

		Our ref: HGY/2024/0141 Contact: John Kaimakamis Date: 13/09/2024
Town and Country Act 1990 (As amended)		
Location:	Mayfield House, St Anns General Hospital, St Anns Road, Tottenham, London, N15 3TH	
Proposal:	Partial approval of details (Phase 1A only) pursuant to Conditions 28(A) (Revised Energy Strategy) and 29 (Overheating) attached to Planning Permission Ref: HGY/2022/1833 dated 10 July 2023.	
Wording of condition 29:	Prior to the commencement of above ground works to Phase 1a, a Revised Overheating Model and report shall be submitted to and approved by the Local Planning Authority, based on acceptable principles as approved, taking into account any detailed design changes and responding the outstanding actions at application stage. The model will assess the overheating risk in line with CIBSE TM52 and TM59 (using the London Weather Centre TM49 weather DSY1-3 files for the 2020s, and DSY1 for the 2050s and 2080s) for the residential units and demonstrate how the overheating risks have been mitigated and removed through design solutions. This report will include: - Reconfirmed details of the design measures incorporated within the scheme in line with the Cooling Hierarchy (including details of the feasibility of prioritising passive cooling and ventilation measures) to ensure adaptation to higher temperatures are addressed, the spaces do not overheat, and the use of active cooling is avoided; - Specification of mitigation measures; - Modelled pipework heat losses from the communal heating system that comply with CP1 2020, reducing the heat losses to reduce energy demand of extract ventilation in corridors; - A retrofit plan to mitigate the future risks of overheating by setting out how the future mitigation measures are shown to help pass future weather files and confirming that the retrofit measures can be integrated within the design (e.g., if there is space for pipework to allow the retrofitting of cooling and ventilation equipment) and include any replacement / repair cycles and the annual running costs for the occupiers; - Submit a clearer annotated plan and a list of the modelled dwellings, making it clear what building they are in and ensuring all habitable rooms have easy-to-identify numbers. Set out what number of dwellings are modelled per block. - Specification and visual appearance of the proposed security shutters, and any further external shading measures proposed. - These mitigation measures shall be operational prior to the first occupation of the development hereby approved and retained (through a like-for-like in specification) thereafter for the lifetime of the development. Reason: In the interest of reducing the impacts of climate change, to enable the Local Planning Authority to assess overheating risk and to ensure that any necessary mitigation measures are implemented prior to construction, and maintained, in accordance with London Plan (2021) Policy SI4 and Local Plan (2017) Policies SP4 and DM21.	

Carbon Management Response 26/04/2024

Documents submitted:

- St Ann's Phase 1A Dynamic Overheating Report, prepared by Hodkinson (dated November 2023)

Revised modelling

Only 12 dwellings (5%) were modelled for Phase 1a (screenshot below). Phase 1A will provide 239 dwellings, including 26 houses, and 213 apartments. This does not take into account the worst-case dwellings for overheating risk.

Table 1: Phase 1A dwelling unit selection for overheating analysis

Plan Ref	Unit	Type	Size (m ²)	Floor Level	Tenure	Orientation	Aspect	Noise Zone
1	AX-00-06	3BSP-A-05	119.76	00-02	Private	North/South	Dual	1/3
2	BX-00-02	4B6P-B-02	119.29	00-02	Private	East/West	Dual	2
3	BX-00-15	4B6P-B-02	119.29	00-02	Private	East/West	Dual	4
4	C1-04-01	1B2P-C1-01	55.33	04	Affordable	North/West	Dual	2
5	C1-04-07	1B2P-C1-04	58.22	04	Affordable	West	Single	3
6	C2-04-02	2B4P-CX-02	74.02	04	Private	North/West	Dual	2
7	C3-02-05	2B4P-CX-02	74.02	02	Private	South/West	Dual	4
8	C3-05-03	1B2P-CX-02	51.23	05	Private	East	Single	2
9	D1-05-04	1B2P-D1-02	51.38	05	Shared	West	Single	4
10	D1-00-02	3B5P-D1-01	86.11	00	Shared	East/South	Dual	4
11	D3-05-04	1B2P-D3-01	52.55	05	Private	East	Single	3
12	D3-08-01	1B2P-D3-02	51.03	08	Private	West	Dual	4

The following measures are proposed to be incorporated:

- Solar control glazing, with amended g-values of 0.42 (east, south and west) and 0.50 (north);
- External shading from balconies and window reveals (185mm);
- Lockable louvred shutters (on the inside with external casement windows) on 34 the ground floor bedroom windows and doors;
- Efficient building services design to reduce heat distribution losses;
- Thermal mass from concrete frame;
- Natural ventilation through openable windows;
- Air tempering bolt-on to MVHR for dwellings with limited window openings due to noise (130kW cooling capacity and ventilation rates of 90 l/s);
- Corridors ventilated through AOV system (1ach).

The hybrid application did not have bolt-on air tempering with cooling capacity as part of the overheating strategy. This change, without properly following the cooling hierarchy, therefore cannot be supported.

