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PLANNING SERVICES

| | |
|---|---|
| PLAN | AWDM/0752/13 |
| DATE VALID | Rec:- 18/7/13 |

# Flood Risk Assessment

Proposed development at

## 16 Old Shoreham Road
## Lancing, West Sussex

On behalf of

## Mrs L Pettett

January 2013

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## 1 Non Technical Summary

1.1 This Flood Risk Assessment has been undertaken in accordance with the Technical Guidance to the National Planning Policy Framework in respect of the proposed development on the site of the existing residential property of 16 Old Shoreham Road, Lancing on behalf of Mrs L Pettett.

1.2 The development proposals are for the conversion of the existing dwelling to form a two bedroom house and a one bedroom house within the same footprint.

1.3 This Assessment includes the consideration of the scenario in the event that the existing flood defences in the vicinity of the site totally fail.

1.4 Records of historic flooding in the vicinity of the site have been studied and confirm that localised flooding has occurred in the vicinity due to failure of surface water infrastructure. The deficiencies have since been remedied.

1.5 The site is protected by the existing flood defences on the River Adur and the coast and is effectively located in Flood Zone 1 with less that a 1:1000 chance of flooding on any year.

1.6 In the event that the flood defences totally fail the site would be located on the extreme outer edge of Flood Zones 2 and 3.

1.7 Surface water from the proposed development will be drained via the existing surface water drains and foul water will be drained to the public sewers beneath Manor Way as is the current situation.

1.8 This report concludes that the development is suitable at this location.

## 2 Existing Site

### 2.1 Site Location

2.1.1 The development site is located at the residential property of 16 Old Shoreham Road, west of the roundabout junction of the A27 Old Shoreham Road and Grinstead Lane in North Lancing, West Sussex at postcode BN15 0QT and grid reference TQ187055.

2.1.2 The site is within the Environment Agency's Lancing Flood Warning Area.

2.1.3 A copy of the site location plan is attached in Appendix 1 at the rear of this Assessment.

### 2.2 Site Description

2.2.1 The site is approximately 350m$^2$ in area and is currently occupied by a single residential property with a footprint of approximately 152m$^2$ together with a garage and hardstanding to the south.

2.2.2 Vehicular access to the site is available via an existing crossover from Manor Way.

2.2.3 A copy of the existing site plan is attached in Appendix 2 at the rear of this Assessment.

### 2.3 Drainage

2.3.1 Surface water from the site is currently drained to privately owned soakaways.

2.3.2 Foul drainage is discharged to the existing public foul water sewer beneath Manor Way.

2.3.3 A copy of the public sewer record plan is located in Appendix 3 at the rear of this report.

## 3 Flood History and Flooding Potential

### 3.1 Flood History

3.1.1 The Environment Agency as successor to the Sussex River Authority has provided copies of reports that detail records of flooding in the area of Manor Way, Manor Close, Old Shoreham Road and Grinstead Lane between 1960 and 1976. The reports are anecdotal from local residents and some are marked as 'Assumed or Hearsay'.

3.1.2 The Sussex River Authority Reports identify instances of flooding in Lancing in the vicinity of the site which occurred in July 1962, March 1964, July 1968, November 1968, July 1976 and September 1976.

3.1.3 Under a title of '*Lancing Brooks Flooding November 1960 to February 1961' the Sussex River Authority report concludes that this was due to 'above average rainfall combined with high spring flows in an area of blocked or silted culverts and ditches in an overgrown and choked state'.* Surface water is reported to have caused damage to 76 Old Shoreham Road and 4 Manor Way.

3.1.4 Houses and gardens on Manor Way were affected by flooding in 1960 / 1961 and again in 1974.

3.1.5 The roundabout was affected by the September 1976 event. The Sussex River Authority report dated 14 September 1976 concludes that the road drainage system was unable to cope with a large quantity of water in a short period of time.

3.1.6 The foul sewerage system for properties in Manor Way were affected by the Lancing Brooks flooding in 1960/1961 and 1974/1975.

3.1.7 Copies of the Sussex River Authority records together with a copy of the Historic Flood Map from the Strategic Food Risk Assessment dated January 2008 undertaken by Capital Symonds on behalf of Adur District Council are attached in Appendix 4 at the rear of this Assessment.

3.2 Local Flood Relief Works

3.2.1 The Lancing Ditches in the vicinity of the site have been cleared in recent years in order to improve drainage and relieve historic drainage problems.

3.2.2 The Highways Agency have undertaken improvements to the highway drainage on the A27 from Lancing to Shoreham.

3.2.3 The works consisted of repairs to defective pipes as well as installing new drainage to ease historic flooding problems on the A27 and were completed in late 2012.

3.3 Flood Defences

3.3.1 Tidal flood defences are in place along the banks of the River Adur in the form of raised banks and the coastline of Lancing Beach to the south of the site in the form of shingle banks.

