

**Report to** Cabinet  
17 January 2018  
**Report of** Director of neighbourhoods  
**Subject** Fire safety in the council's hi-rise tower blocks

**Item**

**1**

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## **Purpose**

To report to cabinet the recommendations from the fire safety checks undertaken in the council's hi-rise tower blocks.

## **Recommendation**

To approve the proposed programme of works following a review of the council's eight hi-rise tower blocks.

To delegate to the director of neighbourhoods in consultation with the deputy leader and cabinet member for social housing, the award of contracts to deliver the works outlined in the report.

## **Corporate and service priorities**

The report helps to meet the corporate priority a healthy city with good housing.

## **Financial implications**

The cost of the work proposed is estimated to be £2,008,187 which will span the two financial years of 2017-18 and 2018-19. The costs of works carried out prior to 31 March 2018 will be met from approved budgetary provision which has been held to cover works arising from the fire safety checks.

Budgetary provision for work carried out after April 2018 will be incorporated into the budgets for 2018-19 which will be approved by council in February.

**Ward/s:** Crome, Mile Cross, Town Close, Thorpe Hamlet

**Cabinet member:** Councillor Harris - deputy leader and social housing

## **Contact officers**

Bob Cronk, director of neighbourhoods	01603 212373
Dave Shaw, operations director, NPS Norwich	01603 227901
Lee Robson, head of neighbourhood housing	01603 212939

## **Background documents**

None

# Report

1. Following the tragic fire in Grenfell Tower London, NPS Norwich were commissioned to undertake detailed surveys of each of the council's eight tower blocks to highlight any repairs and upgrades required to mitigate the potential of risk of fire.
2. The work was undertaken in conjunction with the Norfolk fire and rescue service.
3. The council's eight tower blocks are:
  - Normandie – 16 floors and 95 flats
  - Winchester – 16 floors and 95 flats
  - Ashbourne – 11 floors and 44 flats
  - Burleigh - 11 floors and 44 flats
  - Compass - 11 floors and 44 flats
  - Aylmer - 11 floors and 44 flats
  - Seaman – 11 floors and 44 flats
  - Markham - 11 floors and 44 flats
4. This is a total of 454 flats of which 408 are occupied by tenants and 46 are leaseholder-owned.
5. It is important to note that none of the city council's tower blocks have been fitted with cladding and the safety checks were undertaken to provide reassurance that historic repairs and tenant and leaseholder instigated adaptations had not compromised the compartmentalised fire safety of individual flats, and as a consequence, the building as a whole.
6. The design and construction for fire safety in the tower blocks is based around the principles and effectiveness of fire compartmentation. Compartmentation of individual flats within a block enables residents to remain in their home in the event of a fire where it is reasonably appropriate to do so. Individual flats (compartments) should provide an effective place of refuge for at least 30 minutes.
7. This work is largely complete and a number of recommendations are proposed which will reduce a number of risks highlighted from the surveys and enhance the fire safety features of the tower blocks.

## **The findings and recommendations**

8. Overall, the surveys found that the eight tower blocks were well maintained and continue to perform with regard to fire safety, as designed. The compartmentation overall is intact and the individual risk assessments and evacuation policy are robust and fit for purpose.

9. However, a number of repairs and upgrades are recommended to help prevent fires occurring, to contain the spread of a fire should one occur and to safeguard adequate means of escape in the communal areas should it be required.
10. These are described in the appended report for which Cabinet approval is sought to proceed with the recommendations. The council will fund all the work listed in the various recommendations, including works to leasehold properties, to ensure it meets fire safety standards.
11. Works will be undertaken over the next 12 months based on the level of priority and the timescales and estimated costs are included in the report. Many of these will be delivered in conjunction with the Norfolk fire and rescue service.
12. Building and fire regulations are currently being reviewed following the Grenfell Tower tragedy by the Independent Review of Building Regulations and Fire Safety.
13. The review is expected to report in the spring and the findings may mean that further work will be needed to the council's tower blocks. However, we have no way of knowing the implications of this at this moment in time.

## Integrated impact assessment



**NORWICH**  
City Council

The IIA should assess **the impact of the recommendation** being made by the report

Detailed guidance to help with the completion of the assessment can be found [here](#). Delete this row after completion

### Report author to complete

<b>Committee:</b>	Cabinet
<b>Committee date:</b>	17 January 2018
<b>Director / Head of service</b>	Bob Cronk
<b>Report subject:</b>	Fire safety in the council's hi-rise tower blocks
<b>Date assessed:</b>	4 January 2018

	Impact			
<b>Economic</b> (please add an 'x' as appropriate)	<b>Neutral</b>	<b>Positive</b>	<b>Negative</b>	<b>Comments</b>
Finance (value for money)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Other departments and services e.g. office facilities, customer contact	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
ICT services	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Economic development	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Financial inclusion	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<b>Social</b> (please add an 'x' as appropriate)	<b>Neutral</b>	<b>Positive</b>	<b>Negative</b>	<b>Comments</b>
Safeguarding children and adults	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<u>S17 crime and disorder act 1998</u>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Human Rights Act 1998	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Health and well being	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	The improvements carried out from the works proposed will enhance the safety of residents living in the council's eight high rise tower blocks

	Impact			
Equality and diversity (please add an 'x' as appropriate)	Neutral	Positive	Negative	Comments
Relations between groups (cohesion)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Eliminating discrimination & harassment	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Advancing equality of opportunity	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Environmental (please add an 'x' as appropriate)	Neutral	Positive	Negative	Comments
Transportation	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Natural and built environment	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Waste minimisation & resource use	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Pollution	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Sustainable procurement	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Energy and climate change	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
(Please add an 'x' as appropriate)	Neutral	Positive	Negative	Comments

	Impact			
<b>Risk management</b>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	The improvements carried out from the works proposed will enhance the safety of residents living in the council's eight high rise tower blocks

<b>Recommendations from impact assessment</b>	
<b>Positive</b>	
The work proposed will enhance the fire safety status of the council's eight tower blocks	
<b>Negative</b>	
<b>Neutral</b>	
<b>Issues</b>	



# Tower block review



**January 2018**

**NPS Norwich Ltd**

**Prepared for:**

**Norwich City Council**



**NORWICH**  
City Council

# **Tower block review**

## **Background**

Following the fire in Grenfell Tower in London, NPS Norwich Ltd was commissioned to carry out detailed surveys of council owned tower blocks. This work has been used to update fire safety requirements of the 454 flats and communal areas within the eight high-rise tower blocks owned and managed by Norwich City Council. This exercise was carried out with the support of Norfolk Fire and Rescue Service.

The surveys were undertaken to highlight any repairs and upgrades required to mitigate the potential of risk of fire.

None of the city council's tower blocks have been fitted with cladding which is believed to have contributed to the Grenfell Tower tragedy. However, the council wanted reassurance as a responsible landlord, that historic repairs and tenant and leaseholder instigated adaptations, had not compromised the compartmentalisation and fire safety of individual flats, and as a consequence, the building as a whole.

In the last few years, a successful communal area policy has been implemented and the communal areas in the tower blocks have been maintained as obstruction free and sterile.

The blocks also have a caretaking service that provide a visible presence in the towers. The caretakers contribute to the blocks being safe through their day to day duties such as ensuring the communal areas are clean and clear of obstructions as well as getting to know the residents particularly those who may have care or support needs.

The tower blocks in question are as follows:

- Normandie – 16 floors and 95 flats
- Winchester – 16 floors and 95 flats
- Ashbourne – 11 floors and 44 flats
- Burleigh - 11 floors and 44 flats
- Compass - 11 floors and 44 flats
- Aylmer - 11 floors and 44 flats
- Seaman – 11 floors and 44 flats
- Markham - 11 floors and 44 flats

(for more information see appendix 1)

## **Survey methodology**

The inspection programme ran from 24 July to 14 October 2017. At the time of this report, 411 of the 454 flats had been surveyed equating to an access rate of 90.5 per cent.

The programme followed an agreed process which involved the council's tower block caretakers hand delivering letters to all 454 flats (see appendix 2). The letters informed residents and leaseholders about the programme, its importance for the safety of all residents and provided dates of when NPS Norwich surveyors and fire service staff would be on site to carry out the inspections.

Tenants and leaseholders of flats where we were unable to gain access were sent follow-up letters asking them to get in touch with NPS Norwich and later the council to set up a convenient appointment for an inspection (see appendix 3 and 3a).

Following this process there remain 43 flats which we have not been able to inspect. In these instances, the approach taken has been to apply any tower-block wide recommended repairs to these flats. Of the 454 flats, 408 are occupied by residents and 46 are leaseholder-owned.

## **The findings and recommendations**

Over all, the surveys found that the eight tower blocks were well maintained and continue to perform with regard to fire safety, as designed. The compartmentalisation overall is intact and the individual risk assessments and evacuation policy are robust and fit for purpose.

However, as a consequence of the surveys a number of planned and partially completed programmes of work will be accelerated. A number of other works and upgrades are also recommended to help prevent fires occurring, to contain the spread of a fire should one occur, and to safeguard adequate means of escape in the communal areas.

The design and construction for fire safety in the tower blocks is based around the principles and effectiveness of fire compartmentalisation. The compartmentalisation of individual flats within a block enables residents to remain in their home in the event of a fire where it is reasonably appropriate to do so. Individual flats (compartments) should provide an effective place of refuge for at least 30 minutes.

The surveys have therefore identified how this compartmentalisation can be enhanced.

A copy of the letter notifying residents about the findings and recommendations and a summary of these are included at appendix 4 and 4a.

## **Recommendation 1 – full door replacement**

### **The proposal**

To replace 718 existing front doors and store doors with new fire doors.

The survey has identified a number of repairs required to flat entrance and store doors. Many of these doors have been repaired by us in the past or have had alterations made to them by the residents over a number of years.

To renovate and repair the existing doors would be time consuming, complex, disruptive for residents and not cost effective. It is therefore recommended that all of the entrance and store doors are replaced early in the New Year. There is budgetary provision available for this work in this financial year.

Examples of issues with doors:



**Example of letter flap with no intumescent liner**



**Additional door furniture added to front door**



**Door closer removed**



Gap between door and frame exceeding 4 mm recommended tolerance

### **Issues addressed**

Replacing the front doors and store doors will mitigate 46 per cent of the issues identified.

**The cost**  
£668,800

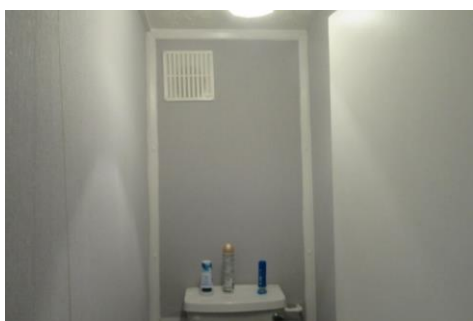
### **Timing**

This work will be carried out in the next 6 months and begin in mid-January 2018.

