

**JP Chick & Partners Ltd**  
Consulting Civil & Structural Engineers



**Site at Junction of Station Road & Blyth Road,  
Southwold  
IP18 6AX**

**Structural Appraisal of Units 1-13**



**DOCUMENT CONTROL**

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## 1.0 BRIEF

- 1.1 J P Chick & Partners Limited were appointed by Southwold Town Council to undertake a structural condition survey of the external fabric of the existing dwellings and retail units referred to as 'Hurren Terrace' numbers 1- 13 Station Road, Southwold.
- 1.2 The purpose of our inspection was to review the condition of the existing structures and to report on any requirement for temporary stabilisation works to enable numerous below ground tanks within the curtilage of the site to be excavated and removed.
- 1.3 Our inspection was undertaken in conjunction with JPC Environmental Services.

## 2.0 DATE OF INSPECTION

- 2.1 Our inspection was undertaken on the 17<sup>th</sup> March 2020. The weather was dry and bright.

## 3.0 SITE DESCRIPTION

- 3.1 The site is located to the South West of the junction of Blyth Road and Station Road, Southwold and comprises of shops, garaging and residential dwellings to the southern periphery of the site, with a central concrete courtyard area to the centre.
- 3.2 The structures pertinent to this survey are as follows:-
  - No 1 – Clancy's General Store
  - No 3 – Gallery Thea
  - No 3A – Chapps
  - No 5 – Five Clothing and Accessories
  - No 7 – Noir Hairdressing
  - No 9A - The Fisherman and Friends
  - No 11 – Residential Dwelling
  - No 13 – Residential Dwelling



- 3.3 The row of shops and dwellings are orientated in a North South direction to the West of Station Road, Southwold. The retail units No3 – No 9A are formed from a terrace of identical, handed construction with a covered vehicular access passage between units 5 and 7.
- 3.4 The site is predominantly level with the structures generally bounded by concrete or asphalt external hardstand areas and paving.
- 3.5 The general site is bounded to the North by Blyth Road which spans in an East West Direction, and to the East with Station road which spans in a North South direction.
- 3.6 To the West of the site the access way is abutted by a row of three terraced structures which are residential properties, these are not within the scope of investigation of this report. Beyond this further to the west generally soft landscaping as part of Southwold Golf Club. To the south there are commercial premises and vehicular access to them, which abut no.13 Station Road.
- 3.7 To the North of the site and immediately adjacent Unit 1 are the premises of Graham Finch Motors/Cycle Hire. This appears to be a framed building of modest construction which we understand is to be demolished as part of the works.
- 3.8 The South West of the site is predominantly covered by the garage units which utilise the central courtyard for storage purposes. These are also to be demolished as part of the works.

#### **4.0 ANTICIPATED GEOLOGY**

- 4.1 With reference to the British Geological survey the site is shown to exist in an area comprising of Crag Group Bedrock with unknown superficial deposits.
- 4.2 A nearby borehole at Longmarsh close, Southwold revealed sandy silty clay subsoils extending to a depth of 8.9m below which, Dense Orange brown silty fine to coarse sand was encountered which continued to the limit of the borehole at 15m.



## 5.0 UNIT DESCRIPTION

### 5.1 No. 1 – Clancy’s General Store

5.1.1 Clancy’s General Store is a single storey load bearing masonry structure with a flat roof over. The property is immediately adjacent to the adjacent Garage/Cycle Hire premises, which is of 1½ storey height and considered to be a steel framed structure, however no access was available and this unit was not within the scope of the survey.

5.1.2 The structure has exposed front and side elevations which comprise of red facing brickwork with considerable glazing to the front elevation. The masonry appears to be of solid 215 mm construction and has externally projecting piers.

5.1.3 There was no evidence of any significant structural movement or distortion to any of the external elevations.

5.1.4 A defective rain water pipe was noted to the corner of the front elevation which requires attention and repair.

### 5.2 Nos. 3 – Gallery Thea and 3A - Chapps

5.2.1 These two units are of identical construction and typically ‘handed’ they generally comprise of two storey solid, load bearing masonry with a second floor within the roof space, with a front dormer window projection to each unit.

