Isle of Wight Local Flood Risk Management Strategy

Appendix N: Ryde

July 2016

Isle of Wight Council, Planning and Housing Services

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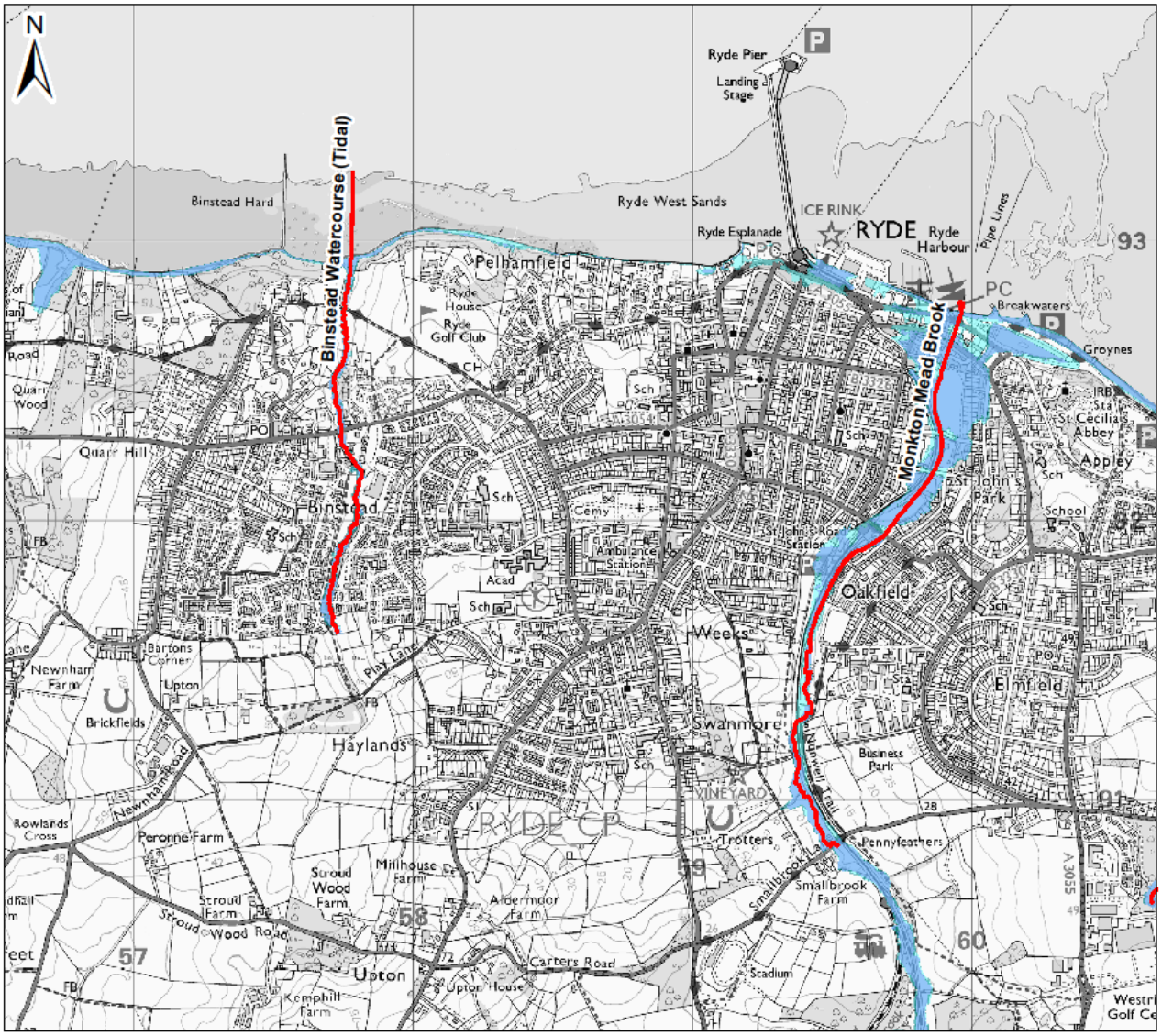
DOCUMENT CONTROL

General information

Title	**Isle of Wight Local Flood Risk Management Strategy Appendices**
Owner	Wendy Perera, Head of Planning and Housing Services – Isle of Wight Council
Version	Final Report
File status	Active

Revision history

Summary of changes	Completed by	Date	Current version?
First Draft	EA/IWC	28/11/2013	No
Second Draft	EA/IWC	02/05/2014	No
Third Draft	EA/IWC	05/02/2015	No
Consultation Draft	IWC	31/03/2016	No
Final Draft Report	IWC	14/06/2016	No
Final Report	IWC Executive Committee	14/07/2016	Yes
Programmed Review	IWC	31/07/2021	



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Local Flood Risk Management Strategy

Legend

- Main River
- Flood Zone 3
- Flood Zone 2

0 125 250 500 750 1,000

Metres

1:13,000 - When printed @ A3

Notes

Flood Map Areas (assuming no defences)

Flood Zone 3
Shows the area that could be affected by flooding:
- from the sea with a 1 in 200 (0.5%) or greater chance of happening each year.
- or from a river with a 1 in 100 (1%) or greater chance of happening each year.