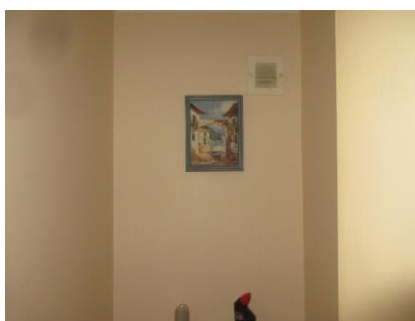


## Recommendation 2 – bathroom improvements

The survey has identified a number of issues that we are already addressing through a planned programme of work. This includes the upgrading of wooden framed removable service riser panels in bathrooms, and replacing them with metal framed fixed panelling. These panels house soil waste pipes and access to these is generally achieved by removing the WCs and not by removing the panels. Fixed, upgraded panelling will further maintain the compartmentalisation of the flats.



Example of existing panelling



Example of new panelling

Fitting intumescent strips to air transfer grills, waste pipes and other voids will also be carried out as necessary. Again, historic repairs by us or alterations made to them by the residents over a number of years, mean that replacing and standardising ventilation ducts and air transfer grilles will be less time consuming and more cost effective.

The cover grilles to these openings can be replaced with a new cover which includes an intumescent liner. These liners are designed to expand and fill the opening to prevent the spread of smoke and fire. A majority of the upgraded flats in Winchester and Normandie Tower have already been fitted with these types of grille.



Variety of ventilation ducts with no intumescent liner



Example of new grille cover

Work will also continue to upgrade waste pipes so they are fitted with an intumescent collar.



**Waste pipe from WC penetrating compartment panel**



**New pipework fitted with intumescent collar**

## **Issues addressed**

Carrying out this work will address 31 per cent of the issues identified

## **The cost**

- a) Grilles with intumescent liners £25,676
  - b) Bathroom service panels £1,035,207
  - c) Soil waste pipe collars £6,180
- Total £1,067,063

## **Timing**

This work will be carried out over 12 months. Expected start date spring 2018.

### **Recommendation 3 – replace lounge/hall vision panels with safety glass**

While not a fire door, the dividing door between the hall and lounge protects the means of escape from the bedroom, bathroom and WC from the most likely source of a fire (ie the lounge or kitchen).



Two examples of non-fire rated visual panels to door and side panel.

### **Issues addressed**

Carrying out this work will address 4 per cent of the issues identified

### **The cost**

£103,500

### **Timing**

This work will be carried out over 12 months. Expected start date spring 2018.



#### **Recommendation 4 – replace battery operated smoke alarms with hardwired units**

The presence of effective smoke alarms is essential for early warning and life safety in tower blocks. They must be present at the least in the means of escape of any flat. Smoke alarms varied in number and quality, some being older battery style ones and some flats having mains powered alarms fitted with a test switch panel mounted in the wall. All flats had the smoke alarm tested as part of the survey.

The council already has a programme to install hardwired smoke alarms throughout every flat and is currently half way through the work. The remainder of the programme to install 192 smoke alarms will be accelerated.



Example of older battery style alarms (left) and newer mains powered alarms (right)

#### **Issues addressed**

Carrying out this work will address 1 per cent of the issues identified

**The cost**  
£53,567

#### **Timing**

This work will be carried out over 3 months. Programme of installation accelerated from winter 2018.

## **Recommendation 5 – miscellaneous improvements and repairs**

A number of other issues also have been identified across a number of flats, some examples are outlined below.

Removal of flammable items stored on balconies



**Flammable Items stored on balcony**

The replacement of decorative polystyrene ceiling tiles present in some flats.



**Decorative polystyrene ceiling tiles**

### **Issues addressed**

Carrying out this work will address 18 per cent of the issues identified

**The cost**  
**£32,757**

### **Timing**

This work will be carried out over 12 months. Expected start date spring 2018.

## **Recommendation 6 – upgrade communal suppression system and install bespoke suppression systems**

The current fire safety measures, in particular the fire compartmentalisation is deemed to be effective. Winchester and Normandie Towers have water based suppression systems fitted to the waste stores at the base of the refuse chutes.

However, it is felt these systems would benefit from being upgraded to a more up-to-date automatic chemical based suppression system and retrofit these systems to waste stores in all the towers.

In addition chemical based suppression systems will be retro-fitted into the service riser cupboards in all eight towers.

This provides a targeted approach to the use of suppression systems where it is considered they will have most impact.



**Tower bin store and refuse chute**



**Service riser cupboard**

Norfolk Fire and Rescue Service has also recommended the use of independent domestic fire suppression systems, which are designed for use with residents who have mobility issues or who are vulnerable due to their life style.

The council will work with the fire service to develop the criteria that will be used to guide where these individual units are installed.

### **Issues addressed**

Carrying out this work will address any potential issues around the compromising of the communal waste chutes and service risers.

### **The cost**

Bin store suppression systems £43,000

Riser cupboard suppression systems £24,500

Independent domestic suppression system £2,000-3,000 each (estimated)

### **Timing**

This work will be carried out over 6 months. Expected start date spring 2018.

## **Recommendation 7 – review and refresh inspection procedures**

It is important that the council reviews inspection and monitoring controls in the tower blocks to ensure they are effective. This will need to cover future construction activities as well as any changes introduced by tenants and leaseholders. There are currently a number of ways in which the building is inspected.

### **Day to day checks**

#### **Caretakers**

The council's caretakers provide a visible presence in the tower blocks and have an important role in knowing the residents and particularly those who may be vulnerable. The caretakers undertake daily health and safety checks of the common areas as part of their regular duties and tasks.

The caretaking team will be provided with specialist training by the fire and rescue service to ensure that all possible fire safety issues for example, damage to doors and door closers are identified recorded and rectified as required.

#### **Housing Officers**

Housing officers will visit the towers to undertake tenancy inspections. These visits will provide a further opportunity for employees to identify fire safety issues to ensure they are rectified or vulnerability issues with residents who require additional support.

#### **Contractors**

Similarly, contractors undertaking works in the towers will be provided with training to identify fire safety issues and how to report them for rectification.

The council will also refresh the policies and procedures for clerk of works activity and ensure there is effective interaction between contractors undertaking works in the towers and the clerk of works.

#### **Inspections**

The requirement for a fire risk assessment extends to the managed common parts of each tower block and is the single most important inspection regime that must be carried out to ensure compliance with statutory legislation and to ensure the council's meets the required legal obligations to manage the fire safety in the buildings.

The fire and rescue service will carry out an annual independent fire safety audit.

### **Issues addressed**

This addresses issues around any ongoing training needs.

#### **The cost**

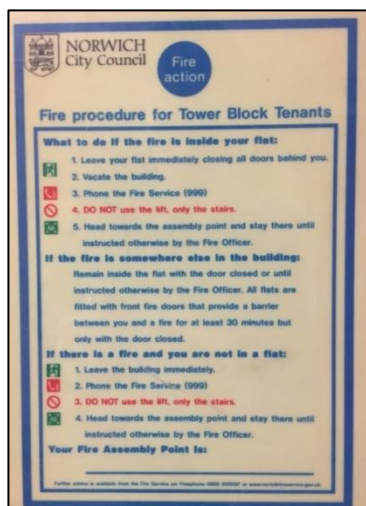
£5,000

#### **Timing**

Expected start date winter 2018

## Recommendation 8 – education and information programme

There is information relating to fire safety already present in all tower blocks. One of the positives we need to build on is how readily tenants and leaseholders were to engage with the fire service and council staff when they visited the blocks as part of the survey.



Current fire safety notice

We have identified a number of things that could be improved in terms of the quality and timeliness information relating to fire safety.

Working with the fire service and residents, it is proposed to develop an education and information programme which will look at, information on notice boards; additional information relating to stay put policy; fire doors; smoke alarms; product recalls; hazardous materials or substances and use of communal areas and resident activities (smoking, cooking and trailing leads etc).

As part of this programme there is a need to develop an efficient way for residents to report defects/concerns relating to fire safety.

### Issues addressed

This addresses issues around the continuing need to update information and work with residents to make sure they are well informed and alert to both fire prevention and procedures.

### The cost

£10,000

### Timing

This work will be carried out over 12 months. Expected start date winter 2018.

## **Recommendation 9 – continue with the stay-put policy**

The stay put policy was reviewed as part of the assessment of the survey with advice from the Norfolk fire and rescue service. Compartmentalisation in the tower blocks is effective and carrying out the repairs and improvements outlined in this report supports and enhances the 30-minute stay put policy.

Compartmentalisation of individual flats within a block enables residents to remain in their home in the event of a fire where it is reasonably appropriate to do so. Individual flats (compartments) should provide an effective place of refuge for at least 30 minutes.

There are two separate elements that contribute to suitable and sufficient fire action procedures, these are the building and associated passive and active controls and, the procedures in place for the management of residents.

The fire safety philosophy is based around the compartmentalisation of each dwelling which incorporates the fire safety flat entrance door which should provide an effective place of refuge for at least 30 minutes.

The stay-put procedure is designed to stop residents in flats unaffected by fire from unnecessarily evacuating the building and blocking the staircase preventing the fire fighters from accessing the location of the fire in a timely manner.

The stay-put policy follows simple guidelines – occupants of a flat where a fire originates must evacuate the premises and summon the fire service.

If a fire occurs in a common area, anyone in that area should leave the building and call the emergency services. The remainder of the building's occupants are safe to remain in their flats, unless directed to leave by the fire service. Some residents in surrounding flats may wish to evacuate the premises in any case, and of course, should not be prevented from doing so and a stay-put policy does not mean residents must remain in all situations.

The principles of the original fire safety design in the towers are based on a fire being able to be contained. This means a fire breaking out in one flat or compartment should not spread throughout the rest of a building, before the emergency services arrive and are able to extinguish the fire.

Fire safety in the towers is highly dependent on fire resistant construction and this is achieved through effective compartmentalisation of the individual flats, and the protection of common areas and corridors to help ensure escape where necessary. The Fire Service has access to a variety of vehicles and equipment that will provide assistance where evacuation of tower blocks is necessary.

The inclusion of fire resistant compartmentalisation should help to ensure that fire is contained in its area of origin and does not endanger those flats nearby. This is the basis of the stay-put policy.

## **In conclusion**

Norfolk Fire and Rescue Service has given us reassurance that there are no serious concerns with our tower blocks. They will continue to work with us to ensure fire safety for our residents.

It should be noted that building and fire regulations are being reviewed post Grenfell.

This may mean that further work will be needed to the council's tower blocks as a result of this review. We have no way of knowing the implications of this at this moment in time.





