**Reason for Referral to DCB as set out in Part 2, Chapter 9 of the Council Constitution:**
The application proposes key changes to the external materials strategy originally presented to Members.

**Address:**
16-48 Cambridge Road, Barking

**Development:**
Application for approval of details reserved by condition 11 (external materials) in respect of planning permission 16/01183/FUL.

**Applicant:**
Swan New Homes Ltd

**Contact Officer:**
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**Title:**
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**Summary:**
Condition 11 of planning permission 16/01183/FUL requires the developer to enter into detailed discussions with the Local Planning Authority around the external facing materials for the development and then to submit full details of the external materials to the Local Planning Authority for approval in writing.

The external materials condition was initially submitted for approval on 27 March 2017. It was noted that key changes were proposed to the original materials strategy that was presented in the application documents for Planning Application No. 15/01252/FUL and later in the application documents for the S73 amendment under Planning Application No. 16/01183/FUL. These applications were determined by the Development Control Board on 7 December 2015 and 7 November 2016 respectively.

Officers have been in detailed discussions with the developer over the past four months around the proposed materials to arrive at a revised scheme that could be supported by officers. Officers requested that the original scheme architects, Studio Egret West, be brought into those discussions.

The main changes to the materials strategy relate to the prominent vertical and horizontal banding on the building façade which was originally identified as Portland stone cladding and the balcony cladding which was originally identified as stone cladding. It is proposed to replace these with powder coated aluminium sheet due to issues that have arisen at the detailed design stage.

It is considered that the revised materials would not materially affect the overall character, appearance and exemplar quality of the development as originally proposed and for this reason officers and the original scheme architect, Studio
Egret West, are in full support of the proposals.

The proposed fire strategy for the development is summarised within this report for Members information, but the strategy is not for planning approval as it is a Building Regulations matter.

**Recommendation:**

That the Development Control Board grants approval of condition 11 (external materials) of planning permission 16/01183/FUL as follows:

1. The submitted details set out below are in keeping with the relevant policies and are approved:
   - Drawing Nos. 3360_PLC_001_r1 and 3360_PLC_002_r1.

### 1.0 Background

1.1 Planning Permission 16/01183/FUL was granted on 4 January 2017 as a S73 amendment to the previously approved Planning Permission 15/01252/FUL granted on 24 March 2016.

1.2 Planning Permission 16/01183/FUL relates to the demolition of the existing building and the redevelopment of the site to provide 291 residential units within four interlinked buildings (10, 17, 20 and 28 storeys), with ancillary car and cycle parking, refuse storage areas and plant space; together with 488 square metres of flexible commercial floorspace (Classes A1, A2, A3, A4, B1, D1, D2), landscaping including roof gardens, and other associated works.

1.3 Condition 11 of planning permission 16/01183/FUL states:

> The developer shall enter into detailed discussions with the Local Planning Authority around the external facing materials for the development, including on-site sample boards, within 6 months of commencing above ground works. Full details, including samples, specifications and annotated plans, of all external facing materials shall then be submitted to the Local Planning Authority for approval in writing. The development shall only be implemented in accordance with the approved details and to the satisfaction of the Local Planning Authority.

**Reason:** To protect or enhance the character and amenity of the area and to ensure an exemplar finish to the building in accordance with policies BP8 and BP11 of the Borough Wide Development Policies Development Plan Document and policies 7.1, 7.4 and 7.6 of the London Plan.

1.4 The external materials condition was initially submitted for approval on 27 March 2017. It was noted that key changes were proposed to the original materials strategy that was presented in the application documents for Planning Application No. 15/01252/FUL and later in the application documents for the S73 amendment under Planning Application No.
Officers have been in detailed discussions with the developer over the past four months around the proposed materials to arrive at a revised scheme that could be supported by officers.

1.5 It should be noted that Christophe Egret from Studio Egret West Architects (the original architects for this development) has been involved in the detailed discussions around the revised materials strategy at the request of officers.

1.6 Officers consider that it is necessary for the Development Control Board to determine this conditions application given the changes proposed to the original materials strategy.

2.0 Consultations

2.1 Not applicable.

3.0 Local Financial Considerations

3.1 There are no local financial considerations.

4.0 Equalities

4.1 The Equality Act 2010 requires the Council to advance equality of opportunity in the exercise of its functions. In this respect, the building to which this condition relates is fully accessible and incorporates 10% wheelchair accessible housing.

5.0 Analysis

External Materials

5.1 Following detailed discussions around the revised materials strategy, the developer has submitted annotated drawings and samples of materials for approval.

5.2 There are 9 components which make up the proposed building façades. The permissions granted under 15/01252/FUL and 16/01183/FUL were based on traditional materials which would be robust over time but less imposing on the surrounding built environment. These materials comprised:

- Vertical banding - Portland Basebed stone cladding;
- Horizontal banding - Portland Vertically Striated stone cladding;
- Balcony cladding - Stone clad balconies;
- Corrugated panels - Bronze coloured material - rusty colour;
- Balcony balustrades: Bronze coloured material - rusty colour to match corrugated panels;
- Secondary façade panels - Grey aluminium coloured material for secondary façade flat panels and secondary balconies;
- Secondary balcony balustrade - Grey aluminium coloured material to match secondary façade panel;
- Window frames - Dark grey aluminium window frames; and
Ground floor lobby cladding - Portland Bowers Roach stone cladding.