3.3.2 The Strategic Food Risk Assessment dated January 2008 undertaken by Capita Symonds on behalf of Adur District Council confirms that the site as defended is not at risk of flooding from anything less extreme that a 1:1000 year tidal flood event.

3.3.3 A copy of the plan showing the actual and residual risk of flooding from the sea included in the SFRA is located in Appendix 5 at the rear of this Assessment.

3.4 Flood Zone

3.4.1 The Environment Agency flood map which does not account for the presence of the existing flood defences identifies the site on the extreme outer edge of Flood Zones 2 and 3 suggesting that in the event that the existing flood defences were removed or breached the site could be at risk of flooding from a 1:200 year tidal flood event.

3.4.2 The Strategic Flood Risk Assessment confirms that the development site is protected from tidal and fluvial flooding and identifies the actual risk of flooding to the site. The site is effectively located outside of the area which would be affected by a present day 1:200 year tidal storm event and therefore equivalent to Flood Zone 1 in reality as it is inappropriate in this case to rely on the undefended scenario.

3.5 Flooding Potential

3.5.1 With the existing flood defences in place the site is not at risk of flooding from a storm any less extreme than a 1:1000 year tidal storm event.

3.5.2 In the event that the existing flood defences were to totally fail the site would be located on the extreme outer edge of Flood Zones 2 and 3. Safe dry access would be available from the site to the A27 Old Shoreham Road for the duration of a 1:200 year flood including the effects of climate change in the future year 2115.

3.5.3 A copy of the Environment Agency's current Flood Map is located in Appendix 5 at the rear of this Assessment.

3.6 Duration

3.6.1 The duration that the flood water would affect the area is directly related to the rate at which the flood water could drain back to the River Adur and its tributaries or to the coastline following a significant storm event.

3.6.2 The duration of flooding due to tidal waters is uncertain and in areas where flood water becomes ponded without a direct gravity drainage route back to the watercourse it could take several days to fully dissipate.

3.6.3 Given the location of the site on the outer extremity of Flood Zones 2 and 3 assuming all flood defences had totally failed the duration of flooding to the site is likely to be for a very short period at the absolute peak of a 1:200 year tidal flood.

3.7 Impact of Flooding

3.7.1 In the event of a present day 1:200 year tidal flood event leading to the failure of the existing flood defences on the River Adur or Lancing Beach the velocity of flood waters is likely to be relatively slow at the outer edge of the flood. This represents a very low risk.

3.7.2 In the unlikely event that such a flood did indeed affect the site it would do so only at the very peak of the event and a significant warning period would be available.

3.7.3 The risk to human safety due to flooding is likely to be negligible given that safe access will be available via the existing public footpaths to the north of the site and the location at the extreme edge of the affected area necessarily means very low depths and velocities of water.

## 3.8 Flood Warning

3.8.1 The site is within the Environment Agency's Lancing Flood Warning Area.

3.8.2 Updates for the flood warning area are available by calling Floodline on 0845 988 1188, selecting option 1 and entering quick dial number 0123132.

3.8.3 Flood warnings are also issued on local radio, television and the internet as well as directly by telephone, mobile, email, SMS text message, fax or pager to people signed up to the Environment Agency's Floodline Warnings Direct service.

## 4 Proposed Development

### 4.1 Description

4.1.1 The development proposals are for conversion of the existing dwelling to provide a two bedroom house and a one bedroom house within the existing dwelling.

4.1.2 A new parking space and crossover will be provided onto the Old Shoreham Road for the eastern most dwelling (number 16). The existing garage is retained.

4.1.3 Two new parking spaces will be provided at the location of the existing hardstanding to the south of the western most dwelling (number 16a).

4.1.4 The new parking spaces will be finished with brick pavers constructed as a permeable surface.

4.1.5 A copy of the proposed site layout plan is located in Appendix 6 at the rear of this Assessment.

### 4.2 Drainage Strategy

4.2.1 The existing surface water drainage system currently discharges to private drains which discharge to ordinary watercourses upstream of the Lancing Ditches which outflow at the mouth of the River Adur.

4.2.2 Given there will be no increase in impermeable surface no alteration to the existing surface water drainage infrastructure is proposed or required.

4.2.3 Foul drainage will be discharged using the existing connection to the public sewer beneath Manor Way.

## 5 The Sequential Test and Exception Tests

### 5.1 Introduction

5.1.1 The Sequential Approach is a risk based approach outlined within the Technical Guidance to the National Planning Policy Framework to be adopted at all levels of planning.

### 5.2 Application

5.2.1 The development site is currently developed and occupied by a single residential dwelling.

5.2.2 The Technical Guidance to the National Planning Policy Framework identifies the development proposals as more vulnerable and as appropriate in Flood Zones 1 and 2 without application of the Exception Test. The flood risk vulnerability classification at the site is unchanged by the proposed development.

