



Chris Turvey  
Ryde Town Council  
10 Lind St  
Ryde  
Isle of Wight  
PO33 2NQ

13<sup>th</sup> June 2023

By email only

Dear Chris,

## **S1583: Structural Inspection; Public Conveniences, St Johns Road, Ryde**

### **Instruction**

Further to your recent instruction I write to confirm observations from our site inspection on 7<sup>th</sup> June 2023.

The purpose of the inspection was to comment on cracks within the building and to propose remedial works.

### **Limitations**

As this was not a full building survey other defects may exist and not observed or commented upon including minor localised structural defects. We have not inspected woodwork or other parts of the structure which are covered, unexposed or inaccessible and we are therefore unable to report that any such part of the property is free from defect.

Although during our inspection I may have referred to other defects that should not be taken as an exhaustive list of other such defects or that the inspection is a full building survey.

### **Inspection**

The site was on the North-East side of the junction of St John's Road, dropping downhill from west to east, and the High Street rising gently to the north.

The toilets were single storey, of modern construction with pitched peg tile roofs behind concealed gutter parapets and gable feature to the respective toilet entrances over brick and block cavity walls.

The building abutted the end of a row of two and three storey shops to the north along the High Street and St John's Road School (now the Scouts

Headquarters) down the hill to the east. The roofs had flashings cut into the adjacent walls which predated the toilets. A few broken tiles were noted.

The rear pitch of the roof and associated flat roof or valleys were not visible and were not inspected.

The accessible toilet entrance was off the corner with the means followed by the ladies along the St Johns Road elevation with floor levels dropping to follow the fall of the pavement.

Externally there was not any significant structural defects to the brick elevation or stone detailing.

High level staining under the cast stone parapet was noted suggesting the occasional overtopping of the concealed gutter and low-level efflorescence to the High Street elevation brickwork.

To the left of the Gentleman's entrance the brickwork had been locally cut back behind a street furniture cabinet and adjacent this, the stone plinth to the entrance pier had cracked and displaced stone, however the brickwork over was in good condition with only two courses of bricks immediately behind the cabinet damaged.

Behind the cabinet and adjacent projecting pier, under the steel plate arch lintel forming the open lobby entrance, the block inner leaf to the main elevation had disintegrated from the ground to the kick of the arched opening.

The absent blocks revealed the external brick pier which enclosed a downpipe within the cavity wall and wire ties into the external brickwork. The cavity beyond into the accessible toilet was not inspected so further cracked blocks might have been present but if so, these had not affected the tiling within the accessible toilet.

Within the covered lobby to the Gents glazed tiles over the door lintel and reveal had been removed. It was noted that the same area of tiles within the Ladies lobby had been extended over the timber door frame.

There were also hairline horizontal and vertical cracks in the tiles to the Gents lobby wall. The mastic movement joint from the brick elevation to the tiled Ladies lobby had opened, slightly tapering wider towards the top with the sealant hardened and pulled from surfaces.

The Ladies were separated from the Gents and respective Party Walls with a horseshoe service corridor. It was noted tiles to the Party Walls predated the toilets construction, presumably from a previous incarnation of the public conveniences. There was a restricted view of these walls, however high-level cracks through the tiles were noted.

The concrete floor to the service corridor was damp and a concrete infill to a manhole tray had cracked.

Between the Gents and Ladies Service corridor there was a thermal block wall constructed off 4 courses of dense concrete blocks laid flat; this wall had a brick pier as well as several near vertical cracks.

The Ladies was separated from the service corridor by 100mm thermal block which had numerous vertical cracks including a crack greater than 5mm against the return leg of the wall that had patches of expanded metal lathe screwed each side across the crack.

### **Discussion**

The British Geological Survey indicates the site to be underlain and near the upper boundary of Bembridge Marls consisting of clays and silts with occasional thin sands, lime-mudstones, and limestones; further up the slope and west of the adjacent crossroads the formation was superficial deposits of Wootton gravel complex member consisting of gravel, sandy, clayey, silty over bedrock of Hamstead Member consisting of clay, silt, and sand.