Ashbourne Tower

Description

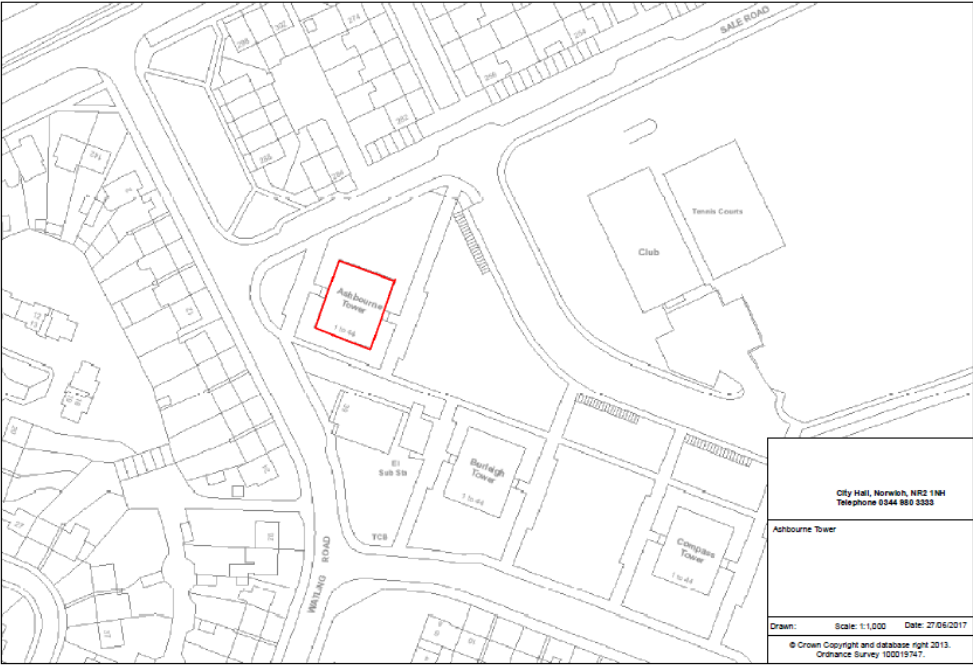
Address; Ashbourne Tower, Watling Road, Norwich, NR7 9TJ							
Building Owner		Built	Storeys	No of Units	Mix of Units by Bedrooms	Council Owned	Privately Owned (Leasehold)
The City Council of Norwich, St Peters Street, Norwich, NR2 1NH		1965	11	44	1 x 1 Bed and 43 x 2 Bed	38	6

The ground floor has 1 no. 1 bed flat and 3 no. 2 bed flats. All subsequent floors have 4 no. 2 bed flats. The building is of reinforced concrete frame construction

This block has a general needs letting policy.

At the time of writing this report, there are 38 Norwich City Council tenants and 6 Leaseholders in the block.

The building has not been externally cladded.



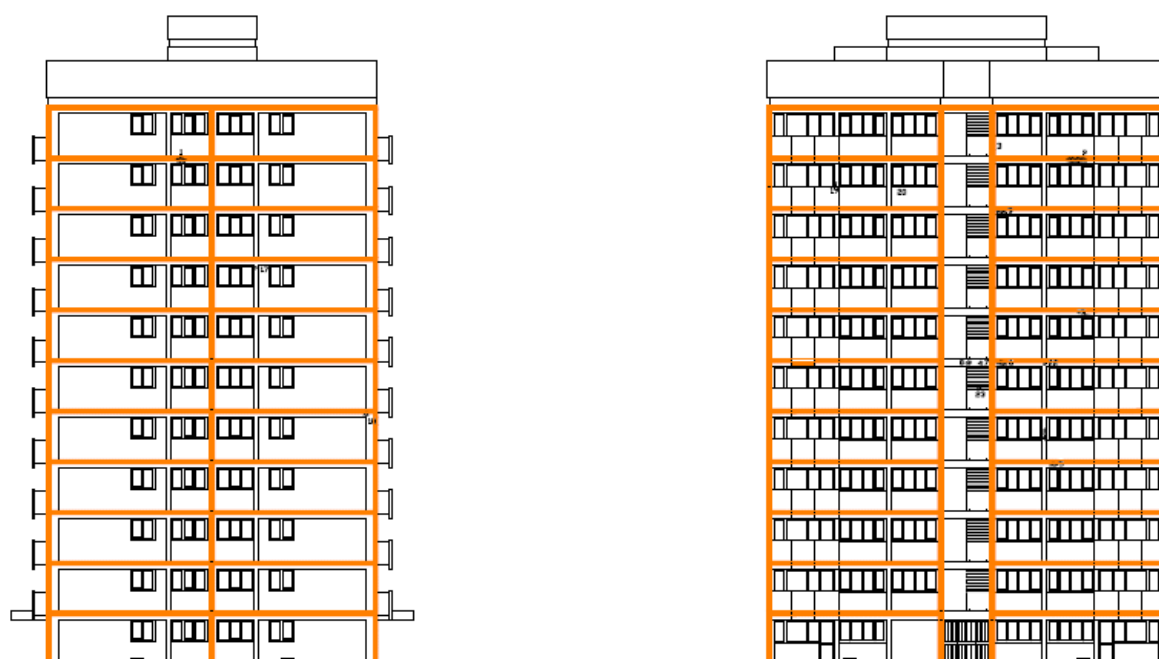
Location Plan



Image

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## Heartsease Towers - Vertical Compartmentations



## Construction Characteristics

The building is of reinforced concrete frame construction with brick infill panels to all elevations. The construction system is a “Truscon – Point Block 3 (PB3) system.

## Fire Management and Compartmentation

This tower block operates a ‘stay put’ policy. Please refer to the ‘Existing Fire Plan’ section later in the report for a detailed explanation of the policy in the event of a fire.

## Original Design

Horizontal compartmentation exists within each dwelling provided by the original flat entrance fire door.

The escape stairwell has a 30 minute fire door opening in to the lift lobby on all floors. The lift lobby is further separated from communal access corridors by a further 30 minute timber fire door and glazed screen on floors 1 to 11. On the ground floor the entrance and exit doors are separated from the lift lobby by a 30 minute fire door and glazed screen.

The design philosophy is based around robust compartmentation. The compartmentation described above cannot be effective in all circumstances due to the absence of quality checks during the original construction and any interim alteration and/or improvement work.

Generally, the construction of the walls to the stair cores to all blocks will provide 2-hour fire resistance. All other masonry/concrete walls will provide 1-hour fire resistance. However, it is noted there are weaknesses in the compartmentation directly as a result of dry riser penetrations.

All of the individual tower block dwellings share internal common service riser ducts for water, drainage and ventilation.

A common service riser duct outside of the dwellings and within a common area services cupboard supplies electrical services. The stair cores and service riser ducts are vertical fire rated compartments.

The compartmentation is so effective within the blocks that if ever a fire developed within an individual flat, the route of progress through the building would most likely be via the external walls specifically through existing window openings. However, a fire within a single dwelling may affect the neighbouring flat (sharing the communal access corridor) before progressing via the external windows.

The original single glazed timber-framed windows were replaced with plastic double glazed units. Whilst this does not provide any certified fire resistance; it has not worsened the protection that was afforded by the original windows.

It is therefore vitally important that all alterations, additions and routine maintenance undertaken in these buildings is carried out without compromising the existing compartmentation criteria and where considered reasonably practicable, upgraded to meet current requirements.

# Burleigh Tower

## Description

Address; Burleigh Tower, Munnings Rd, Norwich NR7 9TN							
Building Owner		Built	Storeys	No of Units	Mix of Units by Bedrooms	Council Owned	Privately Owned (Leasehold)
The City Council of Norwich, St Peters Street, Norwich, NR2 1NH		1965	11	44	1 x 1 Bed and 43 x 2 Bed	40	4

The ground floor has 1 no. 1 bed flat and 3 no. 2 bed flats. All subsequent floors have 4 no. 2 bed flats. The building is of reinforced concrete frame construction

This block has a general needs letting policy.

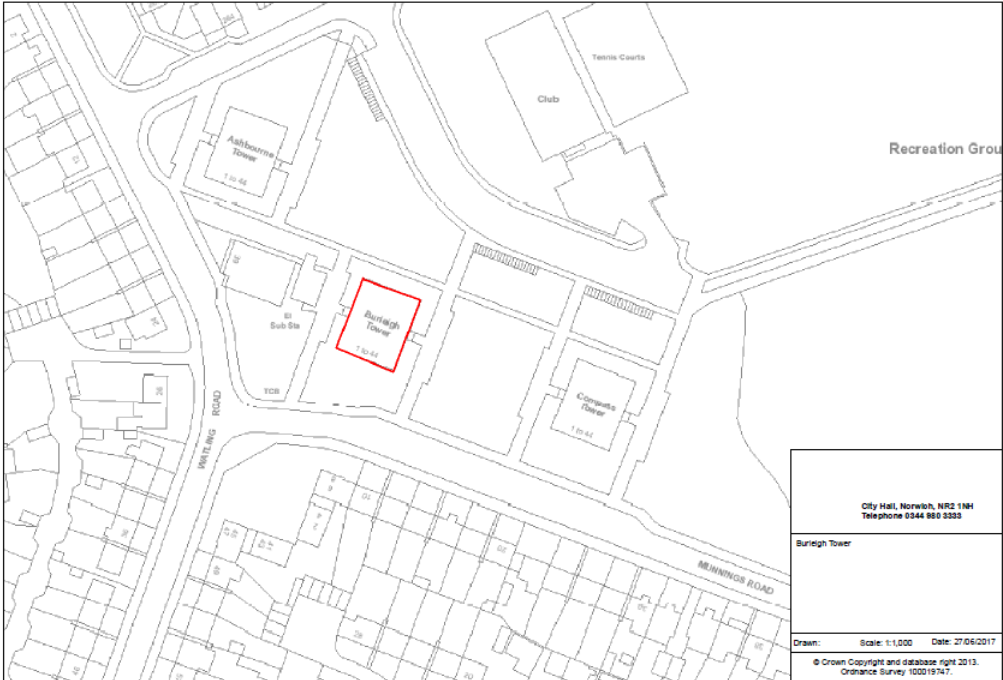
At the time of writing this report, there are 40 Norwich City Council tenants and 4 leaseholders in the block.

The building has no been external cladding.

## Image



## Location Plan



## **Construction Characteristics**

The building is of reinforced concrete frame construction with brick infill panels to all elevations. The construction system is a “Truscon – Point Block 3 (PB3) system.

## **Fire Management and Compartmentation**

This tower block operates a ‘stay put’ policy. Please refer to the ‘Existing Fire Plan’ section later in the report for a detailed explanation of the policy in the event of a fire.

## ***Original Design***

Horizontal compartmentation exists within each dwelling provided by the original flat entrance fire door.

The escape stairwell has a 30 minute fire door opening in to the lift lobby on all floors. The lift lobby is further separated from communal access corridors by a further 30 minute timber fire door and glazed screen on floors 1 to 11. On the ground floor the entrance and exit doors are separated from the lift lobby by a 30 minute fire door and glazed screen.

The design philosophy is based around robust compartmentation. The compartmentation described above cannot be effective in all circumstances due to the absence of quality checks during the original construction and any interim alteration and/or improvement work.

Generally, the construction of the walls to the stair cores to all blocks will provide 2-hour fire resistance. All other masonry/concrete walls will provide 1-hour fire resistance.

All of the individual tower block dwellings share internal common service riser ducts for water, drainage and ventilation.

A common service riser duct outside of the dwellings and within a common area services cupboard supplies electrical services. The stair cores and service riser ducts are vertical fire rated compartments.

The compartmentation is so effective within the blocks that if ever a fire developed within an individual flat, the route of progress through the building would most likely be via the external walls specifically through existing window openings. However a fire within a single dwelling may affect the neighbouring flat (sharing the communal access corridor) before progressing via the external windows.