5.2.2 The structures have two storey rear projections, in conventional fashion with duo pitched roofs over, clad in clay pantiles.

5.2.3 Both units have identical single storey square bay projections to the front, of modern cavity construction incorporating air bricks to service a sub floor void. The infill masonry to the periphery of the doors also appears to be of the same construction.

5.2.4 The North facing gable wall of Unit 3 is rendered with two externally projecting chimney stacks which are finished in face brickwork.



- 5.2.5 Gallery Thea had a scaffold to the front, side and rear elevation erected at the time of our inspection and was undergoing cosmetic repair and redecoration. However it was possible to assess the general condition.
- 5.2.6 The rear, west facing external gable walls are rendered and painted. The render is in poor condition and numerous cracks and spalling above windows can be observed. The window frames are also in a poor condition and require repair or replacement. The patterning on the render face suggest that there may have been a previous single storey pitched roof extension which has subsequently been removed.
- 5.2.7 The south and west facing elevations to the rear of Unit 3A are of face brickwork and incorporate brick arches to the window and door openings. There has been some minor cracking and repointing works have been undertaken above the toilet door to this section.
- 5.2.8 There has been some deterioration to the low level masonry on the west elevation which is considered to be attributable to water action due defective rain water goods. This has caused erosion of the bed joints to a localised section of brickwork.
- 5.2.9 Generally however, although the render is in a poor condition there is no evidence of any significant structural movement to Units 3 and 3A.
- 5.2.10 There is a later flat roof extension constructed to the North side of the rear projection to Unit 3. This is finished in painted brickwork and appears in a good condition with no evidence of any issues.
- 5.3 **No. 5 – Five Clothing and Accessories**
- 5.3.1 This unit is of two storey load bearing masonry construction, as per the adjacent units, but without the front dormer. A small dormer window is evident to the roof pitch to the rear elevation.
- 5.3.2 The principal roof is duo pitched and clad in clay pantiles, with the walls below considered to be of solid 215 mm masonry.
- 5.3.3 This unit appears to have the original shop frontage and does not have the same extended front projection as is observed to the other units and has a smaller footprint by comparison.



- 5.3.4 A chimney stack projects at the ridge location to the party wall with Chapps.
- 5.3.5 To the South of the shop is a covered access way leading to the rear courtyard, with the first floor above. The structure above is supported by a number of timber beams which have been augmented in places with steel flitch plates, with the beams spanning the width of the access way onto the flank walls of Units 5 and 7.
- 5.3.6 The rear west facing elevation comprises of face brickwork with brick arches to the window openings. There is a small section of rendered masonry around the rear door, adjacent to the access passageway.
- 5.3.7 There is no evidence of any significant structural issues to any of the exposed elevations to this unit.
- 5.4 **No. 7 – Noir Hairdressing and No. 9 A – The Fisherman and Friends**
- 5.4.1 These two units are of identical construction to units 3 and 3A and comprise of 2 storey load bearing masonry constructions with a second floor within the roof space and front facing dormer windows.
- 5.4.2 There are projecting chimney stacks on the ridge line at the intersection of Unit 7 and the access way, and Unit 9a and the adjacent residential dwelling unit 11.
- 5.4.3 Both units have identical single storey front projections of modern cavity construction incorporating air bricks to service a sub floor void. The infill masonry to the periphery of the doors also appears to be of the same construction.
- 5.4.4 The rear projection of the units comprises of a two storey construction with a duo pitched roof. The rear gable adjoins the neighbouring garaging which largely obscures the gable wall panel.
- 5.4.5 The south and north facing elevations to the rear of Unit 7 are of face brickwork and incorporate brick arches to the window and door openings. The brickwork is painted below cill level to the North elevation.
- 5.4.6 The gable end is rendered and painted pink where visible. The render is in poor condition with cracking evident above and to the sides of the first floor window.



5.4.7 Generally however, although the render is in a poor condition there is no evidence of any significant structural movement to Units 7 and 9A.

## 5.5 Nos. 11 and 13 – Residential Dwellings

5.5.1 These residential properties are of 2 storey load bearing masonry construction with duo pitched roofs over clad in clay pantiles. A chimney stack is located to the ridge location of the gable walls to both the south gable wall and to the party wall between units 11 and 9.

