# DAYLIGHT ASSESSMENTS
# PREPARED IN
# SUPPORT OF PLANNING APPLICATION

# ON

# LAND TO THE NORTH OF
# No. 2 SHIP STREET,
# SHOREHAM – By – SEA
# SUSSEX

# FOR

# MR K HORAN

**Prepared by:**
**Tester Associates**
**The Granary**
**4 Danworth Farm**
**Hurstpierpoint**
**West Sussex**
**BN6 9GL**

**January 2009**

## 1.00 Introduction and Instructions

This report has been prepared by M J Tester, FRICS, who has been a Chartered Building Surveyor for 25 years and a Fellow of the RICS for 13 years. One of our specialisms is preparing Daylight Assessments using the Building Research Establishment Site Layout Planning for Daylight and Sunlight – A Guide to Good Practice by P J Littlefair.

We have over 18 years experience in undertaking Daylight Assessments for Planning Applications and Appeals (written representations and Public Enquiry).

We have been commissioned by our Client, Mr K Horan, who is the owner of land to the North of No. 2 Ship Street, Shoreham by Sea, West Sussex.

Our instructions are to assess the potential impact of the proposed development to the North of No. 2 Ship Street on the daylighting to the residential units at Nos. 5, 5a and 5B, John Street, Shoreham by Sea.

This assessment report is required following representations by the owner(s) of Nos. 5, 5a and 5b John Street to the Local Authority Planning Department suggesting that there will be an adverse loss of daylight should the proposed development achieve Planning Permission.

The proposal submitted by the Applicant, Mr Horan, comprises of a single three storey town house fronting directly onto Ship Street. The properties that are alleged to be affected sit a minimum of 13.25 metres to the east behind the rear wall and 3 metres further north than the northern gable wall of the proposed development.

Immediately to the South of the allegedly affected properties are the gable wall to No. 56 High Street at a height of approximately 9 metres and the gable wall/flat roof to No. 58 High Street at a height of approximately 7.25 metres above prevailing ground levels.

We have been advised that the proposed development was submitted for Planning Approval under Planning Application No. ADC/0447/08.

The information contained in this Report will, we understand, be used in support of the Application for Planning Permission.

We have made a site visit and carried out a check measured survey and related this back to the Ordnance Survey plan supplied by the Applicant.

Where we were unable to take dimensions on Nos. 5, 5a and 5b as ready access was not available we have estimated, by counting brick courses heights and widths, the dimensions of the residential units. This is recognised practice and provides the level of accuracy necessary for this type of work.

## 2.00 Architect's Drawings

The Client's Architect has provided the following information upon which the Daylight Assessments in this report have been based.

Drawing No. 1691/05 prepared by TVR Designs.
Ordnance Survey at 1@1250 scale with enlargement of part to a scale of 1:500.

Photographs:-

A comprehensive set of photographs have been taken on site and a number of photographs are included in the Report under Appendix A.

## 3.00 Windows/Door Openings Analysed (Daylight Assessments)

We have prepared a drawing numbered TA/0355/01 entitled 'Daylight Analysis Nos 5, 5A and 5B John Street' and an A4 version is included in Appendix B of this Report ( 2 No. A1 copies issued by post).

The property closest to the proposed development on the land North of 2 Ship Street is No. 5 John Street and this would be expected to be the most adversely affected, if at all, by the proposed development. Hence, our assessments and analyses have been undertaken on this property.

The rear of No. 5 John Street which faces the proposed development obliquely to the South has an 'L' shaped plan form with the vertical section of the 'L' comprising a rear extension. At the ground floor level this would appear to contain a kitchen (as this is close to the main drainage points and a has a mechnical extract exiting the rear wall at this level). At the first floor level this extension contains a bathroom as the window comprises of obscured glazing.

At ground floor level, the horizontal section of the 'L' would appear to contain the living room as this is provided with a patio door onto the rear courtyard garden, and at the first floor there would appear to be a bedroom. The plan form means that these rooms are set back and behind the forward most part of the dwelling (ie the GF kitchen and FF bathroom extension).

At second floor level a small dormer is present in the roof and again, as this has obscured glazing, we believe this to be a bathroom.