5.2.3 Given the presence of the existing flood defences on the River Adur and along the coastline the site is effectively within Flood Zone 1 and sufficient mitigation exists for the Sequential Test to be passed.

5.2.4 The proposed development is considered suitable at this location and the Exception Test is not required.

## 6 Safe Development

### 6.1 Safe Access

6.1.1 The Environment Agency's flood map for the vicinity of the site confirms that safe access will be available on the A27 during a 1:200 year flood event based on an undefended scenario ie in the unlikely event that all existing flood defences were to fail.

6.1.2 In the defended scenario as shown in the Strategic Flood Risk Assessment the development site is protected from the 1:1000 year event and not at risk of flooding.

6.1.3 The Environment Agency's advanced flood warnings can predict a significant tidal flood event several days if not weeks in advance allowing a significant evacuation time if required.

### 6.2 Flood Routing

6.2.1 Flood routing through this area of Lancing is south-eastwards towards the coastline via the Lancing Ditches.

6.2.2 In the event of a flood affecting the area flood waters would ultimately drain via a combination of the public sewers, highways drains, private drains and watercourses to the Lancing Ditches and the public foul sewers to the treatment works.

## 7 Conclusions

7.1 There are historic records of flooding in the area held by the Environment Agency relating to the vicinity of the site, the causes of which have since been remedied.

7.2 Recent improvements have been made to the local watercourses and highway drains.

7.3 The site is currently developed, within a residential area and is suitable for continued residential use demonstrating that the Sequential Test has been passed.

7.4 The site is currently defended by flood defences against a 1:200 year and 1:1000 year tidal flood event and there are schemes due to be constructed to further improve local flood defences.

7.5 Even in the event that the existing tidal flood defences were removed or totally failed the site would be at the extreme outer edge of the 1:200 year flood event with safe access available for the duration of that storm event.

7.6 There will be no increase in impermeable area due to the development and the existing surface water drainage system will be reused in its present form.

7.7 Foul drainage will be connected to the public foul sewer via the existing on site connections.

7.8 The site is not at significant risk of flooding and will not increase flood risk either onsite or to the surrounding area.

## 8 List of Appendices

| | |
|---|---|
| Appendix 1 | Site Location Plan |
| Appendix 2 | Existing Site Layout Plan |
| Appendix 3 | Public Sewer Record Plan |
| Appendix 4 | Historic Flood Records and Flood Incident Map |
| Appendix 5 | SFRA and Environment Agency Flood Maps |
| Appendix 6 | Proposed Site Layout Plan |

