

Airspace development

Guidance note

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Introduction and background

1. In 2019, NHS Property Services (NHSPS) were approached by NHS England/Improvement (NHSEI) to explore the possibility of delivering new development above existing public sector buildings. The Public Sector Land team of the Ministry of Housing, Communities and Local Government (MHCLG) were seeking to explore a similar initiative and worked with NHSPS to agree the principles of a pilot study.
2. The principles of the pilot study were to demonstrate the following:
 - a. If airspace developments could provide an opportunity for public bodies to re-provide/ extend operations within airspace development based on strategic need
 - b. If airspace could provide a source of revenue funding and/or a capital receipt
 - c. If airspace could provide homes for key workers/ NHS staff or private housing
3. Airspace development is a specialist area, consequently Urban Airspace Ltd were procured by NHSPS to deliver a detailed pilot study on selected sites within their estate. A criterion for site selection was provided by Urban Airspace. However, to better understand solutions to challenged sites, not all sites were selected using these criteria. This criterion is reviewed in more detail later in this guidance document.

The sites included in the pilot study were:

- a. Bethnal Green Health Centre
 - b. East Barnet Health Centre
 - c. Lord Lister Health Centre
 - d. West Ham Lane Health Centre
4. The output of the pilot study included a detailed analysis of the deliverability, height, massing, the viability, and possible deal structures for delivery. The main outcomes from the pilot study will be reviewed in this report to provide guidance to public sector landowners considering airspace development.
 5. The detailed reports can be made available upon request from Adam Dyer (adam.dyer@property.nhs.uk).

Site selection criteria

6. An indicative set of criteria for optimum site selection was provided by Urban Airspace which can be used to assess the suitability of sites. The list below is not exhaustive, and each criteria carries diminishing weight the further you move down the list.

I. Does the building have flat and uncluttered roof space?

- a. Clear and flat roof space reduces disruption to the existing building, as results in an easier build.
- b. A pitched roof or one with 'clutter' may necessitate the removal of the existing roof structure itself or the removal or relocation of plant (e.g., air conditioning units) on the roof, or, to provide a base on which further construction can take place.

II. What is the history of the building and how might its current structure influence any Airspace development?

- a. The history and structure of the building will help inform to what extent the existing building can accommodate additional development weight and consequently what construction method is necessary. For example, will an exoskeleton structure be required over a pitched roof, or can a transfer deck be implemented on a flat rooved building with sufficient strength to accommodate further development above?

III. How might development disrupt the existing building, its occupants and operation?

- a. The existing structure of the building and roof form will influence whether any disruption will be caused by altering the existing building.
- b. To cause minimal disruption, working hours will need to be factored into the construction build plan. As a general observation, where construction cannot take place during normal working hours this will increase both the duration and costs of the development.

IV. Do Rights of Light easements or Daylight and Sunlight planning requirements impact the development?

- a. Existing neighbours may benefit from rights of light, there may also be planning requirements that will seek to protect daylight to existing buildings. This may not preclude airspace development but means the permitted height of new development needs to be established to avoid unacceptable encroachment.
 - i. Rights of Light is a legal easement which may be held by neighbouring properties. Whilst the easement may be documented on the legal Title of the land, it may also have been acquired through 'prescription'. Generally, any property having uninterrupted enjoyment of light for more than 20

years acquires rights of light via a 'prescriptive right'. It is advised to obtain specialist Right of Light advice where necessary.

- ii. *Daylight and Sunlight* factors are planning matters which Planning Officers will consider when assessing the scale and massing of the proposed development. It is advised to obtain specialist daylight and sunlight advice where necessary.

V. Does the current building overlook other buildings?

- a. Overlooking and privacy of neighbouring properties needs also to be considered. New development near to existing developments, can reduce privacy and impact on amenity space i.e., private gardens or balconies. The floorplans of adjacent buildings should be investigated to establish what windows, if any, face onto your development and whether these windows are habitable or non-habitable rooms as this can have an impact in terms of privacy and floorplate planning. Floorplans of your development can then be flexed to reduce privacy issues.

VI. What impact could any Statutory Listed Building or location in a Conservation Area have?


- a. The settings of listed buildings also require consideration when developing in proximity to them. Specialist Heritage advice should be sought to input on the design and planning of the proposed development.
- b. Buildings which are listed/adjacent to listed buildings, or within a conservation area may require the use of enhanced design features, which could increase baseline build costs.

VII. Are there surveys available or is there the ability to the survey the building?

- a. Structural and utility survey information aids the understanding of whether the existing building can take the load of an airspace development both structurally and in terms of utility capacity. For example, will additional power capacity be required?