It is therefore vitally important that all alterations, additions and routine maintenance undertaken in these buildings is carried out without compromising the existing compartmentation criteria and where considered reasonably practicable, upgraded to meet current requirements.

## ***Historical Fire Events***

In January 2016, a fire broke out on the 9<sup>th</sup> floor of Burleigh tower. The fire started in the kitchen, caused by the tenant leaving a damp tea towel on the cooker that then caught on fire.

The fire brigade were called and successfully extinguished the fire before it was able to spread to any other parts of the flat or wider building. No injuries were reported and only minor damage to the individual’s property was reported.

<http://www.edp24.co.uk/news/shock-at-dramatic-response-to-heartsease-flat-fire-1-4400309>



# Compass Tower

## Description

Address; Compass Tower, Munnings Rd, Norwich NR7 9TW							
Building Owner	Building Owner Contact	Built	Storeys	No of Units	Mix of Units by Bedrooms	Council Owned	Privately Owned (Leasehold)
The City Council of Norwich, St Peters Street, Norwich, NR2 1NH		1964	11	44	1 x 1 Bed and 43 x 2 Bed	41	3

The ground floor has 1 no. 1 bed flat and 3 no. 2 bed flats. All subsequent floors have 4 no. 2 bed flats. The building is of reinforced concrete frame construction.

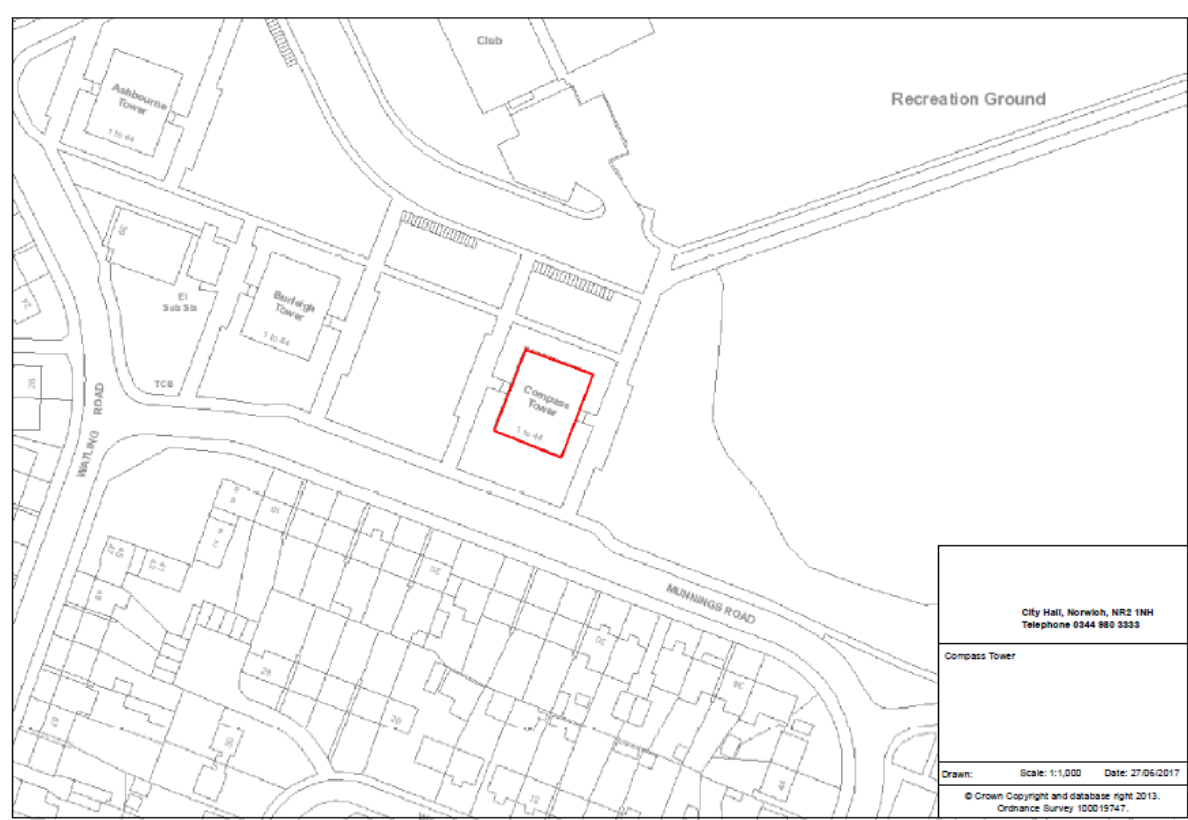
This block has a general needs letting policy.

At the time of writing this report, there are 41 Norwich City Council tenants and 3 leaseholders in the block.

The building has not been externally cladded.



## Location Plan



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## **Construction Characteristics**

The building is of reinforced concrete frame construction with brick infill panels to all elevations. The construction system is a “Truscon – Point Block 3 (PB3) system.

## **Fire Management and Compartmentation**

This tower block operates a ‘stay put’ policy. Please refer to the ‘Existing Fire Plan’ section later in the report for a detailed explanation of the policy in the event of a fire.

## **Original Design**

Horizontal compartmentation exists within each dwelling provided by the original flat entrance fire door.

The escape stairwell has a 30 minute fire door opening in to the lift lobby on all floors. The lift lobby is further separated from communal access corridors by a further 30 minute timber fire door and glazed screen on floors 1 to 11. On the ground floor the entrance and exit doors are separated from the lift lobby by a 30 minute fire door and glazed screen.

The design philosophy is based around robust compartmentation. The compartmentation described above cannot be effective in all circumstances due to the absence of quality checks during the original construction and any interim alteration and/or improvement work.

Generally, the construction of the walls to the stair cores to all blocks will provide 2-hour fire resistance. All other masonry/concrete walls will provide 1-hour fire resistance. However, it is noted there are weaknesses in the compartmentation directly as a result of dry riser penetrations.

All of the individual tower block dwellings share internal common service riser ducts for water, drainage and ventilation.

A common service riser duct outside of the dwellings and within a common area services cupboard supplies electrical services. The stair cores and service riser ducts are vertical fire rated compartments.

The compartmentation is so effective within the blocks that if ever a fire developed within an individual flat, the route of progress through the building would most likely be via the external walls specifically through existing window openings. However a fire within a single dwelling may affect the neighbouring flat (sharing the communal access corridor) before progressing via the external windows.

The original single glazed timber-framed windows were replaced with plastic double glazed units. Whilst this does not provide any certified fire resistance; it has not worsened the protection that was afforded by the original windows.

It is therefore vitally important that all alterations, additions and routine maintenance undertaken in these buildings is carried out without compromising the existing compartmentation criteria and where considered reasonably practicable, upgraded to meet current requirements.

## Aylmer Tower

### *Description*

Address; Aylmer Tower, Lefroy Road, Norwich, NR3 2NZ							
Building Owner		Built	Storeys	No of Units	Mix of Units by Bedrooms	Council Owned	Privately Owned (Leasehold)
The City Council of Norwich, St Peters Street, Norwich, NR2 1NH		1966	11	44	1 x 1 Bed and 43 x 2 Bed	43	1

The ground floor has 1 no. 1 bed flat and 3 no. 2 bed flats. All subsequent floors have 4 no. 2 bed flats.

The building is of reinforced concrete frame construction with brick infill panels to all elevations. The construction system is "Truscon – Point Block 3 (PB3) system.

This block has a general needs letting policy.

At the time of writing this report, there are 43 Norwich City Council tenants and 1 Leaseholders in the block.

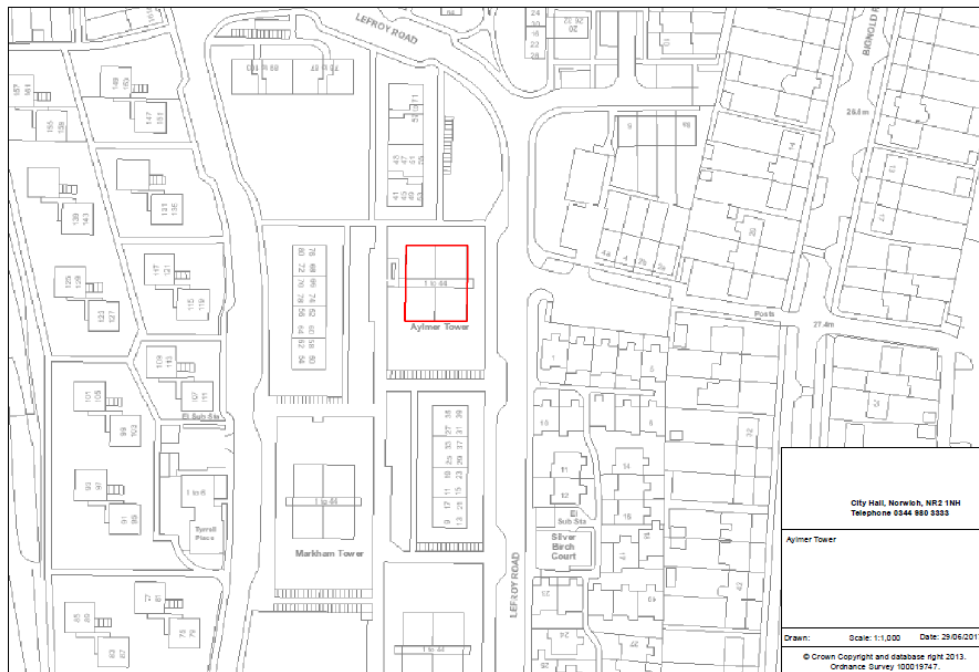
The building has not been externally cladded.

### *Image*

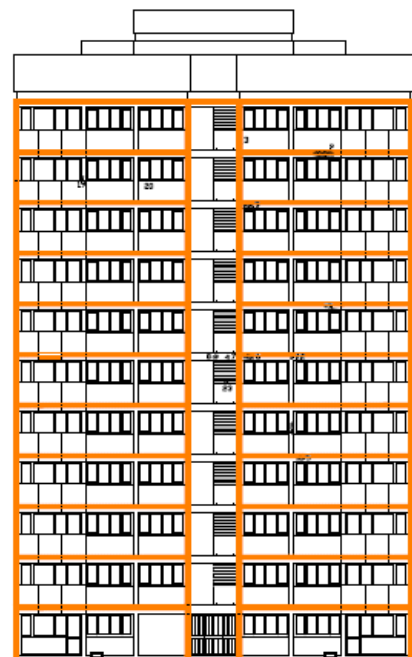
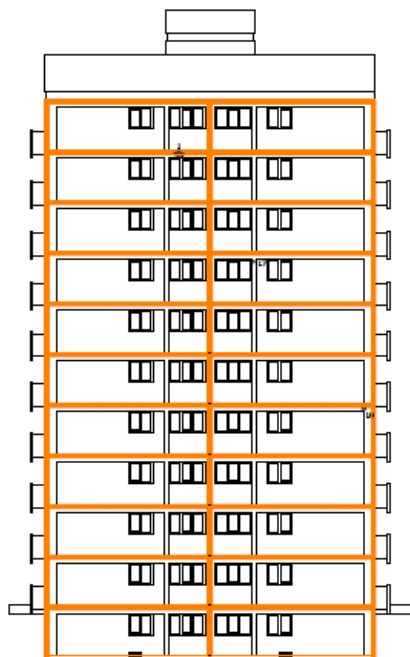




## Location Plan



## Mile Cross Towers - Vertical Compartmentations



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## **Construction Characteristics**

The building is of reinforced concrete frame construction with brick infill panels to all elevations. The construction system is a “Truscon – Point Block 3 (PB3) system.