When assessing the impact on daylight available to existing buildings, the BRE report states the following, "Windows to bathrooms, toilets, store rooms, circulation areas and garages need not be analysed" – essentially this is because these are non-habitable rooms with only occasional or intermittent use.

With regard to No. 5 John Street, there are essentially therefore only 3 windows that require daylight assessment and analysis, ie the kitchen window, the patio doors to the living room and the bedroom window at first floor.

The BRE - 45º Rule

When assessing the ground floor living room patio doors to No. 5 John Street, the BRE Guidance includes a rule of thumb to assess the impact of the rear extension in the plan form described above on the daylight available to the living room. This is known as 'The 45º Rule'.

We intend to use this rule as the plan form extension already described effectively interrupts and reduces the daylight entering the GF patio door and FF bedroom window. The recess formed by the extension is so deep that it almost completely masks and overrides any potential impact on daylighting of the development on the land to the North of 2 Ship Street to these windows. It does this by casting a deep shadow on the windows/doors in the recess.

The 45º Rule states that where a 45º line in plan is extended from the end of an extension back towards the main rear wall of property and this overlaps a 45º line taken from the eaves or ridge of the roof these areas will be permanently shaded by the extension. Where the two 45º lines intersect in both plan and elevation and also fully cover, or cover to above the centre line of a main window, then the extension may well cause significant reduction in the daylight received by these windows/doors.

We have shown this 45º line in plan and elevation on our drawing TA/0355/01.

Clearly it can be seen that the patio doors to the living room to No. 5 John Street are within the 45º shaded area, both in plan and elevation. It can also be seen that the first floor bedroom window is also within the 45º shaded area in plan and elevation and the intersection of the shaded zone occurs above the centre line of the window.

In conclusion, therefore, based on the 45º Rule both the living room patio doors at ground floor level and the first floor bedroom window to No. 5 John Street are significantly adversely affected in terms of access to daylighting by the plan shape of the existing property.

We have also shown in the plan (via an orange coloured line) extended from the centre line of the doors in plan the earliest point at which the proposed development would be visible and hence could be considered to have a possible impact on daylighting. This is in excess of 21 metres away. 20 metres is the accepted separation distance between new build residential properties when built back to back to meet daylighting and privacy issues and hence from the living room the proposed development is in excess of this guideline distance.

The BRE - 25º Rule

The BRE Guide also contains further guidelines to establish if a significant impact on daylighting to existing buildings would occur from a proposed adjoining development.

One of the most important is called 'The 25º Rule'. This states, "*A modified form of the procedure adopted for new buildings can be used to find out whether an existing building still receives enough sky light (daylight). First draw a section in a plane perpendicular to each affected main window wall of the existing building. Measure the angle to the horizontal subtended by the new development at the level of the centre of the lowest window or 2.0m for a door. If this angle is less than 25º for the whole of the development then it is unlikely to have a substantial effect on the diffuse skylight (daylight) enjoyed by the existing building".*

*"If none of the obstructing buildings subtends an angle to the horizontal greater than 25º then there will still be potential for good daylighting in the interior…."*

*"If an obstructing building is taller than this good daylighting may still be achievable provided the obstruction is not continuous and is narrow enough to allow adequate daylight around its sides".*

*"For a room with non-continuous obstructions there is the potential for good daylight provided that the Vertical Sky Component at the window position is not less than the value for a continuous obstruction of altitude 25º. This is equal to a Vertical Sky Component (VSC) of 27%"*

For a totally unobstructed sky (ie a totally remote building on a greenfield open site) the maximum potential Vertical Sky Component available for any window/door is 40%. For obvious reasons in an urban environment it is highly unlikely that this maximum would ever be achieved.

On drawing TA/0355/01 we have drawn the 25º angle line (ie where 27% VSC is available with no obstruction below the line) for each of the allegedly affected windows on the existing residential dwelling, ie GF kitchen (blue dashed line), FF bedroom (red dashed line) and GF living room (green dashed line).

For the first floor bedroom window it can be seen that the subtended 25º angle line does not cut the obliquely viewed outline of the proposed development to the South. For the patio doors to the ground floor living room the subtended line just clips the parapet wall to the roof of the development.

