

HIGH RISK

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**NATIONAL
TOWER
BLOCKS
NETWORK
ANNUAL SPOT
SAFETY SURVEY**

**NOVEMBER
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The National Tower Blocks Network

The National Tower Blocks Network (NTBN) emerged from the National Tower Blocks Conference, which we organised in 1983. The Conference had, in turn, grown out of our practical local work with The Newham Tower Block Tenants' Campaign. The Network is a loose federation of groups and individuals who are concerned about the quality of life in Britain's tower block homes. It gathers information about social and structural problems, and it shares and promotes practical solutions.

Current activities include a quarterly bulletin ('The View') now sponsored by Lander Urban Renewal; the publication of the second edition of the 'Tower Blocks Directory'; an active and well used information service; a training programme and various research projects, of which this report is one.

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SPOT SAFETY SURVEY - SCOPE OF THE REPORT

This first survey has been undertaken in response to a major fire which happened in Merry Hill Court in Smethwick, West Midlands on the 13th July. Jennifer Noble, a tenant, died in the fire.

The report is divided into 3 parts:

In Part one we look at what happened in the Merry Hill Court fire and analyse the reasons why.

In Part two we ask "If such a fire were to occur in another tower block in another part of the country, would the outcome be the same?"

In order to answer this question we have undertaken a random spot safety check in tower blocks in 5 local authority areas: The London Borough of Redbridge, The London Borough of Tower Hamlets, The London Borough of Wandsworth, The City of Manchester and The City of Sheffield. We have used The Department of the Environment definition of a tower block as a building of 6 or more storeys.

Authorities of all political parties have been selected. These authorities have been chosen in order to provide a cross section of political views and policies relating to tower blocks not because they are considered to have poor safety standards.

Part two contains summaries of the detailed reports on each block surveyed compiled by architects. The full reports are included as appendices.

In Part three we outline NTBN's recommendations for improving fire safety conditions in Britain's tower blocks.

The Spot Safety Survey will be repeated annually, highlighting different authorities each year.



PART ONE

NATIONAL IMPLICATIONS OF MERRY HILL COURT FIRE

Our information indicates that the fire in Merry Hill Court was serious because of two main factors. First structural defects in the block caused the fire to spread rapidly. Second, the condition of the means of escape and of fire fighting equipment within the block endangered tenants lives and delayed and impeded the rescue work.

The information included here has come from a variety of sources but it is by no means definitive as we await the publication of a full and comprehensive official report.

1. STRUCTURAL DEFECTS

* The fire in July was the second within seven months. The fire enquiry, into the previous fire in January 1990 revealed that there were no fire stops between each flat. The gaps, surrounding a gas duct, had instead been filled with newspaper. The gas pipes themselves were also not fire proof - they had been boxed in using plywood.

* The flats in Merry Hill Court were therefore not separate compartments as the building regulations require. They could not contain a fire for one hour and thus allow tenants time to escape.

* The fire on the 13th July spread rapidly over 6 floors, through this duct, trapping tenant Jennifer Noble.

2. FIRE FIGHTING/MEANS OF ESCAPE

* The dry riser main within the block which is designed to allow the fire brigade to pump water up to any landing wasn't working. Water had to be pumped from a nearby canal.

* Defective fire doors onto the staircase (the means of escape) allowed smoke and fumes to enter.

3. BREACH OF BRITISH STANDARD CODE OF PRACTICE

The above factors show that Merry Hill Court failed to comply with The British Standard Code of Practice CP3: Chap1V (1962) Precaution against Fire. The Code states:

"The assumption should no longer be made that buildings must be evacuated if a fire occurs and high residential buildings should, therefore, be designed so that the occupants of floors above a dwelling which is on fire may, if they choose, remain safely on their own floor. It may be necessary to evacuate the floor on which the fire occurs, and in some circumstances those floors which are in the immediate vicinity of the fire, but the occupants of these floors should be free to reach safety in any part of the building via the staircase."

"It is, of course, essential that there should be adequate physical separation between the two occupancies and that the means of escape from the dwellings should be designed and constructed so that they can under no circumstances be attacked by fire or smoke from the other occupancy."

"The guiding principle in the recommendations which follow is safety of life. In securing this, means of escape, construction and firefighting all play a part. This part of the Code deals with all three subjects, but recommendations on constructions have not been fully developed as many aspects are already subject to building control." Quote from the Introduction of Chap IV (1962).

4. NATIONAL INSPECTIONS

* After the fire Brian Fuller, the Chief Fire Officer for the West Midlands Fire Service advised the Chief Executive of all tower block owning local authorities to inspect their blocks for the above problems. The West Midlands Fire Service have also carried out their own inspection of tower blocks within their district. The extent and the results of these investigations are still not yet publicly known more than 4 months on.

* NTBN's discussions with fire officers have raised some serious questions. In particular the decision by the London Fire Brigade in April 1990 to cease carrying out annual 'wet tests' on dry riser mains in tower blocks. This inspection involved a practical test of the main, using a fire engine to create the appropriate pressure which was measured on the roof. This test ensured that water could be pumped to every floor in a fire. We have been informed that the testing was stopped as a result of spending restrictions imposed on the London Fire Service.

* Responsibility for this testing now lies with the local authorities. NTBN has contacted all the London tower block owning authorities to get their response. The local authorities concerned have responded in various ways, in some cases they intend to carry out this testing themselves, in others they intend to contract out the work. However, no local authority has confirmed that they have actually carried out such a test yet in a block - 6 months on from the fire brigade's withdrawal of the service.

* The withdrawal of this service effectively means that the standard of inspection and maintenance of essential fire fighting equipment is lower in the London area now than it was in Smethwick at the time of the fire.

INQUEST

Jennifer Noble's death is the subject of an inquest. The National Tower Blocks Network has submitted this Report to the inquest for consideration.

PART TWO

ON THE SPOT - FIVE LOCAL AUTHORITIES

Part two contains surveys of the following tower blocks:

The London Borough of Redbridge:

1. Block "E", Broadmeade Road, Broadmeade Estate.

The London Borough of Tower Hamlets:

2. Kedge House, Tiller Road, Barkentine Estate.
3. Knighthead Point, West Ferry Road, Barkentine Estate.

The London Borough of Wandsworth:

4. Sporle Court, Winstanley Road.

The City of Manchester:

5. Trinity Estate, Salford.

The City of Sheffield:

6. Spring, Park Grange Mount, Norfolk Park.
7. Robert Shaw, Brightmore Drive, Netherthorpe.

Summaries of the findings of each tower block survey are included here in Part Two. The full surveys are included in the appendices. For an overall summary of the findings in all 7 blocks please look to the conclusion of Part two.

BUILDING REGULATIONS FOR TOWER BLOCKS

The construction of buildings in England and Wales is covered by a number of different sets of Building Regulations, Acts of Parliament, the British Standards Codes of Practice (BSCP) and the British Standards (BS). The regulations referred to in this report pertain to the construction of tower blocks.

The regulations governing Inner London are made under the **London Buildings Acts 1930-39** and were all enforced by the District Surveyor. **Section 20** of the London Buildings Acts refers to a building over 100'0" in height or having a large internal volume, which applies to most tower blocks within Inner London. There was a need for the cut-off point because fire brigade ladders can only reach a certain height.

Blocks in Inner London also need to comply with one of the following codes:

BSCP CP3 Chap IV (1962): Fire precautions in flats and maisonettes above 80' in height. (The 80' refers to the height of a fire brigade ladder)

BSCP CP3 Chap IV (1971): Fire precautions in flats and maisonettes above three storeys in height.

The basic requirements of CP3 Chap IV (1962) are that each flat should be capable of containing a fire for the minimum period of one hour. Any duct passing through a flat should have a one hour fire stop. The walls of the duct should also be capable of containing the fire for the same period. The 1971 code introduced the additional requirement of an alternative means of escape from each flat or maisonette.

In Outer London, England and Wales tower blocks must comply with one of these codes depending on when the block was built. Most were built when the 1962 code was in force, but any subsequent alterations or improvements to the blocks may need to meet the regulations as defined in the 1971 code.

In addition to these codes the **Building Regulations England and Wales** apply outside Inner London. They first came into force on February 1st 1966 and were amended in 1972. Before 1966 blocks were built under a number of **Metropolitan Regulations**, usually based on the **Model Byelaws of 1953**. These would have been enforced by the Building Inspectors now known as Building Control Officers.