5.3 The current proposal for each of these 9 components that make up the proposed building facades are set out below:

**Vertical banding, horizontal banding and balcony cladding**

The revised material submitted for approval is 3mm thick aluminium sheet (Grade H14 1050) finished in powder coating (colour/texture: Akzo Nobel Speckle LX18407). The aluminium sheet complies with regulations for external facades. It should be noted that this is not an aluminium composite panel.

During the detailed design stage of the proposed development, several unforeseen issues have arisen with the originally proposed Portland stone cladding.

Due to the close vicinity of the site to the railway track, site constraints and the height of the building, the most suitable construction methodology to fully clad the building is the use of a unitised cladding system, which negates the need for scaffolding or post-fixing materials which cause issues for Network Rail as set out below.

The constraints of the site do not lend themselves to installing perimeter scaffolding and Network Rail has confirmed through consultation that use of scaffolding close to their asset is to be avoided.

Cladding the balconies in stone, in construction terms, would require the balconies to be post-fixed via a tower crane. Network Rail would require contractors working next to their asset to de-rate the lifting capacity of the tower crane by 25% to incorporate a factor of safety. To lift the weight of the balcony, plus the stone cladding, would require a tower crane supported on such a vast crane base that the base area required would not fit within the site boundary and would interfere with the building slab and adjacent road.

The design team explored alternative materials to Portland stone cladding, including curved glass reinforced concrete (GRC). Should a curved GRC material be used, the thickness required to achieve the curve adds significant lifting weight which would also present the same challenge regarding the size of the cranes for this site.

To reduce the weight, a faceted (i.e. made up of a number of flat surfaces) GRC product was reviewed with Studio Egret West. However, there were concerns that the introduction of faceted GRC panels would not achieve the curved design philosophy expected in accordance with the original permissions and would present a more faceted appearance to the curved balconies.

To enable the fixing of the GRC to the unitised cladding system, an additional frame would be required surrounding the GRC panel to fix to the cladding. This would result in unforeseen design implications due to
increases in the size of the movement joints and would be detrimental to the original design intent of the curved aspects of the balconies and to the concept design of the whole building.

The detailed design review has led to the proposal for powder coated aluminium sheet in place of the stone cladding for the vertical and horizontal banding and the balcony cladding. The aluminium is to match the colour and texture of a stone material.

The lighter weight of the aluminium sheet allows it to be lifted by a tower crane (compliant with Network Rail requirements and site constraints) into place and the balconies can be pre-clad prior to installation which satisfies Network Rail and achieves the continuous smooth curve which wraps around the building, as presented in the original design intent.

Officers and Studio Egret West Architects recently viewed a mock-up panel of the proposed aluminium sheet on site and this was elevated by crane to enable officers to understand how the material would be viewed above ground level. The mock-up panel demonstrated how a satisfactory curved design could be achieved and the overall appearance of the material was considered to be an acceptable replacement by all parties taking into account the design issues raised above.

**Corrugated panels**

The material submitted for approval is sinusoidal (i.e. shaped like a continuous wave) aluminium sheet and this would be finished in a metallic bronze colour. At the date of writing this report the developer was still confirming the manufacturing process for applying the colour to the aluminium sheet. Officers hope to be able to confirm the exact colour and manufacturing process verbally at the Development Control Board meeting.

The proposed material comprising corrugated panels has not changed from that presented in the original application documents for the development. A change is, however, proposed in the wave length of the corrugation to use a medium frequency wave. Officers and Studio Egret West Architects support this change.

**Balcony balustrades**

At the date of writing this report, the applicant was still investigating an acceptable metallic bronze coloured polyester powder coating (PPC) to apply to the aluminium balcony balustrades. The colour would match the colour of the corrugated panels. Officers hope to be able to confirm the exact colour verbally at the Development Control Board meeting.

If it is found that a metallic bronze coloured PPC is not possible, it has been agreed with Studio Egret West Architects that the secondary balustrade colour of grey could be used. This is supported by officers.

**Secondary façade panels**
The material submitted for approval is grey coloured aluminium. This reflects what was shown in the original planning application documents and is supported by officers and Studio Egret West Architects.

**Secondary balcony balustrades**

The material submitted for approval is grey coloured aluminium to match the secondary façade panels. This reflects what was shown in the original planning application documents and is supported by officers and Studio Egret West Architects.

**Window frames**

The material submitted for approval is dark grey aluminium window frames. This reflects what was shown in the original planning application documents and is supported by officers and Studio Egret West Architects.

**Ground floor lobby cladding**

The material submitted for approval is Portland Bowers Roach stone cladding. This reflects what was shown in the original planning application documents and is supported by officers and Studio Egret West Architects.

Officers hope to be able to confirm the colour/texture of the stone cladding verbally at the Development Control Board meeting.