In conclusion, for the first floor bedroom using the 25º angle line, there will be no impact on daylighting due to the proposed development. For the ground floor living room patio doors the impact on daylighting will be so small as to be imperceptible. On the other hand, for the reasons we have explained above, (ie the 45º Rule), the existing extension impacts very heavily on the daylight available to this glazed door.

Turning now to the kitchen window, this window has in plan over 45º of its potential maximum horizon view of 120º over the adjoining car park with no obstructions whatsover anywhere near the 25º angle line which, as explained, indicates a 27% VSC and hence adequate provision for daylight. It therefore has better than required daylight availability over 37.5% of the visible horizon view.

The angle of view in plan from the kitchen window where the new development would be visible and hence potentially have an impact on daylighting is only 24º ie its zone of influence is only 20.8% of the maximum potential visible horizon (see Drg TA0355/01).

The 25º angle line shown in elevation on Section A-A does obliquely just clip the very top of the rear 40% of the proposed development at a line approximately 1.8 metres down from the roof parapet level ie 7.9 metres above the ground and at a distance of 13.25 metres away.

It should be noted, however, that the high gable wall/flat roof to No. 58 High Street immediately to the South and not more than 4 metres away is hence both much closer to the kitchen window and is almost to the same height as that at which the 25º line clips the upper parts of the proposed development. This gable wall will, in our opinion because of its closer proximity and height have a greater significant affect on the daylighting available to this window than the proposed development.

Using the BRE Skylight Indicators we have assessed the potential impact of the high gable wall to 58 High Street on the maximum potential Vertical Sky Component of 40% and consider this would reduce this by 6% to 34%.

As the proposed development is much further away and at a minimum of 13.25 metres from the window, its impact will be much reduced and we consider this will have a resultant further reduction of the Vertical Sky Component by 3.5% giving a combined resultant Vertical Sky Component of 30.5%.

We have also estimated the impact of St John's Court (former Church) on the kitchen window and assuming that the ridge is at approximately 13.5 metres high (taken as worst case using known heights and reference points) and approximately 19.0m away we estimate that this will have an impact on daylighting of 2.5%.

In conclusion therefore if all the effects above are added together the anticipated residual VSC available to the kitchen window would be 28% + or – 1%

A Vertical Sky Component of 27 % is advised by the BRE to provide adequate daylighting and hence it is our opinion this window would not be adeversely affected by the proposed development.

## 4.00 Conclusion

From the Daylight Assessments completed in accordance with the BRE Guidance we do not consider day-lighting to any of the windows to No 5, would be adversely affected by the proposed development.

With regards to No's 5A and 5B these properties are situated further north, away from the proposed development and hence could be expected to be less affected than No 5. For this reason we are of the opinion that No's 5A and 5B will not be adversely affected by the development either.

## 5.00 General

This Report is prepared for the sole use of the Client, his advisors and in support of the Applicant's submission for Planning Permission. The Report should not be shown to, released to, or used by any third party without the express written consent of Tester Associates. Any such person who relies upon the Report does so at their own risk.

**M J Tester MaPS FRICS**
Director
Tester Associates

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# APPENDIX A

# PHOTOGRAPHS




West - rear elevation No's 5, 5A, 5B



Gable Wall to No 56 High St and roof/gable wall to No 58 High St.




First floor bathroom windows to rear extension – No's 5A & 5B – No. 5 similar



First floor bedroom window to No 5 (left) and bathroom (right)



Gable wall to No 56 Hugh St and shadow from No. 58 High Street – roof.



