HEALTH & SAFETY GENERAL RISK ASSESSMENT

Replace existing windows with option 1 – Outward opening windows

Location	Chalcots Estate		
Date	**22/03/2019**	**Reference No.**	001 – Option 1
Employee representative	**Dominic Johnson – Head of Safer Homes**	**Manager**	**Gavin Haynes**

Step 1: Hazard - Activity/Workplace/Equipment/Event/intelligence

To determine the current risk level, we used the matrix at the end of the document to determine a risk score based on current information:

Hazard 1. Accidentally falling through the window opening
Risk rating before mitigation: Remote (1) x Fatal (5) = Low (5)

Hazard 2. Windows falling out
Risk rating before mitigation: Possible (3) x Fatal (5) = High (15)

Hazard 3. Working at height for maintenance operatives
Risk rating before mitigation: Unlikely (2) x Fatal (5) = Medium (10)

Hazard 4. Poor ventilation
Risk rating before mitigation: Possible (3) x Serious (3) = Medium (9)

Hazard 5. Items being thrown out of windows
Risk rating before mitigation: Remote (1) x Fatal (5) = Low (5)

Location / circumstances where hazard could arise

All five blocks of the Chalcots estate; Bray, Dorney, Blashford, Taplow and Burnham

Step 2: Persons/Groups at risk

Residents, visitors, contractors and members of the public.

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Step 3: Possible consequences - what harm might occur where hazard could arise
Fatalities or very severe injury could occur from all of the hazards. H1 & H3 = Falls from height (falling out of windows from inside property, maintenance contractors falling whilst working) H2 = Hit by object (window falling out) H4 = Heat stress (not enough ventilation inside the property) H5 = Hit by object (people throwing things out of windows)
Step 4: Existing control measures in place
H1 Window openings above 900mm H2 Security watch during windy weather conditions plus base level scaffolding in some areas H3 Safety systems in place by contractors during work at height maintenance operations H4 Limited window opening H5 Window restrictors

Step 5: Current Risk Rating, taking account of controls currently in place:					
Likelihood	**x**	**Severity**		**=**	
Possible (3)		Fatal (5)		High (15)	
Overall assessment					
LOW (1-8)		**MEDIUM** (9-12)		**HIGH** (15+)	**X**

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Step 6: Further recommended control measures (Medium to very high risks must be reduced to lowest level so far as is reasonably practicable).	
Description	**Priority**
H1 = Accidentally falling through the window opening. This window type would be required to be restricted at 300mm. In addition, key operation is required to release the 100 mm restriction. Window stays (restrictors) will be set to restrict the maximum window opening to 300mm as an option to open the window further might encourage residents to lean out too far. As a result opening this window type beyond 300mm would not be allowed as part of the design. Though restricting this type of window to 300mm would be effective in reducing the risk posed by falling from height, it would restrict the degree of ventilation possible inside the property and would instead introduce a hazard to residents and contribute to H4 heat stress. Please see section 3.1 and 3.2 in the window design technical report for the relevant considerations. In order to satisfy safety concerns in the final design stage the expert design team and the appointed contractor have proposed an additional mitigation to deal with the risk of accidents which could include falling. This is to lower the window sill height to provide a clear gap of 1100mm between window sill and openable sash for both options. This is proposed for the lounge, bedroom windows and kitchen windows that are not over cabinets. This will lower the height of the sill ledge to 200 mm above floor level thereby reducing risk of fall by having a physical barrier to 1100mm above any accessible ledge. This mitigation provides an appropriate design to tackle the main concerns raised by the Council and residents in respect of resident safety. To determine the risk level, we used the matrix at the end of the document to determine a risk score based on the recommended control measures: REMOTE (1) X FATAL (5) = LOW (5)	**LOW**