**SURVEY OF BLOCK 'E' BROADMEAD ROAD ESTATE:
FRIDAY 28TH SEPTEMBER 1990**



Broadmead Road Estate contains six 12 storey blocks, built in the late 1960s, in the London Borough of Redbridge. They are of **Large Panel Construction** and were built by Wates using the Wates System. The blocks are named A-F and the inspection was carried out in Block 'E'.

On each floor the flats open onto a central internal ventilated lobby and this in turn opens onto two further lobbies, one containing the refuse chute and the other leading to the **fire escape stairs**. In the original planning Block 'E' met the requirements of BSCP CP: Chap IV (1962) however in practice, in the event of a fire, the safety of tenants would be seriously compromised because of the following defects.

A considerable number of fire doors are defective, including broken glass, not closing properly or no handles. A safe exit in an emergency would also be hampered by broken refuse chute covers which were left lying in the lobby. There is no emergency lighting in this block. These defects do not appear to be recent.

In the event of a fire the fire stair and escape lobbies could become seriously smoke logged. This could cause loss of life and make fighting the fire more difficult. There is no alternative means of escape from each flat. If this block was designed today this would be a legal requirement. Therefore it is imperative that the fire escape areas are made as safe as is possible.

There are no instructions to tenants about what to do in a fire. If this was a hotel these would be required by law. Notices in English as well as other community languages should be clearly displayed throughout the public areas of all these blocks. It is also recommended that emergency lighting be fitted in all lobbies and the fire stair. Smoke alarms should also be fitted in these areas.

SURVEY OF KEDGE HOUSE: FRIDAY 28TH SEPTEMBER 1990

Kedge House is a 10 storey tower block, in the London Borough of Tower Hamlets. The block contains 40 flats and was built in the **Taylor Woodrow Anglian system (TWA)**. It formed part of a serial contract let by the LCC/GLC known as the Morris Walk Series, so named after the first blocks built at Morris Walk in Greenwich, South London.

Kedge House is 'H' shaped in plan, consisting of two wings of flats with a central tower containing the escape stairs and lifts. This is linked to the two wings by prefabricated concrete panels. There are some 1800 flats in a number of similar blocks to Kedge House, in various parts of London. The TWA system was used on two other estates in London, Broadwater Farm in Haringey and Freemasons Road in Newham. Ronan Point was part of this contract.

The spotcheck survey of Kedge House revealed **a number of fire doors were broken** and some had missing glass. There were no notices warning of the dangers of the use of bottled gas (LPG) in the block. The individual flats suffered the usual problems associated with this form of construction. Water leaking from the upper floor into the bathroom, cooking smells coming into the flat from other flats and hearing people talking in other flats, are some of the complaints of tenants. **TWA blocks are prone to gaps in the structure** particularly along the non-loadbearing edges of the precast concrete floor slabs.

These gaps in the structure **deny tenants a one hour fire separation** as required by the BSCP CP3: Chap IV (1962). The fire test carried out in Ronan Point prior to its demolition caused movement such that the smoke passed around the loadbearing ends of the floor slabs, allowing smoke and fumes to pass into the flat above.

Ronan Point was demolished following a structural survey and tests carried out in 1984. As a result of these investigations the Minister for Housing ordered checks on all TWA buildings in Britain. Was Kedge House checked?

SURVEY OF KNIGHTHEAD POINT: FRIDAY 28TH SEPTEMBER 1990

Knighthead Point is a 22 storey tower block built in 1969, in the London Borough of Tower Hamlets. Knighthead Point, alongside three other similar blocks on the site known as Quarterdeck, was **designed by the LCC/GLC Architects Department** and built by J M Hill Contractors:

There are four flats per floor and these open onto a central internal ventilated lobby served by lifts. The rubbish chute and fire stairs come off a further glazed and ventilated lobby. The means of escape from each floor is from the front door of the flats via the fire escape stairs. **There is no secondary means of escape from the flats.**

Like many of the other blocks Knighthead Point now fails to meet the BSCP CP3: Chap IV (1962) safety standard. A considerable number of fire doors are defective, either not closing properly or with missing glass. In some cases the doors had been completely removed. This is not a recent occurrence, tenants reported that in some cases the **doors have been missing for four years**. If this is the case why have they not been repaired. A concierge system now operates in Knighthead Point. If the concierge had a 'report back system' to the Housing Department then these matters could be picked up when they occur.

A number of the doors which have been replaced **do not shut properly or jam against the floor**. These require the simple operation of easing up or they too will get broken. A further fire hazard is that the fire doors are propped open by tenants in an attempt to ventilate the lobby to get rid of the smell from the chutes. This is a dangerous practice but could be improved if there was adequate ventilation in the lobby.

There is no emergency lighting system for the public areas. In the event of a fire which immobilises the lighting system then all the public areas; fire stairs; lobbies etc. would be plunged into darkness. There are also no instructions to tenants about what to do in a fire.

It is recommended that smoke alarms and fire notices be fitted, that fire doors are repaired and replaced so that the means of escape meets the requirements but more importantly serves its purpose in providing a safe means of escape for tenants.

SURVEY OF SPORLE COURT: FRIDAY 14TH SEPTEMBER 1990



Sporle Court is a 23 storey tower block built in the early 1960s, in the London Borough of Wandsworth. The block is divided up into maisonettes, which are on two floors, there being an internal staircase. The block has two lifts and one internal fire stair.

Externally it appears to be of **Large Panel Construction** and supplied with gas for both central heating and cooking. Following the collapse of Ronan Point in May 1968 the use of gas in Large Panel Construction buildings over five storeys was banned by the Government because of the dangers of progressive collapse in the event of an explosion. The use of bottled gas was also banned.

The Government ordered checks to be carried out on all Large Panel Construction blocks in November 1968 following the partial collapse of Ronan Point in May 1968. As Sporle Court was built before 1968, did Wandsworth Council ever check to see if it was safe to continue to use gas in the building, as ordered by the Government? In 1984 as a result of further investigations into the safety of Ronan Point the then Minister of Housing and Construction, Ian Gow, ordered local authorities in England and Wales to carry out safety checks on all their system built flats. Was Sporle Court checked as a result of this?

The flats in Sporle Court have a piped gas supply. In the event of a leak in the supply pipe there is no way for the gas to escape except into the corridor. The survey revealed a large number of vents that were damaged or loose. Gas supplies should not be situated in an unvented duct.

Several more questions arise in relation to Sporle Court as **gas** is being used in this block. The London Borough of Wandsworth should confirm the constructional method of Sporle Court. Is Sporle Court capable of withstanding an explosion of 5psi (as relevant legislation demands) ? This information is available in the relevant Housing Committee minutes when the block was built. The Council records will also show what steps were taken in 1969/70 to check the safety of this block for the use of gas.

The **means of escape** from the maisonette flats in Sporle Court whilst on the lower floor is via the main corridor to the main fire escape staircase. On the upper bedroom floor escape is via a main corridor to the escape stair and also via the balconies to neighbouring flats. Means

of Escape legislation assumes that it is no longer necessary to evacuate a tower block in the event of a fire. But this requires adequate fire prevention and protection within the block. The survey of Sporle Court found that it did not meet these requirements.

During the survey of Sporle Court a number of **fire doors** were found to be inoperative. The use of timber panelling on the ground floor is questionable. It could pose a serious threat to the safety of the occupants by filling the escape stair with smoke and fumes if it caught fire. The amount of rubbish that had been allowed to accumulate in the block cause another serious fire risk.

These are a few examples of the many found in Sporle Court. The conclusions following the survey are that Sporle Court does not appear to meet the basic requirements in regard to means of escape. It also appears to be of Large Panel Construction with a gas supply. No evidence of strengthening could be found. This poses a serious question: Is Sporle Court safe in the event of a gas explosion or will it suffer progressive collapse?

SURVEY OF RIVER BANK TOWERS: OCTOBER 4TH 1990



River Bank Towers is a fifteen storey block, built in the 1960's. It contains six flats on each floor, three either side of a lobby containing two lifts and a single fire escape stair. It does not appear to be system built and has gas supplied for heating and cooking. Its date of construction means that it falls under the BSCP CP3 Chap IV (1962) regulations regarding means of escape in all blocks over 80' high. But in many respects the block fails to meet these regulations.

