design in line with this intention, offers the following benefits:

- Maximising the placemaking opportunity, enhancing the overall development whilst retaining the clock tower focal point
- Alleviates most of the issues relating to the poor condition of the existing building
- Removes risk factors from remediation
- New Homes warranties can be easily obtained
- Fully meets new Building Regulations, critically ensuring fire protection requirements
- Utilisation of modern methods of construction
- Creating a sustainable and energy efficient building
- Reduced liability and long-term maintenance costs (compared to retention) for residents
- Programme improvement – 12-month betterment in SOS
- Viability – whilst this decision is not underpinned by a financial driver, it provides a more stable viability position, without which the appraisal would no doubt be under significant duress
- This option results in neither a loss of apartments or an enhanced number of homes to the current application.

Based on the investigations and updated structural information, Lovell has evaluated the constraints, efficacy, viability and deliverability of refurbishment versus new build of the wings of Building 3. Lovell consider that Option 3, to rebuild the wings, is the only practicable route for the redevelopment of Building 3.

Financial Feasibility

Whilst cost has not been the driver for change i.e. it is based on the structural integrity of the building; Lovell instructed a Cost Evaluation by Calfordseaden LLP who are a multi-disciplinary property and construction consultancy. Their instruction was to produce a RIBA Stage 2 cost evaluation for Options 1 and 3 listed above. The cost plan is an elemental cost plan but given the stage of design and complexities of the building, there are significant provisional sums and unknown assumptions.

It is incredibly important to note that the construction methodology used in this elemental cost plan **has not** been approved by a recognised Warranty Provider (such has NHBC). In order to do so a full remediation strategy would have to be produced and presented to the warranty provider for approval and pricing, resulting in a significant delay to planning programme. Even with this additional work (which could potentially take 6-9 months) there are no guarantees a warranty provider would be prepared to support the refurbishment of the building.

These costs do not include other abnormal costs such as the cost of obtaining warranties from providers (which are likely to be significantly higher than a new build property). Added to this cost would be the relevant insurances required for working in a compromised environment such as this.

In summary the cost plan evaluation offers the following comparison:-

The cost difference between option 1 and option 3 (retention vs demolition of the wings) is less than 4% and whilst not insignificant in its monetary comparison, this re-iterates the position that this is not a financially driven decision by Lovell but is based on the realities of structural feasibility and safety, new homes warranty requirements and planning deliverability.

Lovell are confident that rebuilding the wings of this building will improve the architectural value of the development, creating an exemplary place to live. In the difficult sales environment, we currently find ourselves in, recognising sales value assumptions in the development appraisal is absolutely critical.

Conclusion

The investigations carried out since submission of the original planning application have demonstrated that Building 3 is in a significantly worse structural condition than initially anticipated. The combined issues of deteriorated concrete, compromised foundations, corroded wall ties and lintels, failing mortar, severe cracking, and ongoing basement water ingress mean that full retention or façade retention of the wings cannot be delivered with confidence. The remediation required would be complex, uncertain and incapable of securing the warranties, design life, and regulatory compliance necessary to bring forward new homes at pace.

Alternative retention options have been fully explored, but each presents unacceptable risks to programme, viability, and long-term integrity. Also, there is a significant risk that new home warranties cannot be obtained. The only practicable and deliverable solution is to demolish and rebuild the wings, while retaining and enhancing the central tower as the site's principal

heritage asset. This approach is not driven by cost, but by the realities of structural safety, warranty requirements, and planning deliverability.

This is an opportunity to retain the tower while introducing a stronger, more sustainable and architecturally enhanced scheme. By focusing on retention of the most important heritage element, while enabling modern, warrantable and energy-efficient new homes, this approach secures both the long-term legacy of the site and a viable, future-proof development for the community.