# Appendix 1

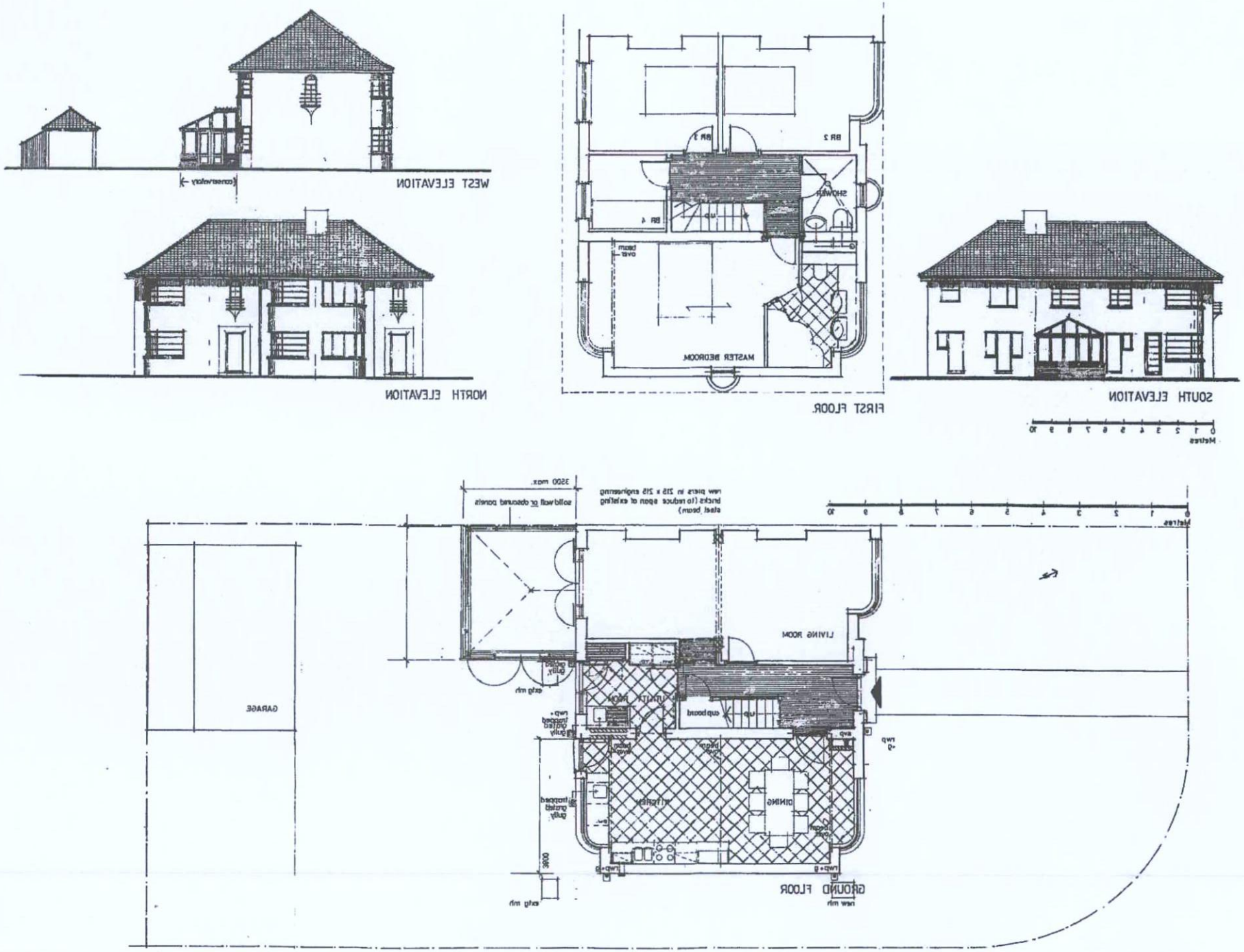
## Site Location Plan



Site Location Plan
1:10,000
1
the Civil Engineering Practice
SHOREHAM
FLYOVER
SHOREHAM
OLD SHOREHAM ROAD
Old Shoreham
Airport
Sheepwash
Hoe Court
Hill Barn
Farm
College
Brighton
Lewes
Burgess
Hill
Heath
Haywards
Crawley
East
Grinstead
Horsham
Billingshurst
Pulborough
Worthing
Arundel
Haslemere
Bordon
Uckfield
Cowley
Sussex
Brighton

## Appendix 2

## Architect's Existing Site Plan




NOTES
All dimensions must be checked on site and not scaled from this drawing.

| | | |
|---|---|---|
| c | 2.2.02 | [illegible] |
| B | 21.1.02 | [illegible] |
| A | | |
| | Date | Revisions |

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Architects.
Martin Szczerbicki Associates
128 Hollingbury Road
Brighton
BN1 7JD

Client

Job Title
Proposed Conversion to Two Dwellings
16 Old Shoreham Road
Lancing.