The inspection took place in the evening, many lights were not working and there was **no emergency lighting** on the fire escape stairs. On moving down the block the lobbies have centrally pivoted windows, 40% of which obstruct the fire doors. Many of the flats and floors are not numbered making location of a fire by the Fire Brigade difficult. **Many fire doors are broken** or not fully operative. In some cases the closer springs are ripped off, handles are missing, hinges broken or so jammed that the fire door will not open or close properly.

One lobby showed signs of a recent fire and the fire door was locked, which is illegal. The cover to the dry riser had been ripped off, leaving it open to vandalism. Damage to the dryriser could mean the fire brigade having to carry hosepipes up the stairs as tenants try to escape down. Such a delay as well as confusion could prove fatal. (Fire in Merry Hill Court, Sandwell; 13th July 1990)

There was **clear signs of vandalism** in the block, on the ground floor the wall mounted lift panel had been damaged leaving bare wires within reach of children. The false ceiling in this area had also been damaged, revealing bare electricity cables. Only 20% of the flats in the block are occupied, of those that are vacant, many have their doors swinging open. Apart from a major fire risk, damage to the water and gas pipes in these flats **could cause flooding or a gas explosion.**

Alongside the flats, each floor has a store opening onto the main lobby. Although these are lockable most were left open. Some were full of debris or old furniture. There are no smoke alarms or fire notices in the block. All this despite the block having been refurbished with in the last three years. Their **present state is potentially dangerous** with a range of major fire safety defects apparent from even a spotcheck on the block.

ON THE SPOT
SHEFFIELD

SURVEY OF SPRING, NORFOLK PARK: OCTOBER 9TH 1990

Spring, on the Norfolk Park Estate in Sheffield, is a block of fifteen storeys, containing eight flats on each floor. The flats are situated either side of a central bay containing the fire escape stairwell and lifts which lead to an internal lobby. This lobby feeds either side to a ventilated lobby running the full width of the block. These lobbies lead to two internal lobbies around which are arranged four flats.

Each flat from the second floor up has **two means of escape**, one via the front door to the escape stair. The other via a 'kick panel' on the balcony which leads to the balcony of the adjoining flat, in accordance with the regulation BSCP CP3 Chap IV (1971). Despite this Spring fails to meet the requirements for means of escape according the other regulations contained in BSCP CP3 Chap IV (1962) and (1971).

All the fire doors were in order. Each of the main lobbies running the width of the building had rubbish chutes and caretaker rooms. Some rooms were locked but others were **crammed with rubbish, boxes and old mattresses**. This is a major fire risk especially as it is situated between the flats and the fire escape. The internal lobbies next to the flats have a compressed fibre false ceiling. The materials and construction used in the lobbies, which form the main means of escape, are **not fire proof**. The lobby should be treated as a protected corridor and the materials used should be Class O.

The false ceiling of the lift lobby at the ground level has the same tiles, yet the fire escape stair leads into this lobby and out into the main lobbies which also contain these tiles. There are no fire notices, smoke alarms or emergency lighting. The dry riser runs up the centre of the building and is not covered, this could itself **act as a chimney for fire** to spread up. An attempt at fire safety, in the form of a notice warning tenants about the use of bottled gas in the block is barely visible behind security glass in the caretaker's office.

Spring block fails to comply with regulations regarding the surface spread of flame of materials used in the construction of the false ceilings in lobbies. These lobbies are the escape route from the block.



SURVEY OF ROBERT SHAW HOUSE: OCTOBER 8TH 1990

Robert Shaw House on the Netherthorpe Estate in Sheffield was built between 1958 and 1960. It is a fourteen storey block which appears to be **constructed of reinforced concrete with brick panels**. The block contains four flats on each floor, which lead off a central lobby. The lobby contains two lifts serving alternative floors and two fire escape stairs. Each flat has only one means of escape through the front door to the lobby and escape stairs, though each flat has its own balcony which contains the rubbish chute.

Robert Shaw was built before the fire regulations, BSCP CP3 Chap IV (1962) came into force, however the block fails to meet some of the standards set within these regulations. There has been **recent work on upgrading the fire doors**, all of which were in working order at the time of the inspection.

On certain floors the windows on the fire escape staircases were either broken, jammed open or closed due to paint. There is a dryriser on alternative floors, which though not covered all looked in good repair. However, despite the recent fire safety work carried out on the block, which has included fire safety doors on all the flats, there are no smoke alarms, no emergency lighting and no fire alarms. There were some fire notices but not on every floor.

The major cause of concern during the inspection was the material used to line the ceilings of the lobbies and the soffits of the stairs in the fire escape stairwell. The tiles are made of **compressed fibre**, some are damaged. A small piece of one tile was tested with the use of a match, **it burned**.

In the main lobby on the ground floor the ceiling was covered in **polystyrene tiles**, it is well known that polystyrene burns readily giving off dense black smoke, which contains toxic fumes. In some of the common areas there appears to be wooden casings around pipe ducts and exposed pipe lagging was found. These also constitutes a fire risk.

Robert Shaw does not meet the fire regulations in respect of surface spread of flame of materials used in construction of false ceilings in the lobbies and stairwells, which constitute the only means of escape.

A SUMMARY OF OUR FINDINGS

Each of the seven tower blocks surveyed by the National Tower Blocks Network fail to meet either the Building Regulations or the British Standards Codes of Practice in reference to buildings above a certain height:

1. Block 'E' on the Broadmead Road Estate fails to meet the basic requirements of BSCP CP3: Chap IV (1962) with regards to means of escape. In a fire the fire stair and escape lobbies could become seriously smokellogged due to broken doors.
2. Kedge House fails to meet the basic requirements of BSCP CP3: Chap IV (1962) with regards to:
 - (a) A one hour fire separation of tenancies.
 - (b) Means of escape.A number of fire doors, glazed panels and rubbish chute covers are broken and the fire stair and escape lobbies could become seriously smokellogged due to broken doors.
3. Knighthead Point fails to meet the basic requirements of BSCP CP3: Chap IV (1962) with regards to means of escape, due to missing and broken doors. The fire stair and escape lobbies could become seriously smokellogged due to broken doors.
4. Sporle Court fails to meet the basic requirements of BSCP CP3: Chap IV (1962) with regards to means of escape. A number of fire doors are inoperative and the use of timber panelling at ground level could pose a serious threat to tenants by filling the escape stair with smoke and fumes. There are signs of vandalism in the block and many fires are caused by vandalism. Rubbish often collects at the base of timber panelling and should this catch light, smoke would be drawn through the fresh air vent into the escape stair.

Sporle Court has a piped gas supply running up an unvented duct, therefore in the event of a leak the gas will vent into the corridor. Questions have been raised as to whether Sporle Court is a large panel system block and whether gas should be present.
5. River Bank Towers fails to meet the basic requirements of BSCP CP3: Chap IV (1962) with regards to means of escape due to broken and locked fire doors. The fire stair and escape lobbies could become seriously smokellogged due to broken doors.

6. Robert Shaw House fails to meet the basic requirements of BSCP CP3: Chap IV (1962) or the Building Regulations with respect to the surface spread of flame of materials used in the construction of the false ceilings in the lobbies and the fire stair.

7. Spring, Norfolk Park, fails to meet the basic requirements of BSCP CP3: Chap IV (1962) with respect to the surface spread of flame of materials used in the construction of the false ceilings in the lobbies and the fire stair.

There is no alternative means of escape from each flat in five of the blocks surveyed; Block 'E', Kedge House, Knighthead Point, River Bank Towers and Robert Shaw. If designed today a secondary means of escape would be a legal requirement. Therefore it is imperative that the fire escape areas in the one means of escape are safe.

In two of the blocks; Kedge House and Knighthead Point, we found metal door grills installed by tenants. Because of the high number of break-ins to flats many tenants have fitted their own security devices, including metal doors. The conflict between fire safety and security is an important point in a fire safety work carried out in tower blocks. This point has been recognised in the proposed amendments to the Building Regulations 1985:

"In blocks of flats there is a potential for conflict between the need for easy and rapid evacuation of a building in case of fire and the control of entry and exit in the interests of security. Measures to prevent unauthorised access can also hinder fire service entry to rescue people trapped by fire. It is important that any potential conflicts be identified and resolved at the design stage and not left to ad hoc expedients after completion."