5.5.2 Access was very limited to the rear of the dwellings with the inspection being undertaken remotely when conditions dictated.

5.5.3 The dwellings are of solid 215 masonry construction with feature lintels to the front elevation and brick arches to the rear elevations.

5.5.4 There is evidence of historic foundation movement to the front elevation with distortions to the masonry panels between the ground and first floor windows and door. There is some minor cracking around the lintel locations which is thought to be long standing.

5.5.5 There are minor masonry issues to rear of the dwellings to the principal structure and the ancillary constructions.

5.5.6 The dwellings are a considerable distance remote from the garage courtyard and so excavations will not adversely affect these structures, assuming excavated depths do not exceed 2.0m.

## 6.0 LIMITATIONS

6.1 This report shall be for the private and confidential use of the client for whom it was undertaken and it should not be reproduced in whole or in part or relied upon by third parties for any use without the express written authority of J P Chick and Partners Limited.

6.2 Unless stated otherwise in the report, we have not disturbed any fixtures and therefore no fitted carpets, floorboards or linings have been removed. Coupled with this, we have not exposed the

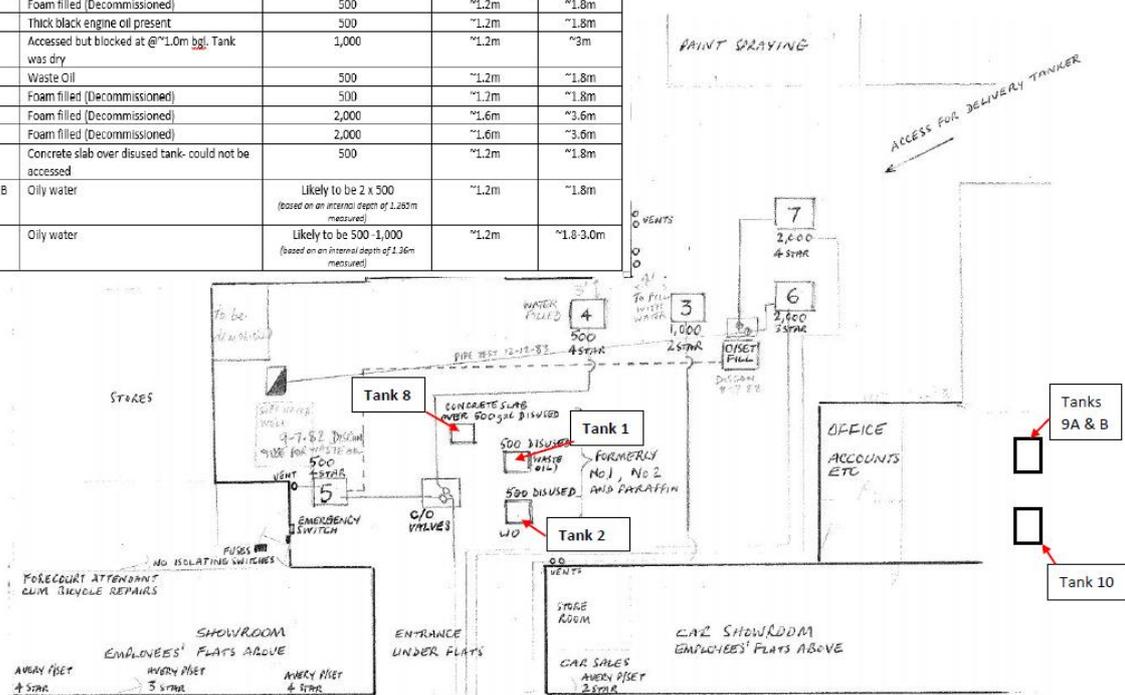
foundations or tested the drains to the property. We are therefore unable to report that such part of the property is free from defect.

- 6.3 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.
- 6.4 The condition of the finishes, waterproofing, damp penetration and structural timbers, unless specifically referred to, are not the subject of this report. We would recommend the services of a specialist to cover these areas.