**Proposed Fire Strategy**

5.4 A fire strategy report for the development has been prepared on behalf of the developer by IFC Group Ltd. The main points of the fire strategy have been summarised by the developer and are set out below in order to give Members and officers some comfort in relation to fire safety matters. It should be noted that the fire strategy is not submitted for approval as it is not a planning matter. The fire strategy is subject to approval under Building Regulations.

5.5 A “defend in place” strategy has been developed for all residential units based on the recommendations of the IFC Fire Strategy report. This strategy would be accomplished by the incorporation of compartmentation to all units, with British Board of Agrement (BBA) approved fire stopping both horizontally and vertically throughout the building to the external build-up. Any fire is assumed to be confined within the flat of fire origin and only occupants in the flat of the fire origin should evacuate in the first instance. Other building occupants may remain unaware of the fire unless evacuated by the fire and rescue service or management (where applicable), or should they become aware they may choose to evacuate at any time.

5.6 Each residential unit has been designed with an automatic fire suppression system (sprinklers) in accordance with Building Regulations for buildings over 30 metres; and would be installed with smoke alarms in each habitable room (bedrooms and living room) and a heat detector in the kitchen; and has been designed to withstand a minimum of 60 minutes fire
compartmentation. All internal materials have been selected in order to provide zero spread of flame.

5.7 With respect to communal areas and lobbies, the London Fire Brigade do not recommend the use of communal fire alarms as these are deemed to instigate panic amongst residents making them leave their homes via stairwells thus preventing required access for the fire brigade.

5.8 A mechanical smoke shaft extraction system would be installed in the common corridors of each tower to prevent smoke entering the stair. All residential levels would be covered by the provisions of a smoke shaft comprising natural and mechanical or natural only depending on the storey served.

5.9 Automatic smoke detection would be installed and would control the mechanisms associated with the corridor smoke control strategy.

5.10 A fire detection control panel would be located at ground floor level within the entrance to confirm the smoke detector or system faults and give a local audible/visual indication illustrating the location of the alarm to the fire brigade upon their arrival.

5.11 Both roof gardens on levels 10 and 20 and the podium garden on the first floor are within the required 45 metre travel distance and therefore no alternative escape routes are required. The stair cores on these levels would be used and are sufficient under regulations to provide escape from the buildings. Each roof garden would be limited to 60 people and building management and adequate signage would be used to control these numbers. A fire alarm would be sounded upon activation of any fire detection along with emergency lighting and escape signage to direct building users from the building or to a place of safety.

5.12 The commercial unit is currently being designed as shell and core with a maximum single direction travel distance of 18 metres and 45 metres to the nearest exit if an alternative is required. As an additional safety measure, a smoke detection system would be installed and connected to the residential building management system until such time that the unit is occupied whereby a suitably developed fire strategy would be employed.

5.13 Cycle stores, bin stores and plant rooms located on the ground floor have been designed to ensure maximum 18 metre travel distances are achieved to the nearest exit.

5.14 A minimum of two exits are provided from the car park. The car park travel distances meet regulations as currently proposed. Mechanical ventilation is not required due to the open nature of the car park with open grated door to the front and louvres to the rear. Access lobbies from the car park would be ventilated to prevent smoke leakage.

5.15 On both residential blocks, the highest occupied floor levels are in excess of 30 metres above ground level and therefore 120 minutes fire resistance would be provided to all structural elements. Unless otherwise required by
Building Regulations, it is proposed to provide a minimum of 30 minutes fire resistance in all areas.

5.16 All cavities within external walls would be fitted with cavity barriers at all compartment boundary locations. The barriers proposed have the same fire resistance as the wall or floor so as not to reduce the period of fire compartmentation required.

5.17 In consultation with the National Housing Building Council the developer has proposed materials which not only meet, but exceed, current regulations. The unitised cladding system encapsulates insulation. The proposed insulation has the highest A1 European rating for spread of flame and is non-combustible.

5.18 The sprinkler system would be designed, installed, commissioned and maintained by an industry specialist to meet Building Regulations for buildings over 30 metres.

5.19 Fire brigade access to the building would be provided from Cambridge Road to the front of the building. A stairwell within each tower would provide firefighting shafts to access each floor along with firefighting lifts also within each tower. An automatic opening vent would be provided at the head of each stairwell, which would be equipped with a manual override for fire service personnel, along with a wet riser to serve each floor.

6.0 Conclusion

6.1 It is considered that the revised materials would not materially affect the overall character, appearance and exemplar quality of the development as originally proposed and for this reason officers and the original scheme architect, Studio Egret West, are in full support of the proposals.

6.2 It is recommended that that the Development Control Board grants approval of condition 11 (external materials) of planning permission 16/01183/FUL.

Background Papers

- Local Plan Policy

  Borough Wide Development Policies Development Plan Document (March 2011)

  Policy BP8 – Protecting Residential Amenity
  Policy BP11 – Urban Design

- The London Plan (March 2016)

  Policy 7.1 – Lifetime Neighbourhoods
  Policy 7.4 – Local Character
  Policy 7.6 – Architecture

- National Planning Policy Guidance