(Quote from Part B: Safety in Fire para 0.14 p6 issued by the DOE for comment on 19th March 1990.)

PART THREE

NATIONAL TOWER BLOCKS NETWORK RECOMMENDATIONS

1. Tower blocks should be subject to fire certification. This would ensure that standards of safety were regularly inspected by the fire brigade and that landlords were required to comply with their instructions by law.

Fire certification would ensure that blocks were properly maintained by the landlord, that the means of escape would be kept clear and that fire doors, vents etc would be maintained and repaired whenever necessary.

Fire certification would require instructions to be provided to each tenant and in the communal areas as to what to do in the event of a fire.

2. Fire drills should be carried out at regular intervals, at least once a year.

3. Smoke alarms should be provided by the landlord for each flat and for the communal areas. These alarms should be maintained by the landlord.

4. Internal gas supplies should be removed from all large panel system tower blocks as a matter of extreme urgency. The government should again call on local authorities to inspect such blocks within their ownership and should oversee these inspections.

5. Each tower block should have a log book in which any work, of whatever nature, is recorded by the responsible department. So that when future work was necessary on the tower block the log book would contain information concerning dates, type of materials used and the extent of work carried out.

BLOCK "E" BROADMEAD ROAD LONDON BOROUGH OF REDBRIDGE.

REPORT OF INSPECTION CARRIED OUT ON FRIDAY 28th SEPTEMBER 1990.

Inspection carried out by Sam Webb Architect on behalf of The National Tower Blocks Network.

1.00 INTRODUCTION.

1.01 Broadmead Road Estate Redbridge consists of 6/12 storey blocks containing a total of 484 flats. They are of Large Panel Construction and were built by Wates using the Wates System. They received approval from the Housing Committee in 1966.

1.02 The blocks are named Blocks A-F. An inspection was carried out in Block "E" with Frances Clarke of The National Tower Blocks Network. I have reason to believe that the conditions in Block "E" will be found in all the other five blocks.

2.00 CONSTRUCTION AND MEANS OF ESCAPE.

2.01 The regulations governing the construction of these blocks would have been The Building Regulations 1965 and Fire Precautions would have been covered by The British Standard Code of Practice CP3: Chap IV (1962).

2.02 The introduction to that code states:

"It is, of course, essential that there should be adequate physical separation between the two occupancies and that the means of escape from the dwellings should be designed and constructed so that they can under no circumstances be attacked by fire or smoke from the other occupancy."

"The guiding principles in the recommendations which follow are safety of life."

2.03 These regulations would have been enforced by the London Borough of Redbridge itself.

3.00 THE INSPECTION.

3.01 We started the inspection on the top floor and walked down the fire stairs.

3.02 Flats open onto a central internal ventilated lobby and this in turn opens onto two further lobbies, one containing the Refuse Chute and the other leads to the Fire Escape Stair. The ventilation of some of these areas is poor.

3.03 In terms of its original planning Block "E" meets the requirements of BSCP CP: Chap IV (1962). In practice these are NOT met and the block is defective in many respects.

3.04 In the event of a fire the safety of the tenants would be seriously compromised. In quite a small fire escaping tenants could be overcome by smoke in the very areas where there should be no smoke; in the fire stairs and escape lobbies themselves. Tenants could die in such a situation. The reason for this is as follows.

3.05 A considerable number of fire doors are defective. They either do not close properly, have no glass, broken closers, no handles or safe exit in an emergency is impeded by broken refuse chute covers which are just lying in the lobby.

3.06 Of the 11 floors we inspected only floors 10, 7, 2 and 1 had no defects.

3.07 Major defects were found on the following floors: 11-1 fire door, 9- 2 fire doors plus broken glazing and a broken rubbish chute cover, 8- 2 fire doors, 6- 1 fire door and a broken rubbish chute cover, 5- 2 fire doors and broken glazing and a broken refuse chute cover, 4- 1 fire door and glazing, 3- 2 fire doors.

3.08 It appears that this situation is not a recent one and these doors have been inoperative for some considerable time. Although we did not inspect the other five blocks we have reason to believe that equally serious safety defects will be found in them as well.

3.09 There was a notice at the bottom of the stairs warning against the use of LPG in the flats.

3.10 There is no emergency lighting in this block.

3.11 We did not inspect any flats.

4.00 CONCLUSIONS

4.01 Block "E" fails to meet the basic requirements of BSCP CP3: Chap IV (1962) with regard to Means of Escape.

4.02 In the event of a fire the fire stair and escape lobbies could become seriously smoke logged. This could cause loss of life and would make fighting any fire more difficult. It could put the lives of the rescue services at risk.

4.04 There is no alternative Means of Escape from each flat. If this block was designed today this would be a legal requirement. Therefore it is imperative that the fire escape areas are made as safe as is humanly possible.

4.05 There are no instructions to tenants about what to do in a fire. If this was a hotel these would be required by law. Notices in English as well as for ethnic minorities should be clearly displayed throughout the public areas of all these blocks.

4.06 Emergency lighting should be installed in all lobbies and the fire stair.

4.07 Smoke alarms should be fitted in these areas.

Sam Webb Architect for The National Tower Blocks Network
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KEDGE HOUSE TILLER ROAD BARKENTINE ESTATE ISLE OF DOGS

LONDON BOROUGH OF TOWER HAMLETS.

REPORT OF INSPECTION CARRIED OUT ON FRIDAY 28th SEPTEMBER 1990.

Inspection carried out by Sam Webb Architect on behalf of The National Tower Blocks Network.

1.00 The inspection was carried out in the presence of Frances Clarke of the NTBN.

1.01 Kedge House is a 10 storey block of 40 flats built in the Taylor Woodrow Anglian system (TWA). This was an adaptation of the Danish Larsen Neilsen system. It was part of a serial contract let by the LCC/GLC known as the Morris Walk Series so named after the first blocks built at Morris Walk in Greenwich.

1.02 There are a number of similar blocks some rising to 14 storeys in various parts of London. They were all built under this contract. In all there are some 1,800 flats.

1.03 The TWA system was used on two other Estates in London apart from the GLC ones, Broadwater Farm in Haringey and Freemasons Road in Newham. Ronan Point was part of this contract.

2.00 THE RONAN POINT FIRE TEST 1984

2.01 In 1983 I was invited by tenants living in Ronan Point to carry out a survey. As a result the building was evacuated in April 1984 in order that tests could be held.

2.02 I requested structural tests and an insitu Fire Test. These were set up by the Building Research Station and the Fire Research Station.

2.03 The Fire Test of 18th July 1984 which should have lasted 20/30 minutes was extinguished after only 12 minutes as the Newham engineers in charge were concerned that the block might collapse due to expansion of the floor slabs and lack of structural restraint to resist this. "The fire was terminated as the limits set by the engineer were reached with respect to both horizontal and vertical deflections." p12 Fire Test Ronan Point 18 July 1984 by B B Pigott and W D Wooley FRS Dec 1984.

2.04 When Ronan Point was systematically dismantled in 1987/88 major defects were found in its structure. These were not visible from a normal inspection but they were predictable.

2.05 As a result of the 1984 investigations the Minister ordered checks on all TWA buildings in the UK. Was Kedge House checked?

2.06 Kedge House like all the Morris Walk series buildings is 'H' shaped on plan consisting of two wings of flats with a central tower containing the escape stair and lifts. This is linked to the two wings by simply supported landing panels. The whole construction is of prefabricated concrete panels.

2.07 Notes of a meeting between The Treasury Solicitors Department and Eric Bunn Chief Structural Engineer to the Greater London Council at the time of the Ronan Point Inquiry on 3rd July 1968 stated that:

"Mr Bunn said that his inquiries which he would have to make before writing another statement may well cause alarm since the Larsen Neilsen System introduced by TWA had undoubtedly been modified as the years went by and it could be said therefore that the earlier buildings were not as stable as the present ones."

This was not made Public at the time of the Inquiry and came to light as a result of searches that I made in the Government Records which were released to me by the Minister.

2.08 What Mr Bunn said in layman's terms is that the Morris Walk Series of which Kedge House is one only block were not as strong as Ronan Point. In the event of an explosion Kedge House would suffer progressive collapse and there is every likelihood that a fire could cause unpredictable structural movement.