Domestic: CIBSE TM59	Predominantly naturally ventilated		Predominantly mechanically ventilated	Number of corridors pass
	Criterion A (<3% hours)	Criterion B for bedrooms (less than 33 hours)	Number of habitable rooms pass (<3% hours)	
DSY1 2020s (no noise)	36/36	24/24		8/8
DSY1 2020s (noise)	36/36	17/24	Not modelled; despite constraints	7/8
DSY2 2020s	12/36	0/24		8/8
DSY3 2020s	10/36	0/24		7/8
DSY1 2050s	12/36	0/24		7/8
DSY1 2080s	3/36	0/24		0/8

Actions:

- There is air tempering for noise-restricted dwellings; but the cooling hierarchy has not been followed properly before air tempering is introduced. It was also only required as a retrofit measure. The Cooling Hierarchy has therefore not been followed correctly. The applicant must demonstrate that the risk of overheating has been reduced as far as practical and that

all passive measures have been explored, including reduced glazing, g-values, and increased external shading in places where windows have no overhanging balconies. This is clearly set out in the GLA Energy Assessment Guidance and the condition wording.

- Specify the shading strategy, including: technical specification and images of the proposed shading feature (e.g. overhangs, Brise Soleil, external shutters), elevations and sections showing where these measures are proposed. Then, redo the modelling with these measures integrated into the design.
- No revised modelling appears to have been done for Block B. This must be re-done with thermal comfort category I.
- Regarding the pipework heat losses, the document states that the heating system only appears to be running 170 days in the pipework heat loss calculations, this should be year-round, so please amend. And, is this only for the corridors?
- What are the modelled heat gains in the flat from the HIU?
- The selection of dwellings modelled does not represent the worst-case dwellings in terms of overheating risk. No south-facing affordable units have been modelled, or south-west. Please model others, in line with the suggestions circled in red below.
- Missing a retrofit plan to mitigate the future risks of overheating by setting out how the future mitigation measures are shown to help pass future weather files and confirming that the retrofit measures can be integrated within the design (e.g., if there is space for pipework to allow the retrofitting of cooling and ventilation equipment) and include any replacement / repair cycles and the annual running costs for the occupiers.

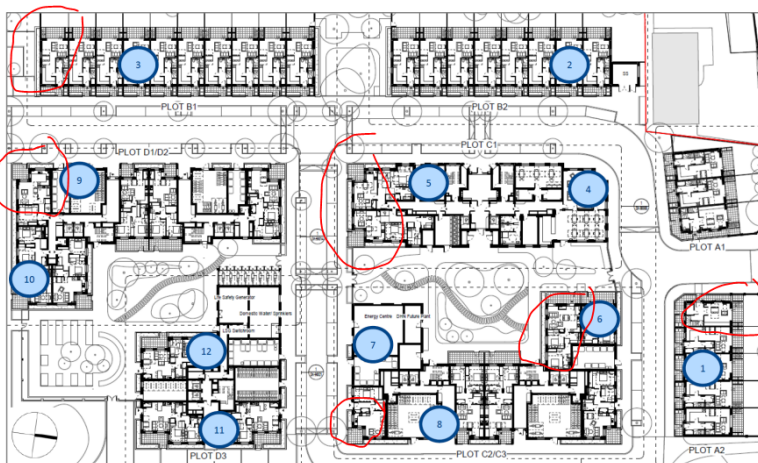


Figure 4: Phase 1A site plan showing locations of dwellings selected for overheating assessment

(CM team annotations)

Conclusion

Further information is required, and we object to the overheating strategy as currently proposed, so we therefore **do not recommend** discharging Condition 29.

The applicant should provide a response to the points raised above and issue updated plans/information where required.

Carbon Management Response 13/09/2024

Documents submitted:

- Overheating Note for St Ann's Neighbourhood Phase 1a, prepared by Hodkinson (dated 20 May 2024, version 1)

The note is an addendum to the previously submitted report referred to above.

Revised modelling

The uplift of different design interventions to improve the overheating mitigation capacity of the development is welcomed. The applicant confirms the windows design now enables the full areas of the windows to be openable inwards, and the ground floor will be provided with internal lockable security grills to allow windows to be securely opened throughout the night.

The applicant believe they have maximised their passive design solutions. This is supported by the TM59 overheating results for dwellings (assuming no window opening constraints) under DSY1 2020s, showing all pass. When external noise constraints are factored in, the report confirms 55 dwellings are affected in total. This overheating risk as a result of this has been proposed to be mitigated with "peak lopping" cooling with MVHR system. However, it is unclear how this is accounted as the report has only modelled 12 dwellings.

The details in the overheating report and the technical note fails to provide enough details to comply with the condition requirements. The condition 29 of the consent requires a "*revised overheating model and report based on acceptable principles as approved*" and "*taking into account any detailed design changes and responding the outstanding actions at application stage.*"

The reports fails to address the outstanding actions at application stage and have not fully addressed the previous action points which have been reiterated below.

Actions:

There has been no response on a number of key issues:

- The sheltered housing has to be remodelled under Category I – raised since the submission of the hybrid application. Please model this.
- Concerns regarding the non-representation of the worst-case dwelling were raised, as only 12 units are modelled from a development with 239 dwellings. No south-facing affordable units have been modelled, or south-west. Please model.
- Please confirm that the design development post-planning including but not limited to redesign of windows, increased openable areas, internal lockable security grills in the ground floors, etc have been reflected in the approved plans and designs.
- Regarding the pipework heat losses, the document states that the heating system only appears to be running 170 days in the pipework heat loss calculations, this should be year-round, so please amend. And, is this only for the corridors?
- What are the modelled heat gains in the flat from the HIU?
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