Flood Zone 2
Shows the extent of an extreme flood from rivers or the sea with up to a 1 in 1000 (0.1%) chance of occuring each year.

Figure N1
Environment Agency Flood Zones 2 & 3 for Ryde

November 2014

Local Flood Risk Management Strategy

Legend

- Main River
- Ordinary Watercourses
- High
- Medium
- Low

0 125 250 500 750 1,000

Metres

1:13,000 - When printed @ A3

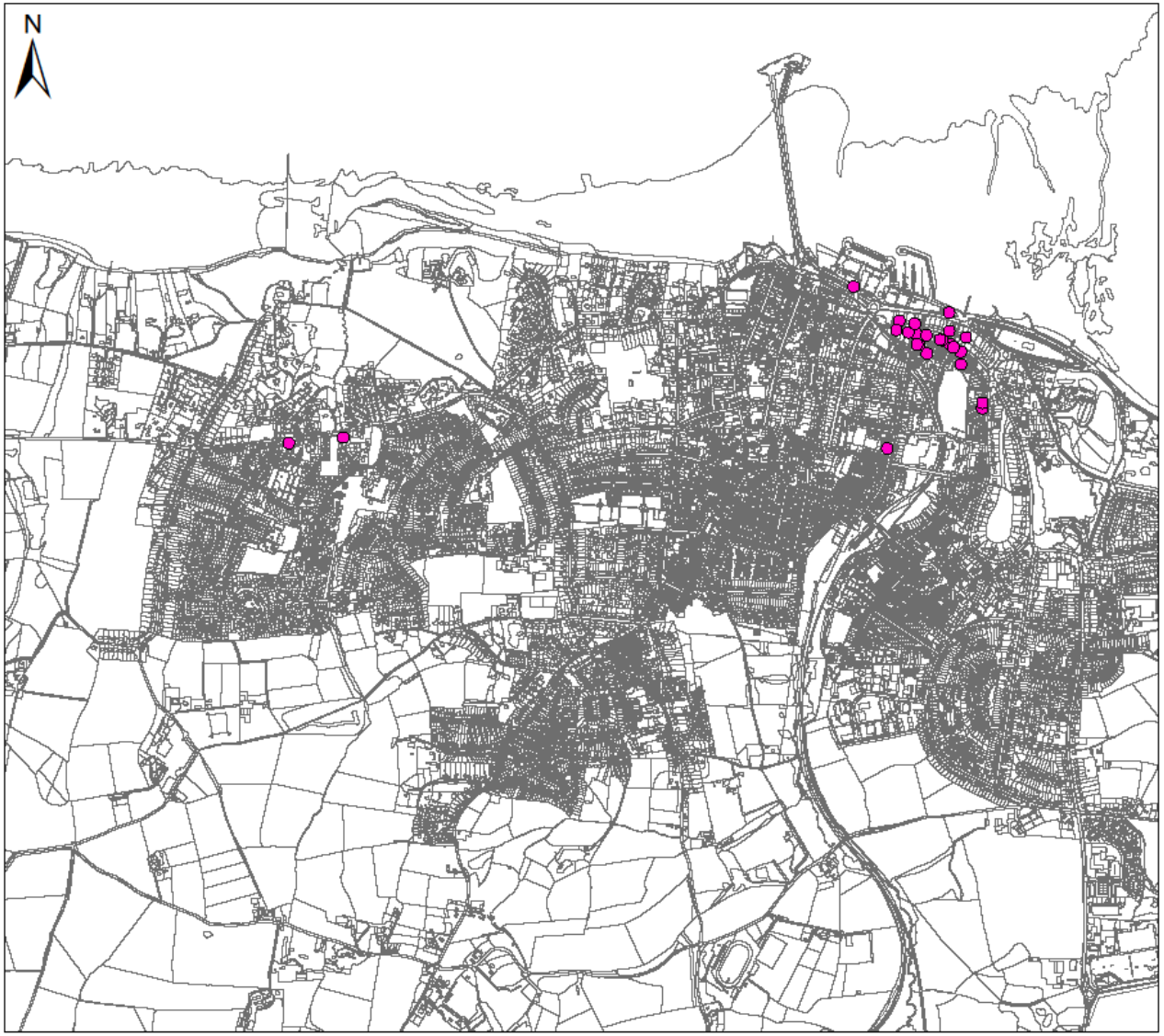
Notes

Likelihood of flooding from Surface Water

High :
Greater than or equal to 1 in 30 (3.3%) chance in any given year.
Medium :
Less than 1 in 30 (3.3%) but greater than or equal to 1 in 100 (1%) chance in any given year.
Low :
Less than 1 in 100 (1%) but greater than or equal to 1 in 1,000 (0.1%) chance in any given year.
Very Low :
Less than 1 in 1,000 (0.1%) chance in any given year.

Figure N2
Updated Flood Map for Surface Water (UFmfSW) for Ryde

May 2015



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Local Flood Risk Management Strategy

Legend

Recorded Flood Events

0 125 250 500 750 1,000

Metres

1:13,000 - When printed @ A3

Notes

Location of reported flooding incidents

Figure N3
Historic flood events for Ryde

May 2015

Area overview

Ryde is located on the north eastern coast of the. It is a coastal town with traditional enclosed pasture land to the south. Ryde has a sloping topography from the foreshore to the ridge and the valley that divides the town.

Flood Risk in Ryde is dominated by the threat of tidal flooding and fluvial flooding from Monkton Mead Brook and has historically been a problem with the most significant recent events taking place in the winter of 1993, winter 1999 and autumn 2000 with more recent events in winter 2013/14.

The most frequent flooding in Ryde is believed to be largely due to the combined sewer system backing up as a result of the Combined Sewer Overflow (CSO) to the Monktonmead Brook being unable to discharge as the river levels were higher than this overflow. This is why many of the basement properties in Ryde experience flooding before the Monktonmead Brook reaches bank full. The threshold levels of many lower ground floors are below the level at which the CSO discharges.

Tidal flood risk

Areas solely at risk of tidal flooding in Ryde are limited to a few small areas along the *Esplanade.* There is modelled tidal risk south of the coast around the Monktonmead Brook, but this modelling does not take into account the pumping station and one way valves at the outfall. This prevents the ingress of tidal water into the Monktonmead Brook and reduces the risk of tidal inundation, but does highlight the risk f tide locking.