2.09 The Ronan Point Fire Test caused a fracture of the floor slab which allowed smoke and fumes to pass up to the flat above the fire. Movement was such that smoke passed around the loadbearing ends of the floor slab (H4 joint). Smoke will also readily pass through gaps caused by bowing non loadbearing window panels (H1 joint).

3.00 THE INSPECTION

3.01 The inspection was carried out in the presence of Frances Clarke. We started at the 10th floor and inspected the stairs and landing areas. We also inspected a flat.

3.02 This building like Knighthead Point on the Quarterdeck was built subject to the following regulations: The London Building Acts 1930-39, Section 20, the London Constructional Bylaws and BSCP CP3: Chap IV (1962). For further explanation see the report on Knighthead.

3.03 A number of fire doors were broken. Some had missing glass.

3.04 The flat suffered the usual problems associated with this form of construction. The tenant mentioned water which leaked from the upper floor into the bathroom. Cooking smells came into the flat from other flats. Noise such as people talking in other flats, we were told, is apparent.

3.05 TWA blocks are prone to gaps in the structure particularly along the non-loadbearing edges of precast concrete floor slabs (H1 joint).

3.06 These gaps in the structure deny tenants a one hour fire separation as required by the regulations (CP3: Chap IV).

3.07 Kedge Point does not meet the basic requirements of BSCP CP3: Chap IV (1962). The tenancies do not have a one hour fire separation.

3.08 A number of these flats have been bought by tenants under the "Right to Buy" terms in the Housing Act.

3.09 The flats contain a considerable amount of asbestos in the form of panelling.

3.10 The flats have been supplied with new heaters. These have been installed in such a way as to damage the decorations of the flats. No attempt has been made at making this damage good.

3.11 We could find no evidence of tenants being warned of the dangers of the use of LPG in Kedge House.

3.12 This is surprising given that Tower Hamlets has three other similar Estates containing almost identical Morris Walk Series buildings: Ocean 1965 3/10 120 flats and Jefferson St 1966 2/10 80 flats and the Barley Mow Estate 1967 3/14 174 flats.

4.00 CONCLUSIONS

4.01 Kedge Point does not meet the requirements of BSCP CP3: Chap IV (1962) with regard to one hour fire separation of tenancies. This is surprising given the widespread publicity over similar deficiencies in TWA buildings from 1984 onwards including the publication of BRE Reports.

4.02 There are no notices warning of the dangers of the use of LPG in the block.

4.05 A number of fire doors are broken.

4.04 An entrance porch is under construction presumably for a Concierge system.

Sam Webb Architect 30th September 1990 COPYRIGHT.

KNIGHTHEAD POINT BARKENTINE ESTATE WEST FERRY ROAD

ISLE OF DOGS LONDON BOROUGH OF TOWER HAMLETS.

REPORT OF INSPECTION CARRIED OUT ON FRIDAY 28th SEPTEMBER 1990

Inspection carried out by Sam Webb Architect

1.00 INTRODUCTION.

1.01 Knighthead Point is a 22 storey tower block built in 1969. The inspection was carried out in the presence of Frances Clarke of National Tower Blocks Network and Terese Shanahan of flat 52 Knighthead Point, The Quarterdeck, Barkentine Estate.

1.02 The Barkentine Estate in West Ferry Road is a 'Mixed Development'. It consists of a number of different contracts: Alpha Grove and Malabar St sites (the Quarterdeck) of 4 x 22 storeys total of 348 flats and Alpha Grove Extension, Stuarts Granolithic Works (Tiller Road) TWA (Larsen - Neilsen) 1/10 40 flats, Kedge House. There are a number of lowrise blocks including some early 'Orlit' system built houses.

1.03 There are four 22 storey tower blocks of flats on the Quarterdeck. They were built in 1969. They received approval by the the GLC Housing Committee in 1965. They do not appear to be 'system built'. They were designed by the LCC/GLC Architects Department and built by J.M. Hill Contractors.

2.00 CONSTRUCTION AND MEANS OF ESCAPE.

2.01 The regulations governing their construction would have been The London Building Acts 1930-39 and The London Constructional Bylaws. As they are over 100'0" they would have come under Section 20 of the London Building Acts. This is directly controlled by The District Surveyor.

2.02 They would also have been subject to BRITISH STANDARD CODE OF PRACTICE CP3: Chap IV (1962) Precaution against Fire. This governed Means of Escape in Case of Fire and Construction:

"The assumption should no longer be made that buildings must be evacuated if a fire occurs and high residential buidings should therefore, be designed so that the occupants of floors above a dwelling which is on fire may, if they choose, remain safely on their own floor. It may be necessary to evacuate the floor on which the fire occurs, and in some circumstances those floors which are in the immediate vicinity of the fire, but the occupants of these floors should be free to reach safety in any part of the building via the staircase."

2.03 cont'd:

"It is, of course, essential that there should be adequate physical separation between the two occupancies and that the means of escape from the dwellings should be designed and constructed so that they can under no circumstances be attacked by fire or smoke from the other occupancy."

"The guiding principle in the recommendations which follow is safety of life. In securing this, means of escape, construction and firefighting all play a part. This part of the Code deals with all three subjects, but recommendations on constructions have not been fully developed as many aspects are already subject to building control."

Quoted from the Introduction of Chap IV (1962).

2.04 Means of Escape from each floor is from the front door of each flat via the fire escape stair to the ground. There is no secondary means of escape as would be the case if these flats had been designed and built today. Therefore it is imperative that these areas are as safe as is humanly possible.

2.05 Due to the age of these flats there will be a high percentage of asbestos used in the construction.

3.00 THE INSPECTION.

3.01 We started the inspection on the top floor walking down the fire stairs.

3.02 There are four flats per floor. These open onto a central internal ventilated lobby served by lifts. The ventilation is inadequate. Each lift serves alternate floors. This lobby opens onto a ventilated space. Off this is a glazed room containing a rubbish chute and the fire stairs. These are ventilated.

3.03 In terms of its original planning Knighthead Point meets the requirements of BSCP CP3: ChapIV (1962). In practice these are NOT met and the block is defective in many respects. In the event of a fire the safety of the tenants would be seriously compromised. In quite a small fire escaping tenants could be overcome by smoke in the very areas where there should be no smoke; in the fire stairs and escape lobbies themselves. Tenants could die in such a situation. The reason for this is as follows.

3.04 A considerable number of fire doors are defective. They either do not close properly, or have missing glazing or in many cases the doors have completely been removed. It appears that this situation is not recent one and these doors have been inoperative for some time. In some cases for AS LONG AS FOUR YEARS. Although we did not inspect the other three 22 storey

blocks I have reason to believe similar conditions will be found in there as well.

3.05 A number of the doors which have been replaced do not shut properly and jam against the floor. These require the simple operation of easing up or they too will become totally broken.

3.06 Because the ventilation to the internal lobby is inadequate some landings become smelly so tenants prop the fire doors open to get rid of the smell. This is a dangerous practice.

3.06 There are no smoke alarms in public areas.

3.07 There is no emergency lighting system for the public areas. In the event of a fire which immobilises the lighting system then all the public areas; fire stairs, lobbies etc would be plunged into darkness.

4.00 CONCIERGE SYSTEM.

4.01 There is a concierge system in operation. Visitors are asked to sign in and out. Lifts have cameras behind sloping black glass and in other areas there are cameras.

4.02 This had led to a considerable reduction in vandalism and break-ins. We were told that this had come about through tenants who were leaseholders (approx 40%) refusing to pay their service charge (£1,000 pa). These are tenants who exercised their 'right to buy'.

4.03 It is difficult to see why the concierge has not picked up the problems of broken fire doors. If he had a 'report back system' to the Housing Department then these matters could be picked up when they occur. It is in no ones interest to have broken fire doors in any building. The implications for the council and its officers could be very serious in the event of a fatality in a fire.

5.00 INSTRUCTIONS TO TENANTS

5.01 There are no instructions to tenants about what to do in a fire. In view of what happened in the recent fire in Birmingham, the high temperatures which develop in a normal domestic fire, ie +1000 deg C and the speed with which fires develop, then this is a serious omission which must be rectified.

5.02 If this building was an hotel then such notices would have to be displayed. These instructions should not just be printed in English. They should cover all ethnic groups. They should be prominently displayed in all public areas. This should be carried out in all blocks throughout the borough.