Drawing Title
Existing
Plans and elevations

Scale 1/50 & 1/100

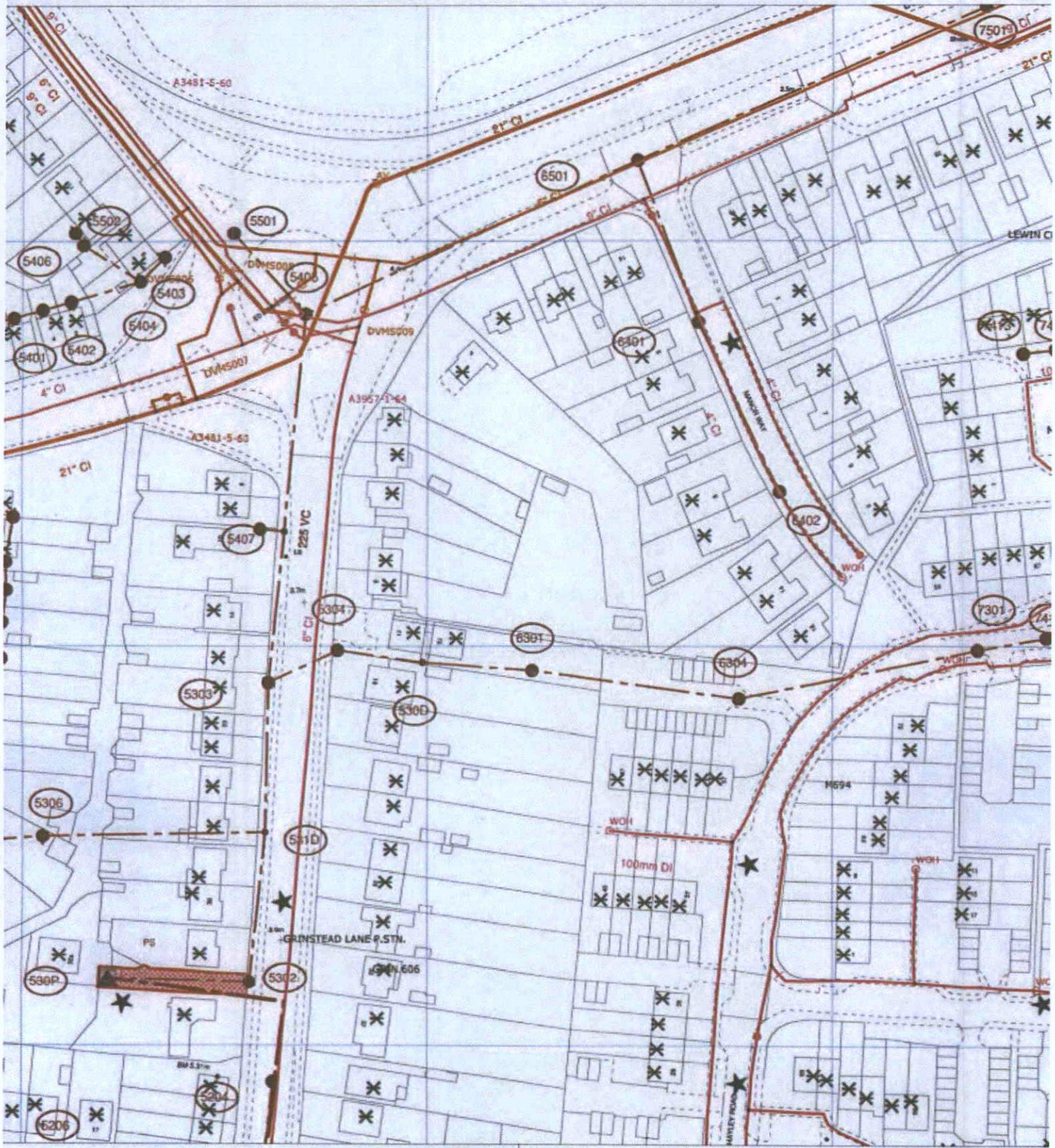
Date 10/2012 | Drawn by MS

Dwg No. 12.10.01/2 | Rev.

# Appendix 3

# Public Sewer Record Plan

# SOUTHERN WATER




The positions of pipes shown on this plan are believed to be correct, but Southern Water Services Ltd accept no responsibility in the event of inaccuracy. The actual positions should be determined on site.

Based upon Ordnance Survey Digital Data with the permission of the controller of H.M.S.O. Crown Copyright Reserved Licence No. WU 298530

Southern Water

O.S. REF: TQ1805SE | Scale: 1:1250

N

Printed By: Ponnanv | Date: 21-7-2011

Screen Print

Southern Water MapGuide Browser

WARNING: BAC pipes are constructed of Bonded Asbestos Cement

WARNING: Unknown (UNK) materials may include Bonded Asbestos Cement

Requested By:

# Appendix 4

## Historic Flood Records and Flood Incident Map

LANCING BROOKS - FLOODING NOVEMBER 1960 to FEBRUARY 1961.

CAUSES

Flooding at Manor Way/Close, Old Shoreham Road and Grinstead Lane.

The flooding in this area was the result of above average rainfall combined with high spring flows in an area of blocked or silted culverts and ditches in an overgrown and choked state.

~~* See previous page~~

~~It seems probable that when the bungalows in Manor Way were built, the 12" culvert under the road carrying the Grinstead Lane surface water, drainage was either completely cut or blocked by the footings put in for No. 5~~. As a result, the water from Grinstead Lane, together with some spring flow from gardens in Grinstead Lane, caused flood water to build up in the Nursery area at the bottom of No. 9 Grinstead Lane until this water overflowed into the gardens of Manor Way (particularly Nos. 6 & This water, together with spring water from other gardens in Manor Way, flowed across the road into Nos. 5 & 7. Water also arrived in No. 9 Manor Way from the old nursery area to the southeast of Manor Way.

The flooding in the Manor Close area appears to arrive mainly from Springs together with several manholes surcharging.

In the east of the general area, flood water arrived from run-off water from Old Shoreham Road (near Nos. 64 to 78), together with high spring flows in gardens along south side of Old Shoreham Road and very high water levels in the overgrown ditch system at the end of these gardens.

It was also noted that many gully grills in the area were blocked by a mat of fallen leaves and road silt.

LANCING BROOKS - FLOODING 1962 to 1973

1) July 1962.

Six months after moving into No. 86 Shoreham Road, Mr. Pope reported flooding in the north carriageway of the Old Shoreham Road together with a build up of water in his garden, flowing in from the rear of the Manor Garage property.

2) March 1964.

Mr. Waterhouse of No. 64 Old Shoreham Road, reported flooding in his garden together with a high water level in the ditch to the rear of his property.

3) July 1968.

Many people reported flooding around this time and this would appear to tie in with a very heavy storm during this period.

4) November 1968.

This flood date was given by Mr. & Mrs. Tweedle of No. 14, Manor Close. This was shortly after they moved in and could tie in with heavy rain at the end of October and beginning of November.

LANCING BROOKS - FLOODING 1960/1961 & 1974/1975.

EXTENT OF DAMAGE.