General technical considerations

7. As with most property development projects there are key considerations which are vital to the shape, form, and success of the proposal. These are mirrored for airspace development, but some play a more prominent role.
8. The general technical considerations include:
 - a. Permitted Development Rights
 - b. Site specific constraints – Rights of Light / Legal constraints
 - c. Physical buildability
 - d. Impact on the existing occupiers
 - e. Programme
 - f. Cost and viability

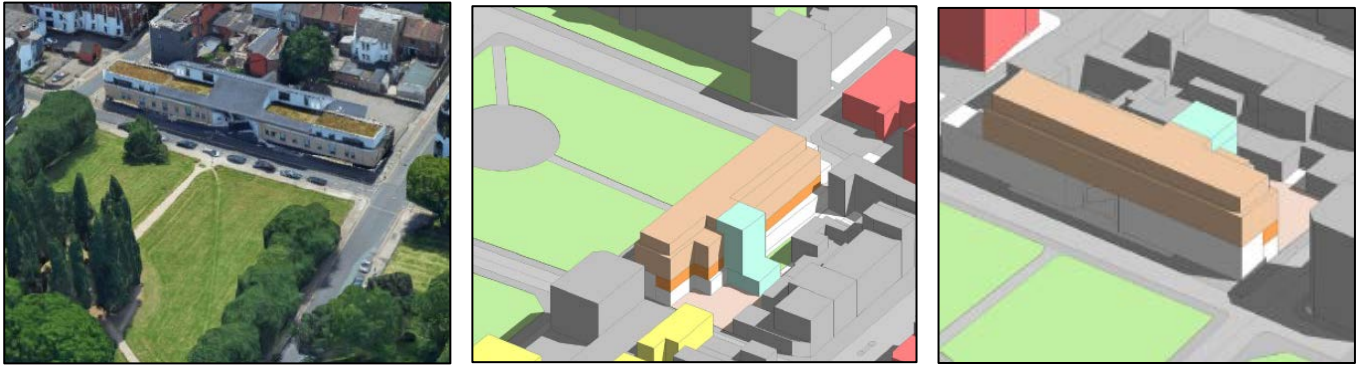
Consideration	Key Elements
Planning risk - Permitted Development Rights	<ul style="list-style-type: none"> o Local and national town and country planning policy guidance must be considered for all proposed development schemes. o Current national town and country planning policy promotes airspace development. o Permitted Development Rights (PD) brought into effect on the 1st August 2020 seeks to enable the construction of up to two additional storeys on existing, purpose-built detached blocks of <u>flats</u>. There are several technical elements which need to be satisfied along with exemptions to PD rights. o For further information please see the NHSPS Town Planning Update on Permitted Development Rights: <div style="text-align: center;">  Town Planning Update - New PD Righl </div>
Site specific constraints - Rights of Light - Legal constraints to land	<ul style="list-style-type: none"> o Rights of Light issues will be brought more into focus therefore, you may be looking to encroach into areas affected by Rights of Light of neighbouring properties. o Specialist Rights of Light advice should be sought to establish potential mitigation measures. o The space between the external walls of the existing building to the site boundary as defined by the legal title of the site is also an important consideration. To construct airspace units, pillars to support the exoskeleton structure of the new space may be required and these will require space between the legal boundary and the existing structure.

	<ul style="list-style-type: none"> o Quiet Enjoyment covenants between landlord and tenant are another key consideration which may require compensation to the tenant during the construction. <ul style="list-style-type: none"> i. <u>Quiet Enjoyment</u> - <i>Quiet enjoyment is a right to the undisturbed use and enjoyment of real property by a tenant or landowner.</i> o Legal advice is recommended to understand whether any restrictive covenants which may prevent airspace development are present within the legal title and any active leases. 																																																																																																																																																																																																																																																																				
<p>Deliverability</p>	<ul style="list-style-type: none"> o Many of the delivery constraints are generic to any development project, although airspace development has some additional constraints unique to this type of development: <ul style="list-style-type: none"> a) Logistics <ul style="list-style-type: none"> i. Space around the existing building, particularly in the London area can be limited. Consideration when assessing the site should be given to matters such as site offices as well as materials delivery and storage during the construction phase. b) Operational Continuity <ul style="list-style-type: none"> i. This will undoubtedly impact on any development programme, but this must be judged on a site-by-site basis. Where the opportunity for site work is limited, build methodologies which maximise the offsite elements may be favoured. 																																																																																																																																																																																																																																																																				
<p>Programme</p>	<ul style="list-style-type: none"> o An indicative programme for airspace development is 36 months <table border="1" data-bbox="169 1310 1441 1568"> <thead> <tr> <th>Month</th> <th>1</th><th>2</th><th>3</th><th>4</th><th>5</th><th>6</th><th>7</th><th>8</th><th>9</th><th>10</th><th>11</th><th>12</th><th>13</th><th>14</th><th>15</th><th>16</th><th>17</th><th>18</th><th>19</th><th>20</th><th>21</th><th>22</th><th>23</th><th>24</th><th>25</th><th>26</th><th>27</th><th>28</th><th>29</th><th>30</th><th>31</th><th>32</th><th>33</th><th>34</th><th>35</th> </tr> </thead> <tbody> <tr> <td>Mobilisation</td> <td colspan="3">█</td> <td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td> </tr> <tr> <td>Planning Pre-App</td> <td></td><td colspan="5">█</td> <td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td> </tr> <tr> <td>Planning App</td> <td></td><td></td><td colspan="6">█</td> <td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td> </tr> <tr> <td>Pre Construction</td> <td></td><td></td><td></td><td colspan="7">█</td> <td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td> </tr> <tr> <td>Enabling Works</td> <td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td colspan="12">█</td> </tr> <tr> <td>Construction</td> <td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td> </tr> </tbody> </table>	Month	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	Mobilisation	█																																					Planning Pre-App		█																																					Planning App			█																																				Pre Construction				█																																			Enabling Works																		█												Construction																																						
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<p>Cost & viability</p>	<p><u>Private Residential – Capital Receipt</u></p> <ul style="list-style-type: none"> o A base build cost of > £3,000 per sqm is common in the case study examples. This base cost in combination with additional cost items such as an allowance for structural framing and groundworks to facilitate the roof extensions, necessitates the requirement to have high sales values. <ul style="list-style-type: none"> i. E.g., Bethnal Green = Base build rate of £3,250 per sqm + structural framing £613k, infrastructure at £253k and measures to protect existing service at £200k in additional costs. 																																																																																																																																																																																																																																																																				