## **Fire Management and Compartmentation**

This tower block operates a ‘stay put’ policy. Please refer to the ‘Existing Fire Plan’ section later in the report for a detailed explanation of the policy in the event of a fire.

## **Original Design**

Horizontal compartmentation exists within each dwelling provided by the original flat entrance fire door.

The escape stairwell has a 30 minute fire door opening in to the lift lobby on all floors. The lift lobby is further separated from communal access corridors by a further 30 minute timber fire door and glazed screen on floors 1 to 11. On the ground floor the entrance and exit doors are separated from the lift lobby by a 30 minute fire door and glazed screen.

The design philosophy is based around robust compartmentation.

Generally, the construction of the walls to the stair cores to all blocks will provide 2-hour fire resistance. All other masonry/concrete walls will provide 1-hour fire resistance.

All of the individual tower block dwellings share internal common service riser ducts for water, drainage and ventilation.

A common service riser duct outside of the dwellings and within a common area services cupboard supplies electrical services. The stair cores and service riser ducts are vertical fire rated compartments.

The compartmentation is so effective within the blocks that if ever a fire developed within an individual flat, the route of progress through the building would most likely be via the external walls specifically through existing window openings. However a fire within a single dwelling may affect the neighbouring flat (sharing the communal access corridor) before progressing via the external windows.

It is therefore vitally important that all alterations, additions and routine maintenance undertaken in these buildings is carried out without compromising the existing compartmentation criteria and where considered reasonably practicable, upgraded to meet current requirements.

## Markham Tower

### Description

Address; Markham Tower, Bowers Avenue, Norwich NR3 2PX							
Building Owner		Built	Storeys	No of Units	Mix of Units by Bedrooms	Council Owned	Privately Owned (Leasehold)
The City Council of Norwich, St Peters Street, Norwich, NR2 1NH		1966	11	44	1 x 1 Bed and 43 x 2 Bed	41	3

The ground floor has 1 no. 1 bed flat and 3 no. 2 bed flats. All subsequent floors have 4 no. 2 bed flats.

The building is of reinforced concrete frame construction with brick infill panels to all elevations. The construction system is "Truscon – Point Block 3 (PB3) system.

This block has a general needs letting policy.

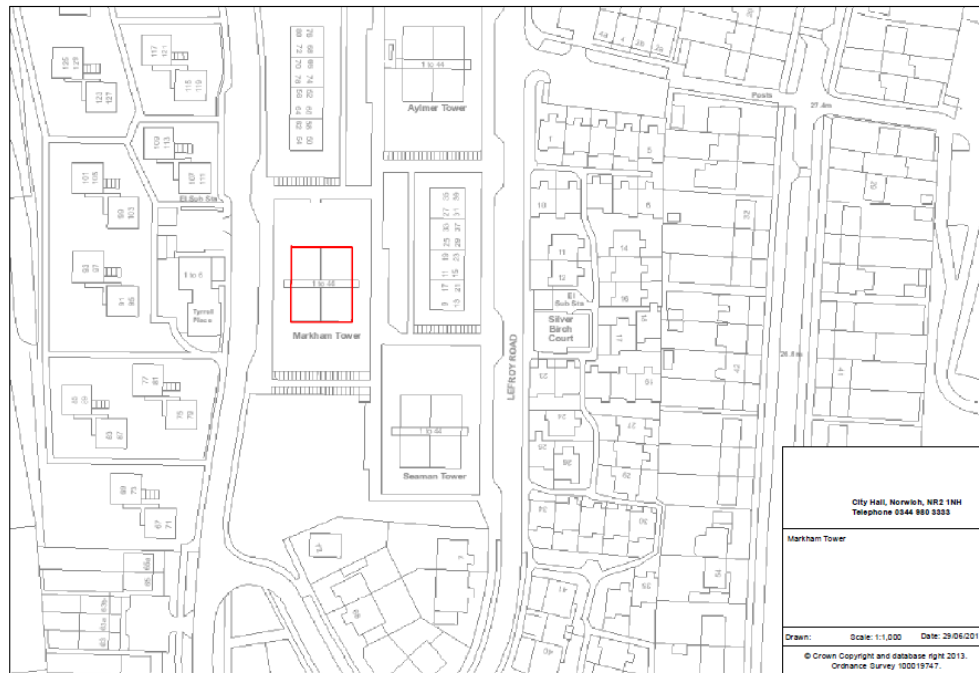
At the time of writing this report, there are 41 Norwich City Council tenants and 3 leaseholders in the block.

The building has not been externally cladded.

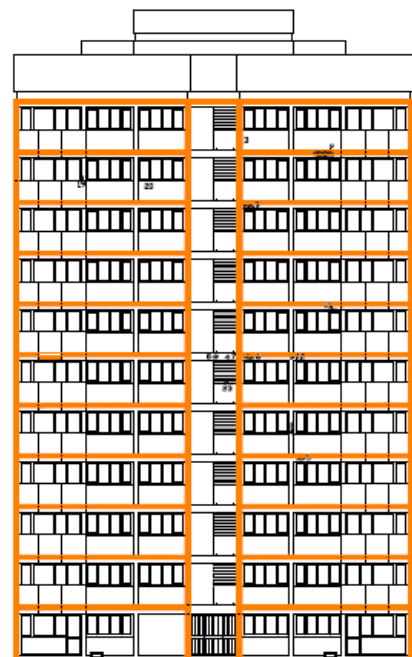
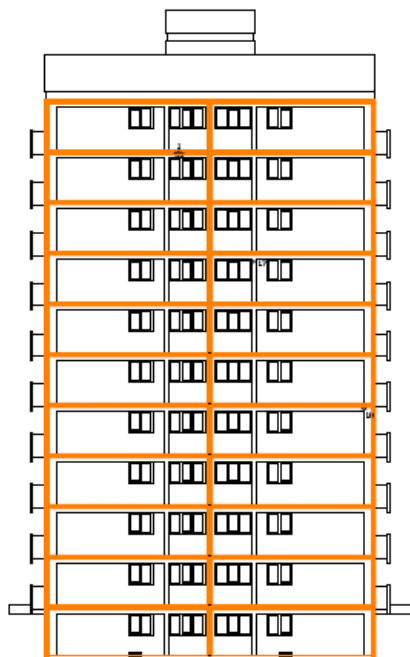
### Image



## Location Plan



## Mile Cross Tower - Vertical Compartmentations



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## **Construction Characteristics**

The building is of reinforced concrete frame construction with brick infill panels to all elevations. The construction system is “Truscon – Point Block 3 (PB3) system.

## **Fire Management and Compartmentation**

This tower block operates a ‘stay put’ policy. Please refer to the ‘Existing Fire Plan’ section later in the report for a detailed explanation of the policy in the event of a fire.

## **Original Design**

Horizontal compartmentation exists within each dwelling provided by the original flat entrance fire door.

The escape stairwell has a 30 minute fire door opening in to the lift lobby on all floors. The lift lobby is further separated from communal access corridors by a further 30 minute timber fire door and glazed screen on floors 1 to 11. On the ground floor the entrance and exit doors are separated from the lift lobby by a 30 minute fire door and glazed screen.

The design philosophy is based around robust compartmentation. The compartmentation described above cannot be effective in all circumstances due to the absence of quality checks during the original construction and any interim alteration and/or improvement work.

Generally, the construction of the walls to the stair cores to all blocks will provide 2-hour fire resistance. All other masonry/concrete walls will provide 1-hour fire resistance. However, it is noted there are weaknesses in the compartmentation directly as a result of dry riser penetrations.

All of the individual tower block dwellings share internal common service riser ducts for water, drainage and ventilation.

A common service riser duct outside of the dwellings and within a common area services cupboard supplies electrical services. The stair cores and service riser ducts are vertical fire rated compartments.

The compartmentation is so effective within the blocks that if ever a fire developed within an individual flat, the route of progress through the building would most likely be via the external walls specifically through existing window openings. However a fire within a single dwelling may affect the neighbouring flat (sharing the communal access corridor) before progressing via the external windows.

It is therefore vitally important that all alterations, additions and routine maintenance undertaken in these buildings is carried out without compromising the existing

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compartmentation criteria and where considered reasonably practicable, upgraded to meet current requirements.



### **Historical Fire Events**

In September 2011 a fire broke out in an 8<sup>th</sup> storey flat in Markham Tower. The fire started in the living room by an electrical fault believed to be from a tenants unattended appliance. The fire was contained to within the one flat due to the compartmentation within the flats construction.

The only damage to other flats was due to smoke damage caused by smoke entering the flat above through the external window opening. There was significant water damage to the flats below due to the large volumes of water used to extinguish the fire.

From records of the above incident it is clearly indicated that the immediate and root cause of the incident was human error or at worst the tenants own electrical equipment and therefore

could not have been prevented by intervention from the landlord.

## Seaman Tower

### Description

Address; Seaman Tower, Lefroy Road, Norwich NR3 2NW							
Building Owner		Built	Storeys	No of Units	Mix of Units by Bedrooms	Council Owned	Privately Owned (Leasehold)
The City Council of Norwich, St Peters Street, Norwich, NR2 1NH		1966	11	44	1 x 1 Bed and 43 x 2 Bed	43	1

The ground floor has 1 no. 1 bed flat and 3 no. 2 bed flats. All subsequent floors have 4 no. 2 bed flats.

The building is of reinforced concrete frame construction with brick infill panels to all elevations. The construction system is "Truscon – Point Block 3 (PB3) system.

This block has a general needs letting policy.

At the time of writing this report, there are 43 Norwich City Council tenants and 1 leaseholders in the block.