Assumed kitchen window to No 5 – [note extract vent and waste plumbing (right)]

# APPENDIX B

Drg No. TA0355/01

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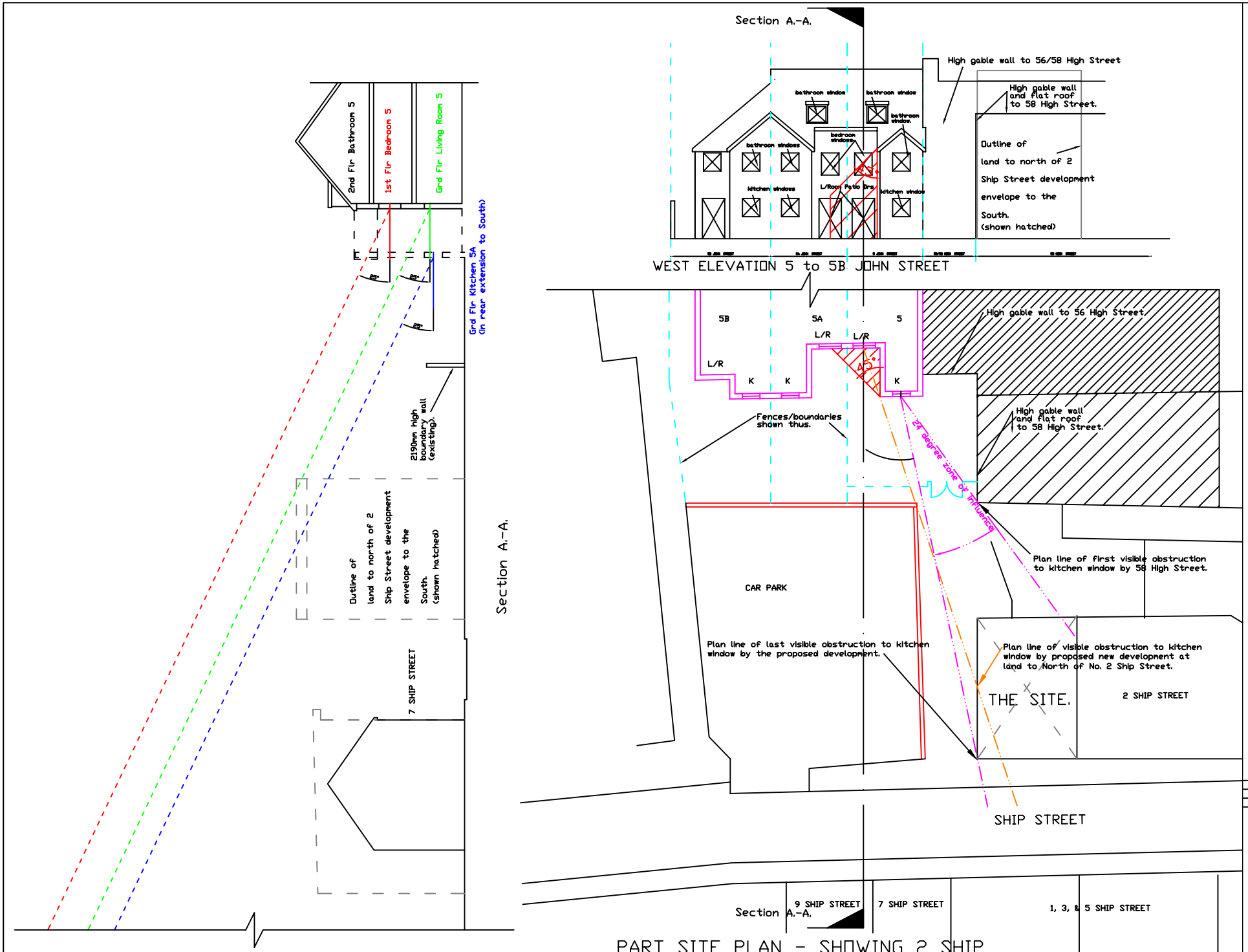


# PART SITE PLAN - SHOWING 2 SHIP STREET IN RELATION TO 5,5A&5B JOHN STREET.

TESTER ASSOCIATES
The Granary, 4 Danworth Farm,
Cuckfield Road, Hurstpierpoint
West Sussex, BN9 6GL

Tel: 01273 831423
Fax: 01273 833626
E-mail: mjtester@tester-associates.com

Client: Keith Horan

Project title: Land to North of 2 Ship Street, Shoreham.

Drawing Title: Daylight Analysis relating to No's 5, 5A and 5B John Street.

Date: 12-01-09 Scale: 1:100 @ A1

Drawn By: MJT

| Job No: | Drawing No: | Rev: |
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