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H2 = Windows falling out. There is currently a safety watch during windy weather conditions. In addition, safety protection over entrance areas has been installed as an extra precaution. In addition, a safety lanyards have been fitted to all current windows. In the long term, there should be a replacement of the existing windows. It should be noted that option 1 will require additional window restraints/cables to be fitted to restrain the window in case of failure, as it opens outwards. It should be considered that this is a post factory fitting and is therefore not a built in design feature of the window which will require maintenance over the lifecycle of the windows and may be subject to failure. This measure therefore does not totally remove this hazard and there will still be a risk to residents and the public. We must therefore consider this carefully. In the last five years there have been eight instances where window hinges have failed with the most recent in March 2019. In some cases this has resulted in total failure of the opening sash with windows falling from height. The most recent incident happened during high winds. The window falling from height was prevented by the addition of safety restraint fitted on all windows across the estate in 2018. Therefore there is a foreseeable risk that windows opening outwards will be placed under the same level of stress and could fail in the same manner. To determine the risk level, we used the matrix at the end of the document to determine a risk score based on the recommended control measures: UNLIKELY (2) x FATAL (5) = HIGH (10)	**MEDIUM**
H3 = Working at height for maintenance operatives. The Council has a legal duty to design out risk wherever possible as part of refurbishment works. This window option will not reduce the risk level for maintenance operatives working at height and we must consider the safest way for them to work. Outward opening windows would require external maintenance on an ongoing basis. To determine the risk level, we used the matrix at the end of the document to determine a risk score based on the recommended control measures: UNLIKLEY (2) x FATAL (5) = MEDIUM (10)	**MEDIUM**

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H4 = Poor Ventilation. Windows with an opening angle between 15° to 30° will not provide enough ventilation to meet Building Regulations part F criteria in all rooms. This window type therefore does not comply with the above requirement as opening will be limited to 300mm. Consideration of this hazard is important, as we need to ensure residents are able to properly ventilate their homes to avoid heat stress in hot weather conditions. To determine the risk level, we used the matrix at the end of the document to determine a risk score based on the recommended control measures: POSSIBLE (3) x SERIOUS (3) = MEDIUM (9)	**MEDIUM**

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H5 = Items being thrown out of windows As part of the risk assessment process we need to consider reasonable behaviour taking action to mitigate any associated risk. Unreasonable actions of individuals is not something that Camden can mitigate against. If the windows are used in the correct manner, then the risk level which has been assigned through the risk assessment will remain the same. The risk assessment will inform the type of restrictor we put in place and the advice we give to residents about how the windows should be used. As part of the detailed design process we will continue to look at the type of window restrictors to be used, to make sure that we have the safest restrictors for the Chalcots Estate while still allowing residents to open their windows. To determine the risk level, we used the matrix at the end of the document to determine a risk score based on the recommended control measures: REMOTE (1) x FATAL (5) = LOW (5)	**LOW**

Priority Status:

High: Risk being addressed is serious; action/control required urgently/immediately

Medium: Potentially serious, remedial action should be taken within agreed timetable

Low: Minor risk. Implement if/when resources allow.

Step 7: Overall Residual Risk Rating - after additional controls applied				
Likelihood	**x**	**Severity**	**=**	
Unlikely (2)		Fatal (5)		Medium (10)

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LOW (1-8)		**MEDIUM** (9-12)	**X**	**HIGH** (15+)	

Notes; including names and contact numbers of risk assessment participants

Dominic Johnson 020 7974 4138

Both the window design technical report (Window System Options ref 259493/00) and statistics for window failure were used to create this risk assessment. The technical engineers have considered in their report the evaluation criteria, which was established in consultation with Camden, to identify the most suitable window type for the Chalcots estate. They also refer to the resident feedback based on what is important for residents in their replacement windows and their preference in window options. The focus of the risk assessment is to ensure that all those in proximity of the windows are kept safe from the different hazards which have been identified. By using the evidence, as well as our professional experience, we were able to use the risk matrix to determine scores which we consider represents the risk for consideration.

Step 8: Review date	**22/03/20**

Assessment coordinated by - Name in CAPITALS:		**DOMINIC JOHNSON**	
Signature		**Date**	**22/03/19**
Approved by Manager - Name in CAPITALS:		**GAVIN HAYNES**	
Signature		**Date**	**22/03/19**

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Risk matrix: Likelihood X Severity = Risk Rating