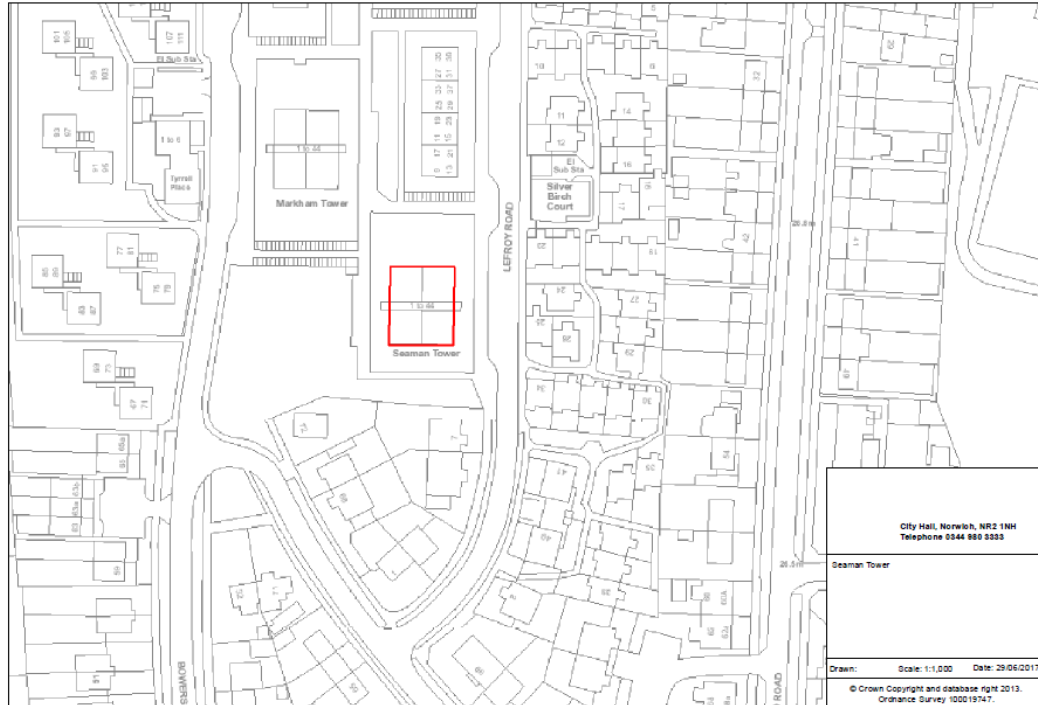
The building has not been externally cladded.

### Image

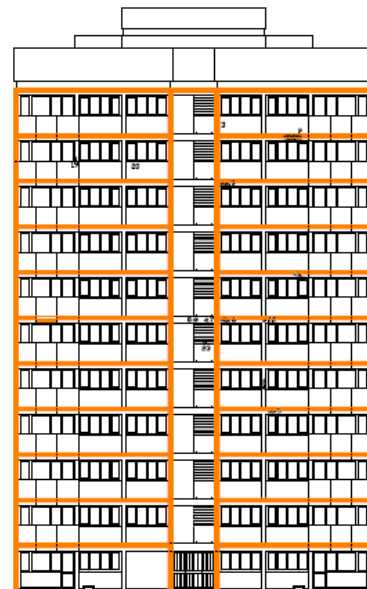
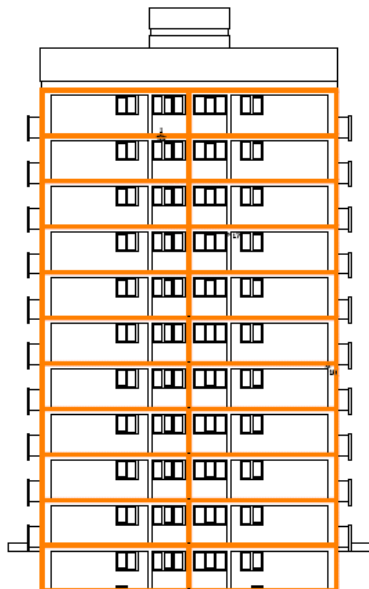




## Location Plan



## Mile Cross Tower - Vertical Compartmentations





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## **Construction Characteristics**

The building is of reinforced concrete frame construction with brick infill panels to all elevations. The construction system is “Truscon – Point Block 3 (PB3) system.

## **Fire Management and Compartmentation**

This tower block operates a ‘stay put’ policy. Please refer to the ‘Existing Fire Plan’ section later in the report for a detailed explanation of the policy in the event of a fire.

## **Original Design**

Horizontal compartmentation exists within each dwelling provided by the original flat entrance fire door.

The escape stairwell has a 30 minute fire door opening in to the lift lobby on all floors. The lift lobby is further separated from communal access corridors by a further 30 minute timber fire door and glazed screen on floors 1 to 11. On the ground floor the entrance and exit doors are separated from the lift lobby by a 30 minute fire door and glazed screen.

The design philosophy is based around robust compartmentation. The compartmentation described above cannot be effective in all circumstances due to the absence of quality checks during the original construction and any interim alteration and/or improvement work.

Generally, the construction of the walls to the stair cores to all blocks will provide 2-hour fire resistance. All other masonry/concrete walls will provide 1-hour fire resistance. However, it is noted there are weaknesses in the compartmentation directly as a result of dry riser penetrations.

All of the individual tower block dwellings share internal common service riser ducts for water, drainage and ventilation.

A common service riser duct outside of the dwellings and within a common area services cupboard supplies electrical services. The stair cores and service riser ducts are vertical fire rated compartments.

The compartmentation is so effective within the blocks that if ever a fire developed within an individual flat, the route of progress through the building would most likely be via the external walls specifically through existing window openings. However a fire within a single dwelling may affect the neighbouring flat (sharing the communal access corridor) before progressing via the external windows.

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It is therefore vitally important that all alterations, additions and routine maintenance undertaken in these buildings is carried out without compromising the existing compartmentation criteria and where considered reasonably practicable, upgraded to meet current requirements.

# Normandie Tower

## Description

Address; Normandie Tower, Rouen Road, Norwich, NR1 1QR						
Building Owner The City Council of Norwich, St Peters Street, Norwich, NR2 1NH	Built	Storeys	No of Units	Mix of Units by Bedrooms	Council Owned	Privately Owned (Leasehold)
	1966	16	95	32 x 1 Bed and 63 x 2 Bed	70	25

The ground floor has 2 no. 1 bed flats and 3 no. 2 bed flats. All subsequent floors have 2 no. 1 bed flats and 4 no. 2 bed flats.

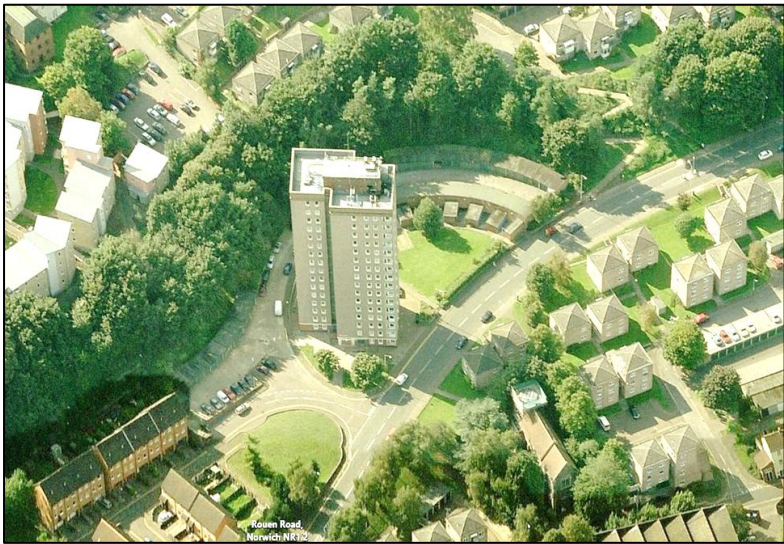
The construction method is of a non-traditional type and known as, “Wimpy No-fines”. This type of construction sees concrete panels cast on-site, with a central services core containing two lifts (one for odd and one for even floors), a central staircase, rubbish chute and a services riser cupboard to each floor.

Heating and hot water are provided by oil-fired boilers mounted on the roof with the oil being pumped externally up the side of the building from a tank in a separate building at ground level.

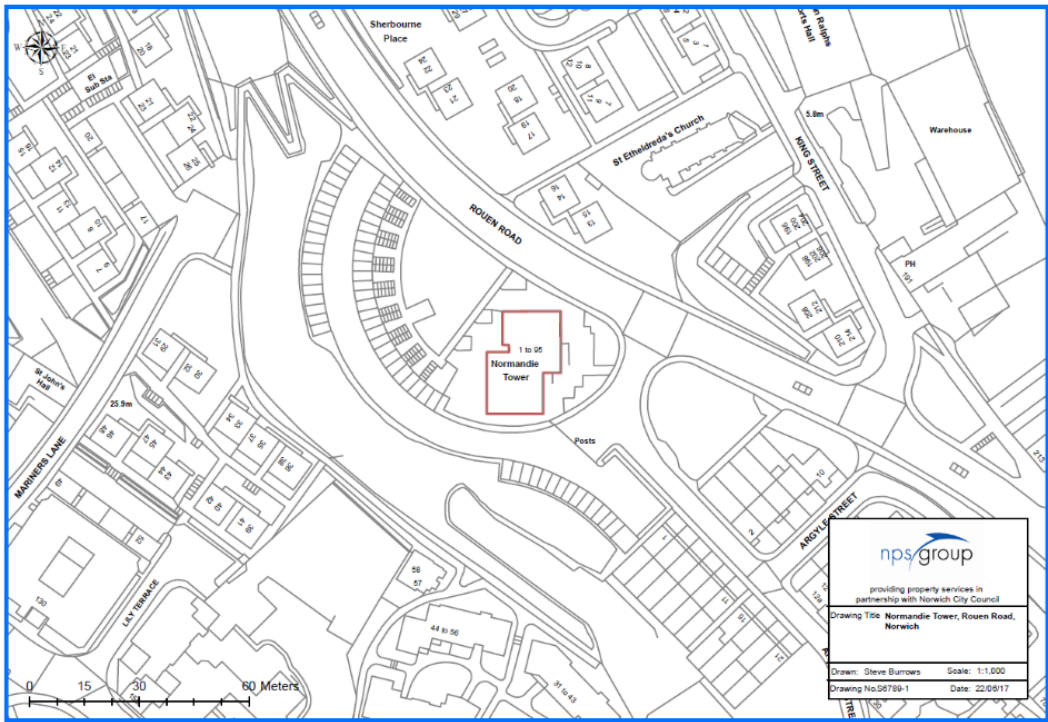
This block has a general needs letting policy.

At the time of writing this report, there are 70 Norwich City Council tenants and 25 leaseholders in the block.

The building has no external cladding.



## Ariel view



## Location Plan

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## **Construction Characteristics**

The Wimpey No-Fines construction involves the use of no-fines concrete, i.e. concrete containing cement and graded aggregate, but no fine aggregate. The lack of fine materials resulted in a wall that can be cast more economically than a normal concrete mix and which contains many air gaps giving some improved insulation properties.

External walls are formed with 200-300mm thick concrete poured on-site into prepared shuttering containing continuous reinforcement.

## **Fire Management and Compartmentation**

This tower block operates a 'stay put' policy. Please refer to the 'Existing Fire Plan' section later in the report for a detailed explanation of the policy in the event of a fire.

## **Original Design**

Horizontal compartmentation exists within each dwelling provided by the original half-hour flat entrance fire door.

The escape stairwell has a 1-hour fire door. Each common circulation area on each floor level above ground floor is further sub-divided into two areas by 2 30 minute fire doors.

The escape stairwell therefore provides a maximum 2-hour fire protection should a fire break out within a flat and a minimum 1-hour fire protection should a fire break out within the common area.

The design philosophy is based around robust compartmentation.

The construction of the walls to the stair cores to all blocks will provide 2-hour fire resistance. All other masonry/concrete walls will provide 1-hour fire resistance.

All of the individual tower block dwellings share internal common service riser ducts for water, drainage and ventilation. A common service riser duct outside of the dwellings and within a common area services cupboard supplies electrical services. The stair cores and service riser ducts are vertical fire rated compartments.