A) Surface water from Grinstead Lane flowing down into the garden of No. 9 caused the front dividing wall between Nos. 9 & 7 to collapse under the weight of water built up.

This surface water was also partly responsible for damage to carpets etc., in Nos. 8 & 10 Manor Way.

B) Springs under the floor of No. 76 Old Shoreham Road caused the bungalow to be condemned. After a long legal fight this was lifted after the floor was dug out, under pinned and relaid.

Springs also appear to have caused subsidence in No. 4 Manor Way, which has had its floors rebuilt. Bungalows Nos. 7, 10 & 16 also have subsiding floors.

Garden walls and pavements in Manor Way also show signs of subsidence.

Flooding in the garden shed of No. 14 Manor Close caused damage to carpets, deck chairs and garden tools. Flooding here is attributed to springs in the garden.

C) Surface water from old Shoreham Road was sufficiently bad to cause an Insurance Company to pay for damage in the garage of No. 78 together with the cost of raising the floor 4" to prevent any similar occurrence happening again.

D) A surcharged MH in the garden of No. 74 Old Shoreham Road caused flooding in the kitchen extension of this property.

E) General flooding at this time caused considerable damage to many gardens including the loss of several trees. Many home owners had to dig trenches through their lawns etc. to enable the water to drain away.

APPENDIX A

[illegible] BROOKS - FLOODING 1960/61

MANOR WAY, MANOR CLOSE, OLD SHOREHAM ROAD & GRINSTEAD LANE

PROPERTIES AFFECTED * ASSUMED OR HEARSAY

A) GARDEN FLOODING ONLY

* No. 1 Grinstead Lane
* No. 7 " "

* No.26 Old Shoreham Road
No.28 " " "
* No.30 " " "
* No.32 " " "
* No.34 " " "
No.36 " " "
No.38 " " "
* No.46 " " "
* No.48 " " "
* No.50 " " "
* No.54 " " "
* No.56 " " "
* No.58 " " "
No.60 " " "
No.68 " " "
* No.70 " " "
* No.80 " " "
* No.82 " " "
* No.86 " " "
* Manor Garage

* No. 2 Manor Way
* No. 3 " "
* No. 5 " "
* No.12 " "
* No.14 " "

* No. 6 Manor Close
* No. 8 " "
* No. 9 " "
* No.11 " "
* No.12 " "
* No.15 " "
* No.16 " "
* No.17 " "
* No.18 " "
* No.20 " "
* No.22 " "
* No.24 " "
Farm land to East of area
Field to East of 17 Manor Close

B) GARDEN AND OUTBUILDING FLOODING

No. 3 Grinstead Lane
* No. 5 " "

B) Garden and Outbuilding Flooding (continued)

* No.16 Old Shoreham Road
* No.18 "
* No.20 "
No.52 "
No.62 "
No.64 "
* No.66 "
No.74 "
No.78 "
No.84 "
* No. 4 "

* No. 1 Manor Way
No. 6 "
No. 7 "
No. 9 "

No.10 Manor Close
* No.13 "
* No.14 "

C) HOUSE FLOODING BELOW FLOORS

No. 9 Grinstead Lane

* No. 4 Manor Way
* No.16 "

D) HOUSE FLOODING ABOVE FLOOR LEVEL

No.76 Old Shoreham Road

* No. 8 Manor Way
* No.10 "

LANCING BROOKS - FLOODING 1974

MANOR WAY, MANOR CLOSE, OLD SHOREHAM ROAD & GRINSTEAD LANE

PROPERTIES AFFECTED * ASSUMED OR HEARSAY

A) GARDEN FLOODING ONLY

* No. 7 Grinstead Lane

No. 4 Old Shoreham Road
* No.26 "
No.28 "
* No.30 "
* No.32 "
* No.34 "
No.36 "
No.38 "
No.46 "
* No.48 "
No.50 "
No.52 "
* No.54 "
* No.56 "
* No.58 "
No.60 "

A) Garden Flooding only (continued)

No.62 Old Shoreham Road
No.68 "
No.70 "
No.76 "
No.78 "
* No.80 "
* No.82 "
No.84 "
No.86 "

No. 1 Manor Way
* No. 2 "
No. 4 "
No. 5 "
No. 7 "
No. 8 "
No.10 "
No.12 "
* No.14 "

No. 6 Manor Close
* No. 8 "
* No. 9 "
No.10 "
No.11 "
* No.12 "
No.15 "
* No.16 "
No.17 "
* No.18 "
* No.20 "

B) GARDEN AND OUTBUILDING FLOODING

No. 3 Grinstead Lane
No. 5 "
No. 9 "

No.16 Old Shoreham Road
No.18 "
No.20 "
No.64 "
No.66 "

No. 6 Manor Way
No. 9 "

No.13 Manor Close
No.14 "