6.00 HIGH WINDS.

6.01 On two occasions during the last three years the southeast of England has been subjected to hurricane force winds in October 1987 and Feb 1990. There were also very high winds during October 1983 in London. Contrary to accepted wisdom such conditions do not occur once every 300 years. Buildings as high as Knighthead Point (22 floors) will be frequently exposed to winds with peak gusts in the order of 105mph. These buildings stand in the Thames Estuary overlooking Limehouse Reach and while the building will not blow over parts- particularly windows are very vulnerable in such winds.

6.02 During the hurricane early this year we were told that some 60 windows were sucked out of the high blocks on the Quarterdeck. Apart from the risks to occupants of flats where this happens glass falling from the heights of these blocks could kill people on the ground.

6.03 This would seem to imply that due regard was not given in the choice of windows and the forces that they would be likely to meet during use. Is the glass thick enough? Are the fixings adequate? In one block of flats in south London brickwork was removed from upper storeys in the 1990 hurricane.

6.04 These windows would not meet today's regulations with regard to insulation. They are draughty and while they might be adequate at ground level they lead to problems in use. Expensive heat is lost from an overloaded and inadequate warm air heating system.

7.00 CONCLUSIONS

7.01 Knighthead Point does not meet the requirements of BSCP CP3 Chap IV (1962) with regard to Means of Escape.

7.02 In the event of a fire tenants could be overcome by smoke and fumes in the very areas where they would expect to be safe, ie the fire escape stairs and lobbies.

7.03 This would also affect the rescue services.

7.04 I was told that fire doors had been missing and or broken for four years (see 3.04).

7.05 There are no instructions to tenants about what to do in the event of a fire. If this was an hotel these would be required by law. Notices in English as well as for ethnic minorities should be clearly displayed throughout the public areas.

7.06 There is no alternative Means of Escape from each flat. If this block was designed today this would be a legal requirement. Therefore it is imperative that the fire escape areas are made as safe as is humanly possible.

7.07 Smoke alarms and an Emergency Lighting System should be provided in all the Public Areas inside the block.

7.08 The glazing appears to be incapable of withstanding the windforces that have occurred during the last three years. In early 1990 some 60 windows were sucked out of blocks on the Quarterdeck.

7.09 The heating system is inefficient and may well lead to tenants using LPG heaters. Some years ago piped gas was removed from these blocks.

7.10 Events over the last two months have led to higher and higher oil prices. Past history tells us that they will not go down even if Iraq does withdraw from Kuwait. Petrol pump prices have increased by 25% since August 1st 1990 and crude oil has increased from 19\$ a barrel to 40\$ in the same time. These prices will affect all heating fuels, put up the price of electricity and increase the tenants heating bills to a point where they either cannot pay them or they resort to 'cheaper' forms of heating. One result of this could be the use of extremely dangerous LPG. One simple remedy which would help would be an overhaul of all the windows in this block and the other three blocks. Adequate draught stripping should be provided as a matter of urgency.

7.11 Although this is a long report much of which is critical the criticisms are made about areas of Knighthead Point where lives would be at risk in the event of a fire or some aspects which could lead to dangerous substances being taken into the block ie LPG because of an inadequate heating system and poor windows. While these windows may be adequate at ground level they are not adequate some 200' 0" above the The Thames Estuary.

7.12 The Concierge system is admirable and it should be extended to incorporate a 'report back system' so that the Housing Department can pick up defects. It is a system which could be incorporated borough wide. The savings through reductions in damage through vandalism would be considerable. I am very concerned that fire doors which are crucial to the safety of tenants and the rescue services in the event of a fire have remained broken for four years. This is one of the defects raised by the West Midlands Fire Brigade after the fatal multi storey fire in Birmingham last July.

Sam Webb Architect for The National Tower Blocks Network
29th September 1990 COPYRIGHT.

SPORLE COURT WINSTANLEY ROAD WANDSWORTH SW11

REPORT OF SURVEY CARRIED OUT ON FRIDAY 14th SEPTEMBER 1990

Survey carried out by Sam Webb Architect for The National Tower Blocks Network.

1.00 INTRODUCTION.

1.01 Sporle Court is a 23 storey Tower Block built in the early 1960's.

1.02 Externally the block appears to be of Large Panel Construction. The block is supplied with gas both for Central Heating and Cooking.

1.03 The block has two lifts and one internal fire stair. The accomodation is in the form of Maisonette flats. These are on two floors and each has an internal staircase.

1.04 Means of Escape from the lower floor is via the main corridor to the main fire escape staircase. On the upper bedroom floor escape is via a main corridor to the escape stair and also via balconies to neighbouring flats.

1.05 The block would have been built under the London Building Acts 1930-39, and the relevant LCC Constructional Bylaws. The Means of Escape would have had to comply with BSCP: CP3: Chapter IV (1962) or its earlier equivalent. I was told that tenants had lived in the block since 1963.

1.06 The inspection was carried out in the presence of Frances Clark of The National Tower Blocks Network and Mrs Kakembo a Tenant living in flat 17. Some photographs were taken.

1.07 While in Mrs Kakembo's flat Ms Clark and I read a number of documents.

2.00 LARGE PANEL CONSTRUCTION AND GAS.

2.01 Externally this block gives the appearance of Large Panel Construction.

2.02 In 1968 the use of gas in Large Panel Construction buildings over 5 storeys was banned by the Government because of the dangers of progressive collapse in the event of an explosion. The use of bottled gas was also banned.

2.03 The only buildings of this type in which gas could be used were those under 5 storeys or those capable of withstanding an explosion of 5psi. If existing buildings could not meet 5psi or be strengthened to this figure then a lower figure of 2.5 psi was adopted. In this case gas had to be removed.

2.04 As Sporle Court was built before the partial collapse of Ronan Point in 1968, did Wandsworth Council ever check to see if it was safe to continue to use gas in the building in 1968/69? The Government ordered checks in November 1968 after the publication of the Ronan Point Report.

2.05 In 1969 a Report was prepared on Large Panel Construction by the then Chief Executive of Wandsworth. This Report was not presented to the Council.

2.06 As Gas is being used in this block The London Borough of Wandsworth should confirm the constructional method. Is Sporle Court capable of withstanding an explosion of 5psi? The information on construction can be found in the relevant Housing Committee minutes when the block was built. The Council records will also show what steps were taken in 1969/70 to check the safety of this block for the use of gas.

2.07 In 1984 further investigations were carried out into the construction and site workmanship of Ronan Point. In October 1984 the Minister of Housing and Construction Ian Gow ordered Local Authorities in England and Wales to carry out Safety checks on all their system built flats. A number of reports were written by the BRE about Large Panel Construction. Was Sporle Court checked as a result of this?

3.00 MEANS OF ESCAPE AND FIRE SAFETY.

3.01 The object of the fire regulations is to prevent the spread of fire, to contain a fire within the flat of origin, to prevent the untimely collapse of a building and to allow for safe, protected Means of Escape.

3.02 Means of Escape would be covered by BSCP CP3: Chap IV (1962) 'Precaution against Fire'. This assumes that it is no longer necessary to evacuate a tall residential building (over 80'0") in the event of a fire. The code states: "The guiding principle in the recommendations which follow is safety of life. In securing this, means of escape, construction and fire fighting all play a part."

3.03 In a number of instances during the survey it was found that Sporle Court did not meet these requirements.

4.00 THE INSPECTION.

4.01 We started the inspection on the 21st floor walking down the fire stairs. Not all floors were visited but enough was seen to give an overall view.

4.02 21st floor: the fresh air vents at both the West and East ends of the corridor are broken and in a dangerous state. The space of all those inspected was full of rubbish which in some cases created a serious fire risk. The grating at the west end has been broken, possibly by children jumping on it. A hole is thus exposed through which it would be possible for a small child to fall 200' 0" to the ground. This is very dangerous and this condition is found on many floors. Objects can be thrown through this hole endangering people at ground level. The door to the Dry Riser has no lock for security and is an open invitation for vandalism. In a recent fatal fire in Birmingham Dry Risers had been vandalised and water had to be pumped from ground level for the full height of the building. As a result the fire took longer to bring under control. The same condition applies to many service duct doors in the corridors. Some of these contain gas supplies.

4.03 19th floor: the fresh air vent at the East end was full of rubbish. The service duct doors were not secure.