The compartmentation is so effective within the blocks that if ever a fire developed within an individual flat, the route of progress through the building would most likely be via the external walls specifically through existing window openings. It is therefore vitally important that all alterations, additions and routine maintenance undertaken in these buildings is carried out without compromising the existing compartmentation criteria and where considered reasonably practicable, upgraded to meet current requirements.



# Winchester Tower

Address; Winchester Tower, Vauxhall Street, Norwich, NR2 2SF							
Building Owner		Built	Storeys	No of Units	Mix of Units by Bedrooms	Council Owned	Privately Owned (Leasehold)
The City Council of Norwich, St Peters Street, Norwich, NR2 1NH		1966	16	95	32 x 1 Bed and 63 x 2 Bed	93	2



## Description

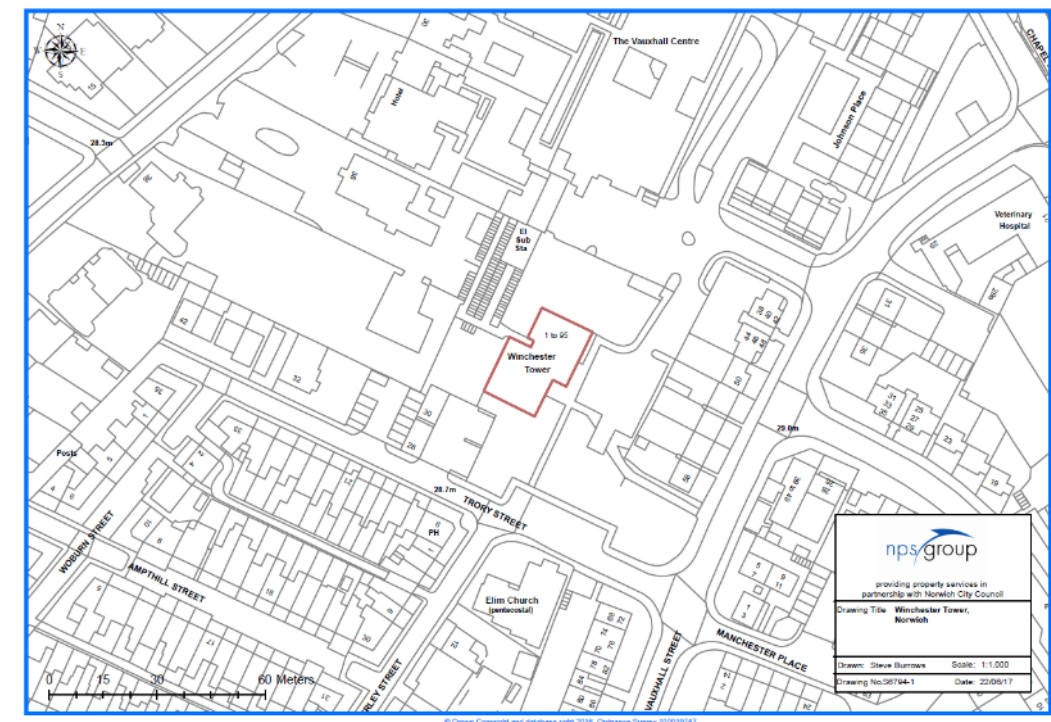
The ground floor has 2 no. 1 bed flat and 3 no. 2 bed flats. All subsequent floors have 2 no. 1 bed flats and 4 no. 2 bed flats.

The construction method is of a non-traditional type and known as “Wimpy No-fines”. This type of construction sees concrete panels cast on-site, with a central services core containing two lifts (one for odd and one for even floors), a central staircase, rubbish chute and a services riser cupboard to each floor. This is via mains gas boilers mounted on the roof with a vertical external mains gas supply. This is the only tower block that Norwich City Council owns that has an over 55 age letting policy. The age restricted nature of the lettings policy for the block means that there are higher than usual numbers of vulnerable tenants living in this high rise tower block.

At the time of writing this report, there are 93 Norwich City Council tenanted homes and 2 Leaseholders within the block.

The building has not been externally cladded.

## Location Plan



## Construction Characteristics

The Wimpey No-Fines construction involves the use of no-fines concrete, i.e. concrete containing cement and graded aggregate, but no fine aggregate. The lack of fine materials resulted in a wall that can be cast more economically than a normal concrete mix and which contains many air gaps giving some improved insulation properties.

External walls are formed with 200-300mm thick concrete poured on-site into prepared shuttering containing continuous reinforcement.

## Fire Management

This tower block operates a 'stay put' policy. Please refer to the 'Existing Fire Plan' section later in the report for a detailed explanation of the policy in the event of a fire.

## Original Design

Horizontal compartmentation exists within each dwelling provided by the original half-hour flat entrance fire door.

The escape stairwell has a 1-hour fire door. Each common circulation area on each floor level above ground floor is further sub-divided into two areas by 2 30 minute fire doors.

The escape stairwell therefore provides a maximum 2-hour fire protection should a fire break out within a flat and a minimum 1-hour fire protection should a fire break out within the common area.

The compartmentation described above cannot be effective in all circumstances due to the absence of quality checks during the original construction and any interim alteration and/or improvement work.

The construction of the walls to the stair cores to all blocks will provide 2-hour fire resistance. All other masonry/concrete walls will provide 1-hour fire resistance.

All of the individual tower block dwellings share internal common service riser ducts for water, drainage and ventilation.

A common service riser duct outside of the dwellings and within a common area services cupboard supplies electrical services. The stair cores and service riser ducts are vertical fire rated compartments.

The compartmentation is so effective within the blocks that if ever a fire developed within an individual flat, the route of progress through the building would most likely be via the external walls specifically through existing window openings.

The original single glazed timber-framed windows were replaced with plastic double glazed units. Whilst this does not provide any certified fire resistance; it has not worsened the protection that was afforded by the original windows.

It is therefore vitally important that all alterations, additions and routine maintenance undertaken in these buildings is carried out without compromising the existing compartmentation criteria and where considered reasonably practicable, upgraded to meet current requirements.

Lee Robson  
Head of neighbourhood housing  
Norwich City Council  
City Hall  
St Peters Street  
Norwich NR2 1NH

**TO THE RESIDENT**  
**\*IMPORTANT INFORMATION\***  
**\*THIS IS NOT A CIRCULAR\***

07 July 2017

Dear Resident,

Following the Grenfell tower fire a number of you have asked us to inspect your flats so you can feel reassured about your safety.

In order that we can provide these assurances to all tenants and leaseholders living in our eight tower blocks we will be doing a thorough review of all flats in our tower blocks.

This means we will need access to every flat in all eight tower blocks.

Our flat inspections programme will begin on <??? insert date>. We will write a follow-up letter to residents and leaseholders in all tower blocks to let everyone know when we will be on site to carry out flat inspections at the tower block you live in.

Having access to all flats in every tower block is absolutely essential if we're to carry out a complete and successful safety review.

All you'll need to do is email us to let us know when you won't be at home on the dates we'll be visiting your block so we can arrange an alternative time to carry out an inspection of your flat.

Please look out for our next letter which will give you the dates we'll be visiting your tower block and how to get in touch with us if you need to.

Yours sincerely,



Lee Robson  
Head of neighbourhood housing  
e: [info@norwich.gov.uk](mailto:info@norwich.gov.uk)  
t: 0344 980 3333





**\*IMPORTANT INFORMATION\***  
**\*THIS IS NOT A CIRCULAR\***

Lee Robson  
Head of neighbourhood housing  
Norwich City Council  
City Hall  
St Peters Street  
Norwich NR2 1NH

22 August 2017

Dear

As you will be aware, in response to the Grenfell Tower fire in London, Norwich City Council has been conducting a safety review of all its tower block flats, which includes the three blocks at Heartsease.

Most of the flats in the **Heartsease** blocks have now been inspected, but there are some we've not yet been able to gain access to, including your home which is one of the last few.

It is vitally important that we can get access to every single flat in order to gain a full understanding about the fire safety of your home and the block as a whole.

I'd like to remind you that your tenancy agreement states you must allow the city council and its contractors access to your home to:

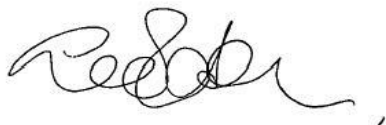
- inspect it to check the condition and any work needed
- carry out repairs, maintenance or improvements

Our surveyors from NPS Norwich offer flexible appointment times, including some evening and weekends, if weekday times are not convenient for you.

If you've not yet had your flat inspected please contact NPS Norwich as soon as possible to arrange a day and time:

e: [NCCTowerBlocks@nps.co.uk](mailto:NCCTowerBlocks@nps.co.uk)  
t: [01603 227900](tel:01603227900)

Yours sincerely



Lee Robson  
Head of neighbourhood housing  
e: [info@norwich.gov.uk](mailto:info@norwich.gov.uk)  
t: 0344 980 3333

9 January 2018

Your reference      Fire risk assessment

Resident

Dear Resident

**Urgent**

You will be aware from recent letters you received that Norwich City Council commissioned a flat-by-flat fire safety review across all its tower blocks following the Grenfell Tower fire in London.

So far, over 90 per cent of people who live in the council's tower blocks have let our contractors into their flats to carry out a fire risk assessment.

We have made a number of visits to your home in order to carry out these assessments but unfortunately you were not available.

It is vital that we carry out this inspection so please help us to make sure that everyone remains safe. Please contact Jane Booth on 01603 213554 or Ben Newbrook on 01603 213579 urgently to arrange a convenient time.

If we are unable to arrange access the fire service will use the necessary powers to gain entry to your home.

I hope this will not be necessary and we look forward to hearing from you.

Yours sincerely

Tracey Fordham

Housing operations manager

t: 03449803333

e: [info@norwich.gov.uk](mailto:info@norwich.gov.uk)

Dear Resident,

## **Update about flat-by-flat fire safety review**

### **What we did**

You will be aware from recent letters you received that Norwich City Council commissioned a flat-by-flat fire safety review across all its tower blocks following the Grenfell Tower fire in London.

This review was carried out by surveyors from NPS Norwich Ltd, with the support of Norfolk Fire and Rescue Service.

While none of the city council's tower blocks have been fitted with cladding, the council wanted reassurance that historic repairs and resident adaptations had not affected the compartmentalised fire safety of individual flats, and as a consequence, the building as a whole.

### **What we found**

Overall, it was found that the tower blocks are well maintained. The compartmentalisation of each flat remains intact and the individual risk assessments and evacuation policy are robust and fit for purpose.

However, during the flat-by-flat review, a number of repairs and upgrades have been identified to help mitigate any possible issues in the future.

At the time of this letter, 411 of the 454 flats across the tower blocks had been surveyed. Work will continue to ensure that 100 per cent coverage is achieved.

In general terms, the design and construction for fire safety in tower blocks is based around the individual flats being compartmentalised which means residents can remain in their home in the event of a fire, where it is reasonably appropriate to do so.

Individual flats (compartments) should provide an effective place of refuge for at least 30 minutes in the event of a fire.

The review identified how this compartmentalisation can be enhanced.