LANCING BROOKS - FLOODING 1960/1961 & 1974/1975

MANOR WAY, MANOR CLOSE, OLD SHOREHAM ROAD & GRINSTEAD LANE

PROPERTIES AFFECTED * ASSUMED OR HEARSAY

E) PROPERTIES WITH FOUL SEWERAGE AFFECTED

No.28 Old Shoreham Road
* No.30 "
* No.32 "

E) Properties with Foul Sewerage Affected (continued)

* No.34 Old Shoreham Road
No.36 "
No.38 "
No.46 "
* No.48 "
No.50 "
No.52 "
* No.54 "
* No.56 "
* No.58 "
No.60 "
No.62 "
No.64 "
No.72 "
No.74 "
No.76 "
No.84 "

* No. 5 Manor Way
No. 6 "
No. 7 "
No. 8 "
No.10 "
No.12 "

No.10 Manor Close
No.11 "
* No.12 "
No.14 "
No.15 "
* No.16 "
No.17 "
No.18 "
* No.20 "
* No.22 "
No.24 "

LANCING BROOKS - FLOODING 1960/1961. 1974/1975 AND OTHER TIMES

HADLOW WAY AND BARFIELD PARK

PROPERTIES AFFECTED

* ASSUMED INFORMATION

A) GARDEN FLOODING ONLY

No. 1 Hadlow Way
No. 2 "
No. 3 "
No. 5 "
Sold No.12 "
No.13 "
No.15 "
No.16 "
No.56 Barfield Park
No.57 "
No.58 "
* No.60 "
* No.61 "
* No.62 "

B) GARDEN AND OUTBUILDING FLOODING

No. 4 Hadlow Way
No.11 " (Not flooded in 1974/1975)
No.59 Barfield Park

C) PROPERTIES WITH FOUL SEWERAGE AFFECTED

No. 1 Hadlow Way
No. 2 "
No. 3 "
No. 4 "
No.11 "
No.12 "
No.13 "
No.14 "
No.15 "
No.16 "

LANCING BROOKS - MANOR AREA FLOODING 1974/75.

PROPERTIES AFFECTED

* Assumed or Hearsay

A) GARDEN FLOODING ONLY

* No. 7 Grinstead Lane
No. 4 Old Shoreham Road
* No.26 "
No.28 "
* No.30 "
* No.32 "
* No.34 "
No.36 "
No.38 "
No.46 "
* No.48 "
No.50 "
No.52 "
* No.54 "
* No.56 "
* No.58 "
No.60 "
No.62 "
No.68 "
No.70 "
No.76 "
* No.78 "
* No.80 "
* No.82 "
No.84 "
No.86 "

No. 1 Manor Way
* No. 2 "
No. 4 "
No. 5 "
No. 7 "
No. 8 "
No.10 "
No.12 "
* No.14 "

No. 6 Manor Close
* No. 8 "
* No. 9 "
No.10 "
No.11 "
* No.12 "
No.15 "
* No.16 "
No.17 "
* No.18 "
* No.20 "

B) GARDEN AND OUTBUILDING FLOODING.

No. 3 Grinstead Lane
No. 5 "
No. 9 "

No.16 Old Shoreham Road
No.18 "
No.20 "
No.64 "
No.66 "

SUSSEX RIVER AUTHORITY

# LAND DRAINAGE

Sub-Catchment Area

Frontage or Watercourse No.

File Reference F/19/2

Date 14.9.76

THE CIVIL ENGINEERING PRACTICE
9 JUL 1980
RECEIVED

Report of Chris Bull

Approved by

Subject Flooding at Grinstead Lane, Lancing.

During a very heavy rain storm at mid-day on the 14th September 1976, there were two cases of flooding in Grinstead Lane, Lancing.

Firstly, the road opposite the "Brittania" Public House was flooded right across the road causing several cars to breakdown. This flooding was caused by the road drainage system being unable to cope with the sudden large amount of surface water. This water normally drains via a short culvert into the Lancing Brooks ditch to the south of Brierley Gardens. The ditch, although full, was seen to be running, therefore a blocked drain was not causing the flooding.

In conclusion, it would seem that the road drainage here cannot cope with a sudden large amount of water.

The second area of flooding was on the northern stretch of Grinstead Lane and the roundabout at the junction with Old Shoreham Road.

The force of the water sweeping down the Manor Road culvert caused surcharging of the gully on the south of the roundabout. This water formed a large pool covering the south-eastern lanes the roundabout and then flowed down the eastern side of Grinstead Lane (road and pavement) forming another pool covering both lanes of the road about 150m down from the roundabout.

Whilst flowing from north to south, some water was flowing down the drives of Nos. 3 & 5 into their garages. To combat this, the occupants placed barriers made of planks and tarpaulins etc., to stop the water entering their drives.

Further down Grinstead Lane the new property in the process of being built (No. 157) had some flood water around the property. Two cars were in the road. Next door, No. 17 had a "river" running down their slop in drive from the road. This water covered the whole garden to a depth of several inches.