4.04 17th floor: the fresh air vent at the East end had rubbish and parts of a car in it.

4.05 15th floor: both vents were filthy and full of rubbish. The fire door leading to the corridor would not shut. The top hinge had been badly repaired with #10 30mm Pozidrive screws. All of the screws were loose and could be pulled out by hand. These screws are recent.

4.06 13th floor: both vents were filthy.

4.05 8th floor: The fire door from the stairs will not close. The hinge is loose. The vents at the East and West ends are loose. The floors between the 13th and 8th were not inspected or between 6th and 2nd.

4.06 2nd floor: the fire door from the stair would not shut. The ducts were filthy and there had been a fire in one. The service ducts were not secure.

4.07 Ground level: there is a ramp from the fire escape door to the ground. The staircase is ventilated by three slots. Immediately adjacent is timber panelling on battens fixed to brickwork. There is a 50mm gap behind the panelling. This panelling constitutes a fire risk and would hazard the escape stair. The corner of the panelling has been broken away.

5.00 CONCLUSIONS.

5.01 These flats have a piped gas supply. In the event of a leak in the supply pipe there is no way for the gas to vent except into the corridor. Gas supply pipes should not be in an unvented duct.

5.02 A number of fire doors are inoperative. In the event of a fire they would allow large amounts of smoke and hot, possibly lethal fumes to hazard escape routes. The use of timber panelling at ground level is questionable. It could pose a serious threat to the safety of the occupants by filling the escape stair with smoke and fumes if it was set alight by vandals. It has already been damaged.

5.03 Many of the fresh air vents to the escape corridors have been vandalised. They are in an unsafe condition. They are accesible to children who could fall through the gap at floor level.

5.04 Many fires are caused by vandalism. Rubbish frequently collects in spaces such as the areas at the base of the timber panelling. A fire here could cause a great deal of smoke which would be drawn through the lower fresh air vent to the escape stair and hazard people using the stair.

5.05 Sporle Court which has a gas supply for cooking and central heating appears to be of Large Panel Construction. If this is the case is then it is extremely doubtful if the structure is capable of sustaining a 5psi explosion without progressive collapse. Was this block checked in 1968 or again when the Minister requested in October 1984 that Large Panel Blocks be checked for safety? It is very important that this matter is verified by the Council. Are there any other similar blocks on this estate or elsewhere in the borough?

5.06 Sporle Court as inspected on Friday 14th September 1990:

**** does not appear to meet the basic requirements of BSCP CP3: Chap IV(1962) with regard to Means of Escape

**** appears to be of Large Panel Construction with a gas supply. No evidence of strengthening could be found. This poses a serious question. Is Sporle Court safe in the event of a gas explosion or will it suffer progressive collapse?

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Sam Webb Architect. 081 472 6652.
Report on behalf of The National Tower Blocks Network.
September 1990.

RIVER BANK TOWERS SALFORD 3 MANCHESTER.

REPORT OF INSPECTION CARRIED OUT ON THURSDAY 4th OCTOBER 1990.

Inspection carried out by Graham Doyle Architect.

1.00 INTRODUCTION.

1.01 Riverbank Towers is a 15 storey block of flats built in the 1960's. It does not appear to be system built. It is supplied with gas.

1.02 There are six flats per floor with three either side of a lobby containing two lifts and a single fire escape stair.

1.03 The inspection was carried out by Graham Doyle and Evan McKenzie the Chair of the Tenants Association. This report was written by Sam Webb Architect from information supplied.

2.00 MEANS OF ESCAPE AND FIRE SAFETY.

2.01 The block would have been built either under the 1965 Building Regulations or the earlier Metropolitan Byelaws based on the Model Byelaws of 1953. These would have been enforced by the Building Inspector.

2.02 Means of Escape is covered by those regulations and would be dealt with by compliance with BSCP CP3 Chap IV (1962). This related to blocks of flats and maisonettes over 80'0" high. The guiding principle of this code and the one which succeeded it is: "safety of life."

2.03 In a number of important respects Riverbank Towers does not meet the basic requirements of these regulations.

3.00 THE INSPECTION.

3.01 The inspection started on the top floor in the lobby and then continued down the fire stairs to the ground floor.

3.01 The inspection took place in the evening. Many lights were not working. (see chart) There is no emergency lighting.

3.02 The lobbies have centrally pivoted windows 40% of which obstruct the fire doors. These 6 windows are not locked and blow open in the wind. The cill is only 1 metre from the floor and a child could fall out of one of these windows.

3.03 Many flats and the following floors are not numbered &, 8, 9 and 10. In a fire the fire brigade would not know which floor they were on and they might not find a flat. This could cause delays and cost lives. It could result in the rescue services becoming lost inside the building in a fire.

3.04 Many fire doors are broken or not fully operative. They have closer springs ripped off, missing handles, broken hinges or they are so jammed that they will not open or close properly. In some cases doors are missing. (see chart).

3.05 One lobby showed signs of a recent fire. This fire door was locked. This is illegal.

3.06 At the lowest level where the fire brigade would connect their pump the dry riser cover had been ripped off. This allows the dry riser to be vandalised and has obvious safety consequences. Damage to the dryriser could mean the fire brigade carrying hoses etc up the block. Such a delay could prove fatal. (fire in Merry Hill Court Birmingham 13 vii 1990)

3.07 In the ground floor entrance hall the wall mounted lift panel has been vandalised. The cover is missing. Bare live wires are exposed within reach of children.

3.08 The false ceiling in this area which is 4" (100mm) deep is generally vandalised has missing tiles. Above these are exposed electrical cables running alongside what appears to be water pipes. It is possible to touch these cables. The height of the tiles is 2100 mm or about 7'0".

3.09 Only 20% of the flats are occupied, 80% are empty and of these 40% had their doors swinging open. There are many breakins and vandalism is rife. Apart from the major fire risk there is risk from damage to water pipes causing flooding to the flats below and a major risk of explosion because these flats have gas supplies.

3.10 Each floor has a store opening onto the main lobby off which are three flats. Although these are lockable most were left open. Some were full of debris or old furniture. They appear to be a possible fire risk.

3.11 There are no smoke alarms and no notices instructing tenants what to do in the event of a fire.

3.12 We understand that these flats have been refurbished within the last three years. Their present state is potentially lethal. The conditions in the other three blocks on the estate is according to the Chairman of the Tenants Association as bad if not worse. There was not time to inspect these three blocks and River Bank Towers was chosen at random.

4.00 CONCLUSIONS.

4.01 There are major fire safety defects in this building. A number of fire doors are inoperative. In the event of a fire this situation would allow large amounts of smoke and hot possibly lethal fumes to hazard the escape routes. Tenants and rescue services could become trapped and overcome in the very area where they should be safest.

4.02 The high number of empty flats has led to high levels of vandalism and breakins. There are no instructions on what to do in a fire, many lights are broken, there is no emergency lighting, fire doors broken and some are locked.

4.03 There is an understandable level of insecurity among the tenants. There are 80% of the flats empty. Of these 40% have been forced open. This block was apparently refurbished three years ago.

4.04 With the high levels of vandalism we are seriously concerned about the risk of an explosion from the gas supply.

4.05 River Bank Towers is one of four similar blocks on the estate. The conditions in the other three blocks are equally as bad if not worse according to the Chair of the Tenants Association.

Sam Webb Architect.
October 26th 1990.
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SPRING, NORFOLK PARK ESTATE SHEFFIELD 2.

REPORT OF INSPECTION CARRIED OUT ON 9th OCTOBER 1990.

Inspection carried out by Sara Gowen of The National Tower Blocks Network Sheffield.

1.00 INTRODUCTION.

1.01 This report should be read in conjunction with the sketch plan.

1.02 The block is in relatively good condition. Vandalism is a problem in other blocks on the estate ie lifts set on fire and a tenant is alleged to have set fire to a 6th floor flat in order to get a transfer.

1.03 The block is 15 storeys. There are 8 flats per floor. The plan is symmetrical with a central bay containing a fire stair and lifts which lead to an internal lobby. This lobby feeds either side to a lobby running the full width of the block. This is ventilated. These lobbies lead to two internal lobbies around which are arranged four flats.

2.00 MEANS OF ESCAPE AND FIRE SAFETY.

2.01 Each flat from the second floor up has two means of escape. One is via the front door to the escape stair. The other is via a "kick panel" on the balcony. This leads to the other flat.