### **What happens next**

The work we have already started on the tower blocks as part of our planned maintenance and improvements programme will be speeded up (eg installing hard-wired smoke alarms and replacing all removable service panels in bathrooms).

Overall, the review led to a number of recommendations concerning repairs and improvements. Each of these recommendations are described in more detail in the enclosed document.

The complete review report will be considered by the council's cabinet on 17 January 2018. It will be published on the council's website on 10 January via this weblink [www.norwich.gov.uk/towerblocks](http://www.norwich.gov.uk/towerblocks)

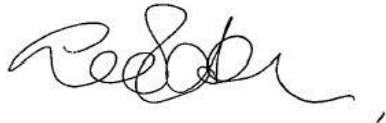
We will also make sure that a hardcopy of the report is available at each tower block in the coming days.

Our contractor will be back in touch with you again shortly to let you know when they will be visiting your tower block to begin work on these improvements.

This work will begin around mid-January 2018 and should be complete within 12 months.

The council will pay for all the work listed in the various recommendations, including leasehold properties, to ensure all work meets fire safety standards.

Yours sincerely

A handwritten signature in black ink, appearing to read 'Lee Robson', with a small comma at the end.

Lee Robson  
Head of neighbourhood housing

## Tower block fire safety review – recommendations

### Recommendation 1 – full door replacement

Replace 718 existing front doors and store doors with new fire doors in every tower block.

Replacing the front doors and store doors will mitigate 46 per cent of the issues identified and will cost £668,000. This work will begin in mid-January 2018.

**X**



**Non fire-proof letterbox**

**✓**

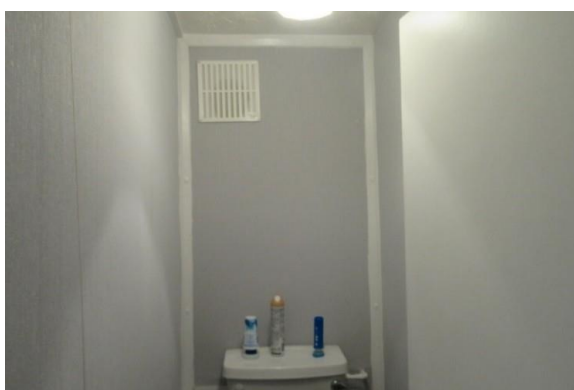


**Example of a fire-proof letterbox**

### Recommendation 2 – bathroom improvements

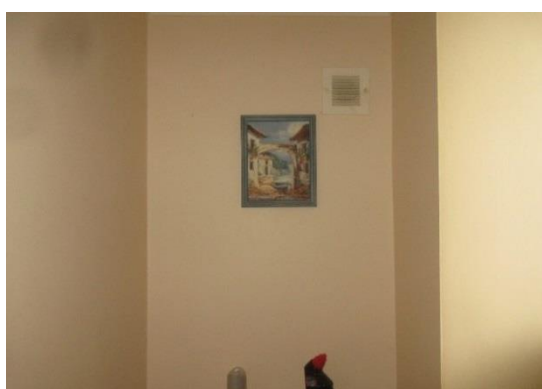
The survey has identified a number of issues that we are already addressing through a planned programme of work. This includes upgrading wooden framed removable service riser panels in bathrooms and replacing them with metal framed fixed panelling.

**X**



**Example of existing panelling**

**✓**



**Example of new panelling**

Fitting intumescent strips to air transfer grills. The cover grilles to these openings can be replaced with a new cover which includes an intumescent liner.

**X**



**Ventilation duct with no intumescent liner**

**✓**



**Example of new grille cover**

Work will also continue to upgrade waste pipes so they are fitted with an intumescent collar.

**X**



**Waste pipe with no intumescent collar**

**✓**



**New pipe fitted with intumescent collar**

Carrying out this work will address 31 per cent of the issues identified and cost just over £1 million. This work will be carried out over the next 12 months.

### **Recommendation 3 – replace lounge/hall vision panels with safety glass**

While not a fire door, the dividing door between the hall and lounge protects the means of escape from the bedroom, bathroom and WC from the most likely source of a fire (i.e. the lounge or kitchen).

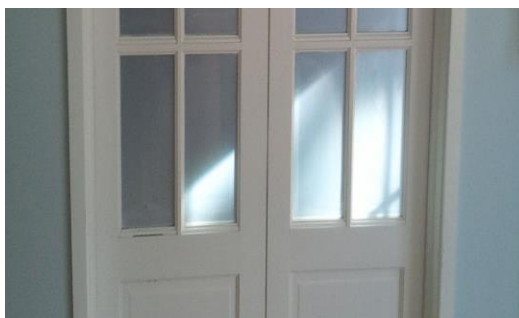
Carrying out this work will address 4 per cent of the issues identified and cost £103,500. This work will be carried out over the next 12 months.

**X**



**Non fire-rated visual panels to door and side panel**

**✓**



**Example picture of safety glass**

### **Recommendation 4 – replace battery operated smoke alarms with hardwired units**

The council already has a programme to install hardwired smoke alarms throughout every flat and is currently half way through the work. The remainder of the programme to install 192 smoke alarms will be accelerated.

Carrying out this work will address 1 per cent of the issues identified and cost £53,500. It will be carried out over the next 12 months.

**X**



**✓**



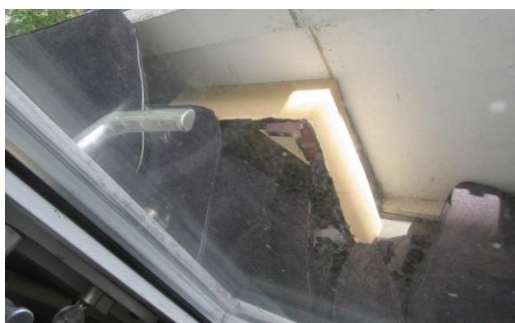
**Example of older battery style alarm (left) and new mains powered alarm (right)**

## **Recommendation 5 – miscellaneous improvements and repairs**

A number of other issues also have been identified across a number of flats, some examples are outlined below.

These include the need to remove flammable items stored on balconies and replacing decorative polystyrene ceiling tiles present in some flats.

**X**



**Flammable items stored on balcony**

**X**



**Decorative polystyrene ceiling tiles**

## **Recommendation 6 – upgrade communal suppression system and install bespoke suppression systems**

The current fire safety measures, in particular the fire compartmentalisation, is deemed to be effective. Winchester and Normandie Towers have water based suppression systems fitted to the waste stores at the base of the refuse chutes.

However, it is felt these systems would benefit from being upgraded to a more up-to-date automatic chemical based suppression system and retrofit these systems to waste stores in all the towers.

In addition, chemical based suppression systems will be retro-fitted in the service riser cupboards in all eight towers. This provides a targeted approach to the use of suppression systems where it is considered they will have most impact.



**Tower bin store and refuse chute**



**Service riser cupboard**



Norfolk Fire and Rescue Service has also recommended the use of independent domestic fire suppression systems, which are designed for use with residents who have mobility issues or who are vulnerable due to their lifestyle.

The council will work with the fire service to develop the criteria that will be used to guide where these individual units are installed.

Costs for these items are as follows: bin store suppression system – £43,000; riser cupboard suppression systems – £24,500; estimate for individual mobile suppression system – £2,000-£3,000. This work will be carried out over the next six months.

## **Recommendation 7 – review and refresh inspection procedures**

It's important that the council reviews inspection and monitoring controls in the tower blocks to ensure they are effective. This will need to cover future construction activities as well as any changes introduced by tenants and leaseholders.

There are currently a number of ways in which the building is inspected which includes caretakers, housing officers, contractors and more formal inspections as detailed below.

### **Day-to-day checks**

#### **Caretakers**

The council's caretakers provide a visible presence in the tower blocks. They play an important role in knowing the residents, particularly those who may be vulnerable. The caretakers carry out daily health and safety checks of the communal areas as part of their regular duties and tasks.

The caretaking team will be provided with refresher training to ensure all possible fire safety issues (e.g. damage to doors and door closers) are identified, recorded and rectified as required.

#### **Housing officers**

Housing officers will visit the towers to undertake tenancy inspections. These visits will provide a further opportunity to identify fire safety issues to ensure they are rectified as well as highlight any vulnerability issues with residents who require additional support.

#### **Contractors**

Contractors carrying out work in the tower blocks will be provided with training to identify fire safety issues and how to report them for rectification. The council will also refresh the policies and procedures for clerk of works activity and ensure there is effective interaction between contractors undertaking works in the tower blocks and the clerk of works.

#### **Inspections**

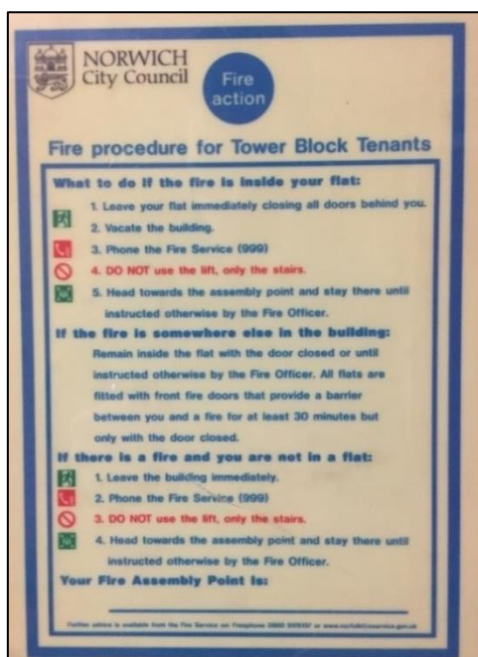
The requirement for a fire risk assessment extends to the managed communal parts of each tower block and is the single most important inspection regime. It must be

carried out to ensure compliance with statutory legislation and to ensure the council's meets the required legal obligations to manage fire safety in the buildings.

Total cost for the inspection procedures is estimated at £5,000. Work is expected to start on this by winter 2018.

## Recommendation 8 – education and information programme

There is information relating to fire safety already present in all tower blocks. One of the positives we need to build on is how readily tenants and leaseholders engaged with the fire service and council staff when they visited the blocks as part of the review.



Current fire safety notice

We have identified a number of things that could be improved in terms of the quality and timeliness information relating to fire safety.

Working with the fire service and residents, the proposal is to develop an education and information programme which will look at: information on notice boards; additional information relating to stay-put policy; fire doors; smoke alarms; product recalls; hazardous materials or substances and use of communal areas and resident activities (smoking, cooking and trailing leads etc).

This programme has an estimated cost of £10,000 with work expected to start in winter 2018.

## **Recommendation 9 – continue with the stay-put policy**

The stay-put policy was reviewed as part of the survey with advice from the fire service. Compartmentalisation in the tower blocks is effective and carrying out the repairs and improvements outlined in this report supports and enhances the 30-minute stay-put policy.

## **In conclusion**

Norfolk Fire and Rescue Service has given us reassurance that there are no serious concerns with our tower blocks. They will continue to work with us to ensure fire safety for our residents.

Building and fire regulations are still being reviewed post-Grenfell. This may mean further work will be needed to the council's tower blocks as a result. We have no way of knowing the implications of this until the review is complete.