We were provided a copy of a letter report dated 11<sup>th</sup> January 2023 by Tim Smart of Smart Surveyors on an inspection undertaken on 13<sup>th</sup> September 2022. This report referenced a further report dated 27<sup>th</sup> September 2017; however, we have not had sight of the same.

The letter report referenced the view that vibration movement had caused the cracks observed together with some differential movement between varying materials. It also noted cracks to the stone plinth.

We understand from you that substantial areas of blown wall tiles had been replaced 5 years ago however note that during our inspection none of the tiles were loose or cracked other than those specifically referenced.

From the Ladies covered lobby it was noted that the tiles had been taken across the timber door frame from the wall and therefore susceptible to

becoming dislodged due to bridging across dissimilar materials and vibration from the door closing.

It was noted that the Ladies entrance door was sticking on the internal manhole under the swing of the door and this could either be due to heave of the clay formation under a ground bearing slab or just the door requiring trimming or hinges attended to.

The area of damaged blockwork within the Gents lobby is very localised and not reflected in the adjacent walls and therefore the cause is likely either vandalism, vibration of the wall ties as the outer brick leaf was chased for the street furniture cabinet.

Although you referenced a void under, we were unable to inspect that due to the area likely to have been used as a urinal and possible presence of sharps.

However, it is likely, given that none of the other adjacent walls suggest foundation movement this is only due to cracked and displaced blocks. If there was a foundation issue with respect to the Gents Lobby block panel, then there would be greater effect on the surrounding structure and the crack pattern would present differently.

Although vibration from traffic movement cannot be discounted entirely as a cause for the cracked blocks it is unlikely given such a localised area. This might have previously contributed to tiles becoming dislodged from the walls if these had been poorly installed however given there was no signs of such damage to the replacement tiles installed the issue has been resolved.

In addition to the above damage, which was the specific purpose of our inspection, we also noted the various cracks to the thermal block walls as well as the original Party Walls to the service corridor at the rear of the Ladies.

These cracks are considered longstanding, given these were not reflected in the tiled finish on the Ladies side; however, although the immediate cause was not defined, the likely causes will be thermal movement within the block, initial construction settlement or seasonal movement if these walls have been constructed off original slab or footings, potentially exacerbated by any underground drainage failure or blockage.

## **Recommendations**

Undertake the following recommendations subject to further intrusive investigations or detailed remedial design as appropriate.

Use a drone or provide safe ladder access to enable inspection of the rear roof pitch and associated roof lights, valleys, and flat roof; clear any debris and make good any defects encountered. Note fall from height risk due to ladder use and fragile roof lights.

Undertake a camera survey of underground drainage and make good any defects encountered.

Install Avongard standard crack monitors to the various vertical cracks to the block walls within the Ladies Service corridor and then for a period of six months undertake recording monthly, including measurement readings and photographs, and report findings to the Structural Engineer for further advice.

Further remedial works might be necessary subject to whether cracks are historic, seasonal, or progressive.

Disinfect lobby to the gents and proceed with proposed remedial works using caution, temporary propping top blockwork over and suitable PPE as sharps might be present. Remove the cracked and displaced blocks from lintel bearing down to foundation and to adjacent wall to the accessible toilet and advise the Structural Engineer of findings.

Subject to above findings make good adjacent walls and use Furfix wall starter to brick pier and accessible toilet block wall and rebuild blockwork using standard dense block with semi-dry non-shrink grout to wall over.

Within the respective lobbies provide flexible sealant to vertical joints between bricks and tiles, make good walls with tiles to match existing using mesh across any dissimilar blocks and lintels plus stopping short and using flexible vertical joints to the timber door frames.

Adjust hinges or trim Ladies Entrance Door.

## **Conclusion**

The damage with the Gents lobby is a localised issue requiring rebuilding of the block inner leaf as above recommendations.

A separate issue are the cracks to the block walls forming the service corridor and although a long-term issue, further monitoring should be undertaken to confirm these are not due to progressive movement requiring further remedial works.

If you require any clarification, then please do not hesitate to contact me.

Yours Sincerely,

John Sutton B.Eng (Hons)  
Director