2.02 This secondary means of escape is presumably to comply with the requirements of BSCP CP3 Chap IV (1971).

2.03 In a number of important respects Spring does not meet the basic requirements of these regulations.

3.00 THE INSPECTION.

3.01 The inspection started on the top floor and worked down.

3.02 All the fire doors were in order.

3.03 Each of the main lobbies running across the width of the block had rubbish shutes and caretaker rooms. Some rooms were locked, others were crammed with rubbish, boxes and old mattresses. This is a major fire risk. These conditions were found on floors 1, 2, 3 and 10.

3.04 Each internal lobby has a compressed fibre false ceiling. This lobby serves the front door of each flat. There are four to each lobby. (see sketch plan)

3.05 The materials and construction used in this lobby which is the only means of escape must not support fire. This ceiling will burn. If there is a fire in a flat this ceiling could ignite and trap tenants in the other three flats. This should be treated as a protected corridor. The materials used for these walls and ceilings should be Class 0.

3.06 Given the risk of fire from the accumulated rubbish in this block it is not a question of, 'if this happens' but 'when'.

3.07 The false ceiling in the lift lobby at ground level has the same tiles. This lobby opens into the main lobbies at the bottom of the block. Each lobby has the same tiles.

3.08 The materials used in these ceilings will support fire. The block does not comply with BSCP CP3 Chap IV (1971). The materials used do not comply with the 'surface spread of flame' requirements of the Building Regulations.

3.09 There are no notices about what to do in the event of fire. There are no smoke alarms or emergency lighting.

3.10 There is a dry riser running up the centre of the building. It is not covered. There is an outlet at each floor.

3.11 Lobby windows are broken on floors 12, 13, 14 and 15.

3.12 There is a notice about the dangers of Liquefied Petroleum Gas (LPG) in the caretakers office. This is behind security glass and not legible.

4.00 CONCLUSIONS.

4.01 This block of flats does not comply with BSCP CP3 Chap IV (1971) with respect to surface spread of flame of materials used in the construction of the false ceilings in lobbies. These lobbies are the escape route from the block.

Sam Webb Architect for the National Tower Blocks Network.
Copyright October 26th 1990.

**ROBERT SHAW BUILDING, NETHERTHORPE ESTATE,
BRIGHTMORE DRIVE, SHEFFIELD S3.**

REPORT OF INSPECTION CARRIED OUT ON 8th OCTOBER 1990.

Inspection carried out by Sara Gowen of The National Tower Blocks Network Sheffield.

1.00 INTRODUCTION.

1.01 This report should be read in conjunction with the sketch plan.

1.02 The block has had recent fire safety work carried out. All fire doors worked and all flats have had fire doors fitted.

1.03 The block is 14 storeys built of brick and concrete with 4 flats on each floor off a central lobby. This lobby contains two lifts serving alternate floors and two fire escape stairs. Each flat has a balcony with its own rubbish chute.

1.04 The Netherthorpe Estate was built in stages with the first stage starting on site in 1958 and the fourth and last in 1960. The first three stages and part of the the fourth were built by Tersons and remainder of the fourth stage was built by Sheffield's Direct Labour Department. The Robert Shaw Building appears to be of conventional construction of reinforced concrete with brick panels.

2.00 MEANS OF ESCAPE IN CASE OF FIRE.

2.01 Each flat has one means of escape through the front door to the lobby and then to the fire escape stairs. These lead to the ground. At ground floor level there is a lobby.

2.02 All blocks on the estate were built before BSCP CP 3 Chap IV (1962) was mandatory for flats of this height. Prior to 1962 the only specific regulation governing tall buildings was Section 20 of the London Building Acts (Amendment) Act 1939 which did not apply to Sheffield. The only other guides on fire were The Building Industries National Council Report on means of escape in case of fire 1945, Post War Building Studies No 29 HMSO 1952 and CP3: Chap IV: 1948 Houses and flats of not more than two storeys. The blocks appear to conform to the early code of 1962. The Regulations in force at the time would have been Sheffield's own Byelaws based on the Model Byelaws of 1953.

2.03 There has been recent work upgrading fire doors. All of these doors are in working order. However there are other parts of the common areas which do not comply with BSCP CP3 Chap IV.

2.04 These areas have flammable linings which will support fire.

3.00 THE INSPECTION.

3.01 The inspection started on the top floor and worked down.

3.02 All fire doors worked.

3.03 On every floor the windows the staircases were either broken, jammed open or closed due to paint. Some had been damaged by the wind. This block is exposed and on a hill.

3.04 There is a dryriser on alternate floors 1,3,5,7 etc.

3.05 There are no smoke alarms, no emergency lighting and no fire alarms.

3.06 There are some notices about what to do in the event of a fire. These are sporadic. All flats and floors were numbered.

3.07 The ceilings of of every lobby and every stairwell including the soffits of the stairs themselves are clad with a compressed fibre ceiling panel. The false ceiling in the entrance lobby is of polystyrene tiles.

3.08 Polystyrene burns readily giving off dense black smoke. This smoke contains toxic fumes. We have tested part of one of the other compressed fibre tiles with a match and found that it burned. These linings should be Class 0 ie plaster, concrete etc. They should not supprt fire.

3.09 In common areas there appear to be wooden casings around pipe ducts and we are concerned at exposed pipe lagging found. It would appear to support fire. There is evedence of water penetration through light fittings on the top floor.

3.10 The Robert Shaw Building does not comply with the normal safety standards of BSCP CP3 Chap IV in respect of these linings.

3.11 There was some uncleared rubbish found. This is a fire risk.

4.00 CONCLUSIONS,

4.01 This block of flats does not comply with BSCP CP3 Chap IV (1962) or the Building Regulations with respect to the surface spread of flame of materials used in the construction of the false ceilings in lobbies. These lobbies are the escape route from the block.

Sam Webb Architect for the National Tower Block Network.
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CAUSE FOR ALARM - SMOKE ALARMS IN THE HOME

A SUMMARY OF A REPORT BY THE NATIONAL HOUSING AND TOWN PLANNING COUNCIL

Smoke alarms give early warning of fire and provide precious extra minutes in which to escape. Over 300 lives could be saved each year if smoke alarms were installed in every home in the UK and properly maintained. It is estimated that 30% of homes in this country have voluntarily fitted smoke alarms, but this is a relatively new innovation and subsequently there is not enough evidence accumulated to back up the demand for legislation.

However evidence from other countries, particularly the USA, shows that smoke alarms can nearly halve the loss of life from domestic fires. Smoke alarms in the USA have been described as the "fire safety success story of the decade". Research has shown that the chance of death from a domestic fire is 45% lower in a home where at least one detector has been fitted.

Fire safety legislation in Britain has recognised the part smoke alarms can play in fire safety provisions in communal places. Fire Authorities can withhold Fire Certificates until adequate precautions are in place. Yet in domestic properties there are no legal requirements to install smoke alarms.

A natural progression of Government policy on fire safety would be the introduction of measures to ensure more widespread smoke alarms in domestic properties. The Government already supports voluntary action but has pulled back from legislating on the issue. The National Housing and Town Planning Council believe that the weight of evidence now available suggests that the Government should urgently reconsider its position.

No-one has ever claimed that smoke alarms were the complete answer to fire safety. Rather, they have been advocated as part of a wider fire prevention strategy, including diligence, education, building design improvement and other safeguards. But smoke alarms do give people extra time to ensure their safety.

Several councils, North Wiltshire District Council, Newcastle City Council, Bury Metropolitan Borough Council, to name a few, have been

fitting smoke alarms in recent years. Newcastle City Council believes that smoke alarms in their tenanted properties have "saved lives" when fires have occurred there.

The NHTPC carried out a survey of 500 public sector landlords and 50 top house builders, to establish their practices and experiences with smoke alarms. As a result, they make a list of 15 recommendations; which include:

Responsibility for installing smoke alarms should lie with the owner-occupiers and with the landlords of tenanted homes.

Smoke alarms should be provided free of charge to households receiving housing benefit or supplementary benefit.

VAT on smoke alarms should be abolished.

'Cause for Alarm - Smoke Alarms in the Home' is available from NHTPC, 14-18 Old Street, London EC1V 9AB. Telephone number (071) 251 2364.