<p>Maintenance and lifecycle of existing building</p>	<ul style="list-style-type: none"> ○ The existing building and the new airspace development can be separate structures and therefore have separate maintenance plans. ○ Ongoing maintenance obligations is also an important consideration. An existing building may have a maintenance programme which becomes more complex by erecting an airspace development above the existing building as it could limit accessibility. This may add cost to future maintenance programmes, an example is cladding repair or replacement.
<p>Strategic vision / Future proofing</p>	<ul style="list-style-type: none"> ○ The strategic requirement of the operational health care centre must be known at the start of the project. For example: <ul style="list-style-type: none"> i. Will the health care centre become surplus to requirements and therefore a disposal is more appropriate? ii. Is future expansion of the existing use likely and will you need more flexibility in terms of future use? iii. Is the centre programmed as a long-term hold with limited future expansion requirements and therefore do you have the flexibility to build residential airspace units above?

Case study learnings

Bethnal Green Health Centre

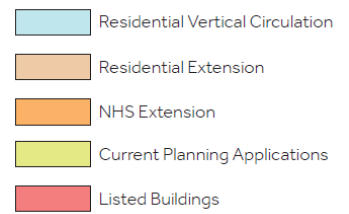


Location

- 60 Florida St, London E2 6LL

Proposed development

- 22 units
- 3 storeys



Key learnings

- **Cost and viability** - This site had a positive land value (circa £2m. for 22 units) despite the high cost of construction (£6,738/m² - £626/ft²) as the residential values were high because of the central London location (£11,000/m² - 1,022/ft²).
- **Legal constraints** – Site curtilage presents an issue as there is little space to position the exoskeleton pillars for the build within the legal title.
- **Right of Light constraints** - The site is near neighbours and will likely impact their ROL.
- **Planning risk** (daylight/sunlight) – The proximity of neighbouring buildings similarly poses a daylight and sunlight risk to the potential development.
- **Planning risk** (listed buildings) – Adjacent to the site there is a Listed building, any development would need to show consideration to the setting of this building therefore potentially affecting the scale and design of the proposed development.
- **Deliverability** – The existing roof is pitched and therefore works to the existing building are required to support airspace development, causing disruption to existing occupiers. In this case study the existing internal plant room also requires relocation.

Conclusion

- Bethnal Green poses a complex challenge to construct an airspace development.
- However, it demonstrates that airspace development can achieve a positive capital receipt if located in a residential area of high value.

East Barnet Health Centre



Location

- East Barnet Health Centre, 149 E Barnet Rd, East Barnet, New Barnet, London, Barnet EN4 8QZ