Fluvial flood risk

The main fluvial risk in Ryde is from the Monktonmead Brook, although there is fluvial risk associated with the Binstead Watercourse to the west. Fluvial flooding of the Monktonmead Brook occurs generally as a result of tide locking. Whilst the pumping station operates at high tide to allow water from the river to flow into the sea, the pumping station has a limit in its capacity which can be overwhelmed. This will lead to rising river levels and eventually flooding from the river. The *recreation ground* and *railway line* have experienced flooding from the river in recent years, as have a number of properties in the vicinity of this area. Modelled fluvial flooding from the Binstead Watercourse is far less extensive, and there have been few, if any, confirmed events of flooding occurring directly from this watercourse.

Surface water flood risk

There are known surface water issues in Binstead, particularly around the *Binstead Cemetery*. This is also shown in the surface water modelling for the area which shows flow routes following the highways down to this area and beyond. The most notable flow route from the modelling in the Binstead area originates from rural land to the south, along *Greenway and Sandpath* to the area around the Cemetery at *Cemetery Road* and *Binstead Hill* before finding its way back into the Binstead Watercourse further to the north.

Surface water flooding in Ryde is most significant around the Monktonmead Brook, particularly where the Brook is culverted. Areas around *Simeon Street, The Strand, Cornwall Street* and *Marymead Close* are all shown to be affected from the modelling and have been confirmed by reported events. Highways to the east and west of the Brook are expected to

experience surface water flows down towards the Brook, such as *St Johns Road, St Johns Hill, Park Road* and *Wells Street.*

Groundwater flood risk

Although it may be possible that following prolonged periods of rainfall and/or during extreme high tides, groundwater may emerge within the recreation ground, there have been no incidents of specific groundwater flooding recorded for the Ryde area. As such, groundwater flood risk is considered to be low.

Reservoir flood risk

There are currently no known reservoirs on the Island that meet the requirements of the Reservoirs Act 1975, which are reservoirs that hold at least 25,000 cubic metres of water above ground level. As such flood risk from this source is considered to be nil.