In conclusion, as with the lower area, the road drainage system was unable to cope with this quantity of water in such a short period of time. Most of the water flowing from the roundabout down the east side of Grinstead Lane passed straight over the gully at the head of the culvert system outside No. 5 which was already flowing to capacity with water from its Grinstead Lane catchment area.

LANCING BROOKS - MANOR AREA FLOODING 1976.

July 1976.

Following a heavy storm in July 1976, some flooding occurred on Grinstead Lane outside properties Nos. 5 to 9 inclusive which ran off into the garage and garden of number 9. Flooding also occurred at this time at the roundabout at the north end of Grinstead Lane.

GENERAL NOTE.

Several property owners in this area reported frequent flooding at times of very heavy rainfall.

It was also noted that parts of Grinstead Lane, the northern carriageway of the Old Shoreham Road near Manor Garage and the roundabout at the junction of these two roads, flood frequently. This would appear to indicate a deficiency in the road drainage system in this area.

Date 14.9.76

File Reference F/19/2

Report of Chris Bull

Accompanied by

*Subject* Flooding at Grinstead Lane, Lancing.

During a very heavy rain storm at mid-day on the 14th September 1976, there were two cases of flooding in Grinstead Lane, Lancing.

Firstly, the road opposite the "Brittania" Public House was flooded right across the road causing several cars to breakdown. This flooding was caused by the road drainage system being unable to cope with the sudden large amount of surface water. This water normally drains via a short culvert into the Lancing Brooks ditch to the south of Brierley Gardens. The ditch, although full, was seen to be running, therefore a blocked drain was not causing the flooding.

In conclusion, it would seem that the road drainage here cannot cope with a sudden large amount of water.

The second area of flooding was on the northern stretch of Grinstead Lane and the roundabout at the junction with Old Shoreham Road.

The force of the water sweeping down the Manor Road culvert caused surcharging of the gully on the south of the roundabout. This water formed a large pool covering the south-eastern lanes the roundabout and then flowed down the eastern side of Grinstead Lane (road and pavement) forming another pool covering both lanes of the road about 150m down from the roundabout.

Whilst flowing from north to south, some water was flowing down the drives of Nos. 3 & 5 into their garages. To combat this, the occupants placed barracades of planks and tarpaulins etc., to stop the water entering their drives.

Further down Grinstead Lane the new property in the process of being built (No. 15?) had some flood water around the property. This also came from the road. Next door, No. 17 had a "river" running down their sloping drive from the road. This water covered the whole garden to a depth of several inches.

In conclusion, as with the lower area, the road drainage system was unable to cope with this quantity of water in such a short period of time. Most of the water flowing from the roundabout down the east side of Grinstead Lane passed straight over the gully at the head of the culvert system outside No. 5 which was already flowing to capacity with water from its Grinstead Lane catchment area.

Signed

Date 14.9.76

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Signed

RECEIVED
NEW MONKS FARM
MARSH FARM ESTATE
HOUSING

Map H: Historic Flood Events (sorted by broad category) at: Shoreham-Lancing Gap

Scale 1:18000

Drawing No: H12

Version: January 200

## Legend

Adur District and Worthing Borough Boundaries

Main River

**Historic Flood Event Points**

- Coastal
- Tidal
- Fluvial
- Groundwater
- Surface Water
- Sewer
- Failure
- Unknown

**Historic Flood Event Lines**

- Coastal
- Tidal
- Fluvial
- Surface Water
- Unknown

**Historic Flood Event Areas**

- Coastal
- Tidal
- Fluvial
- Groundwater
- Surface Water
- Failure
- Unknown




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# Appendix 5

## SFRA and Environment Agency Flood Maps

# Map AZ-7: Flood Depth - Actual Risk of Flooding from the Sea at: Shoreham-Lancing Gap

Scale 1:18000

Drawing No: AZ-712

Version: January 2008

N




**Legend**

- Main River
- Adur District and Worthing Borough Boundaries

**Defended 0.5% AEP Tidal Flood Depth (m)**

- 0 - 0.25
- 0.25 - 0.5
- 0.50 - 0.75
- 0.75 - 1
- 1.00 - 1.25
- 1.25 - 1.5
- 1.50 - 1.75
- 1.75 - 2
- 2.00 - 2.25
- > 2.25
- Unknown

Note: This represents the raw model depth results.
To produce the flood extents, further processing was undertaken

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**BN15 0QY** at scale 1:10,000




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## Appendix 6

## Architect's Site Layout Plan

GROUND FLOOR
FIRST FLOOR
SOUTH ELEVATION
NORTH ELEVATION
WEST ELEVATION
Martin Szczepiński Associates
128 Hollinghurst Road
Brighton
BN1 7JD
Proposed Conversion to
No. Dwellings
14 Old Steyning Road
Lancing
Proposed plans and elevations
A
12.10.13
1:50 & 1:100
1 : 50
12.12.10