Proposed development

- 34 units
- 7 storeys

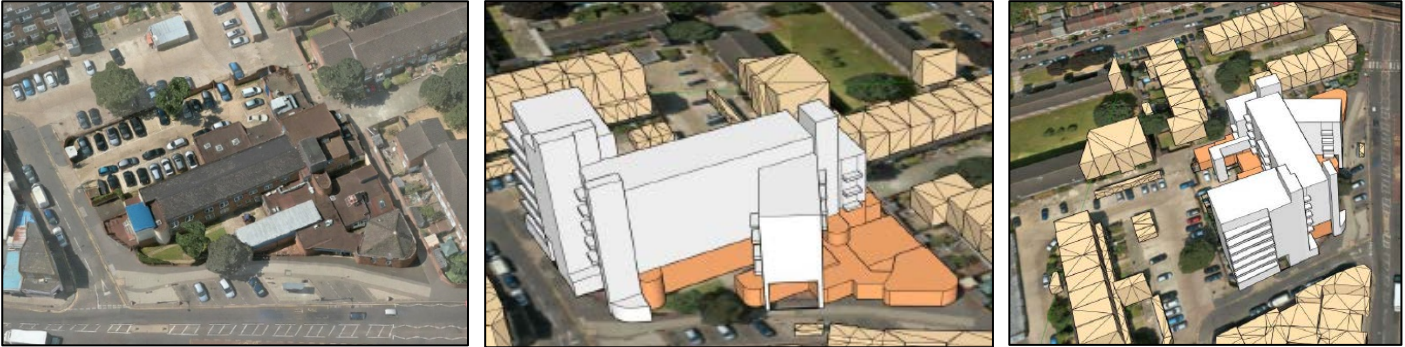
Key learnings

- **Deliverability (logistics)** – There is adequate space within the site boundary to locate the pillars for the exoskeleton structure and a large car park for site offices/ material storage.
- **Deliverability (operational continuity)** – The flat roof structure allows development to occur directly above the existing without major disruption to the existing occupiers, including having to temporarily relocate.
- **Legal constraints** – The flank wall of the adjacent residential building, outside of NHS ownership, is a blank façade and therefore will not pose a Right of Light risk as there are no habitable windows looking onto the site.
- **Cost & viability** – A private residential scheme breaks even.

Conclusion

- Our high-level feasibility analysis indicates that the East Barnet site lends itself to airspace development.

Lord Lister Health Centre



Location

- 121 Woodgrange Rd, Forest Gate, London E7 0EP

Proposed development

- 54 units
- 7 and 8 storeys + Health Centre

Key learnings

- **Deliverability** –The base build cost is £3,653 per m² which is circa 25% higher than seen in demolish and rebuild mixed use developments within close proximity to London (Zone 3) that NHSPS is also engaged on. The uplift in cost is partially a result of the existing building being made up of a variety of heights, widths and construction ages. This makes airspace construction more complex.
- **Cost & viability** – Lord Lister sits within a lower value residential market for London (£6,000/m² compared to £11,000/m² at Bethnal Green) and these values do not support the cost of the development (£14m), should private residential sales be the aim of the airspace development.

Conclusion

- Historic, piecemeal extensions to the existing buildings have made airspace development complicated to deliver.
- The lifecycle of the current building is limited due to age and building obsolescence therefore, to maintain effective service provision, it is perhaps more appropriate to fully redevelop the site.
- Despite currently having comparably lower private residential values for London, Crossrail's introduction is expected to have a positive impact on the residential market in the area. Therefore, this site should be monitored for future value uplifts.

West Ham Lane Health Centre



Location

- 84 W Ham Ln, London E15 4PT

Proposed development

- 20 units
- 3 storeys

Key learnings

- **Maintenance** - at West Ham Lane the cladding panels on the existing building require replacement every 15 years. Any airspace development would cause disruption to the building's accessibility for maintenance as access to the fabric of the existing building will be hindered.

Conclusion

- The maintenance obligations and remaining life of the existing building is a vital consideration before embarking on an airspace development. Whilst the existing and proposed structures can remain separate allowing for replacement of the cladding, the new structure can make this refurbishment more complex.

Financial Deal Structures

9. Three financial deal structures were put forward by Urban Airspace, all assuming a residential build model. The deal structures put forward are as follows:

- 1) The airspace developer buys the freehold, leasing back the operational space to the previous landowner.
- 2) The landowner retains the freehold and sells the development on a long lease to the airspace developer.
 - i. If granting a long lease is not possible a shorter lease, for example of 40 years could be granted with a balloon payment made to the developer at lease expiry. This method allows the airspace developer to recoup costs and profit which they otherwise could not over a 40-year period.
 - ii. Alternatively, if a balloon payment is not appropriate at the end of the initial lease, a further lease could be granted equivalent to the time it will take to pay back the full cost of development and any profit margin.
- 3) The landowner and the airspace developer enter in a Joint Venture Agreement, sharing any profit in the sale or letting of the residential units.
 - iii. Procurement advice will be required by the relevant Public Body.

Conclusion

10. Airspace development is a useful tool for any public sector organisation. It should not just be looked at to provide a capital receipt, which can be achieved in the right location, but also as an opportunity to provide much needed new homes to key workers possibly NHS staff close to their places of work.

It also gives opportunity to extend existing service provision without causing large scale disruption to the existing occupiers and services, as well as negating a potentially expensive and temporary decant solution.

Support team

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