## 7.0 DISCUSSION

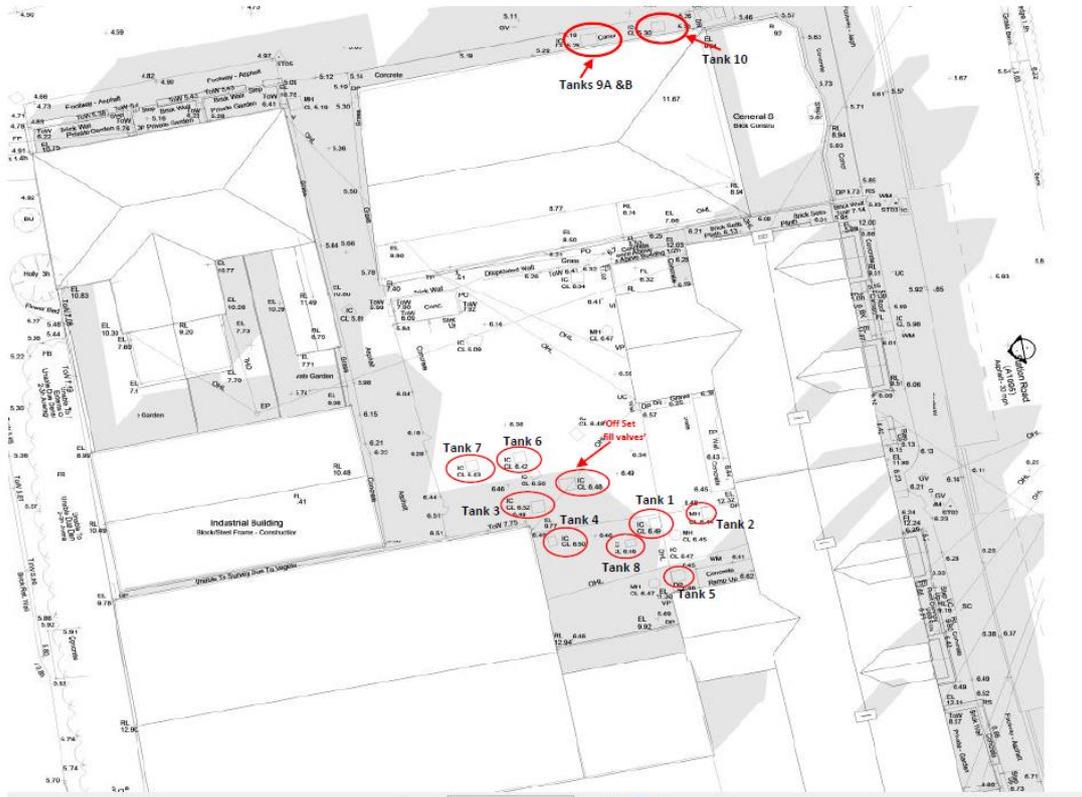
- 7.1 A total of 11 below ground tanks were identified by JPC Environmental services, with a further potential tank located to the rear of Unit 3, which could not be investigated during the inspection.
- 7.2 The tank locations and associated sizes are noted with report reference IE20/016/CSJ but for completeness are as follows:

Tank	Contents/ Decommissioned	Size (Gallons)	Diameter (m)	Length (m)
Tank 1	Foam filled (Decommissioned)	500	~1.2m	~1.8m
Tank 2	Thick black engine oil present	500	~1.2m	~1.8m
Tank 3	Accessed but blocked at @~1.0m bgl. Tank was dry	1,000	~1.2m	~3m
Tank 4	Waste Oil	500	~1.2m	~1.8m
Tank 5	Foam filled (Decommissioned)	500	~1.2m	~1.8m
Tank 6	Foam filled (Decommissioned)	2,000	~1.6m	~3.6m
Tank 7	Foam filled (Decommissioned)	2,000	~1.6m	~3.6m
Tank 8	Concrete slab over disused tank could not be accessed	500	~1.2m	~1.8m
Tanks 9A & B	Oily water	Likely to be 2 x 500 (based on an internal depth of 1.285m measured)	~1.2m	~1.8m
Tank 10	Oily water	Likely to be 500-1,000 (based on an internal depth of 1.36m measured)	~1.2m	~1.8-3.0m

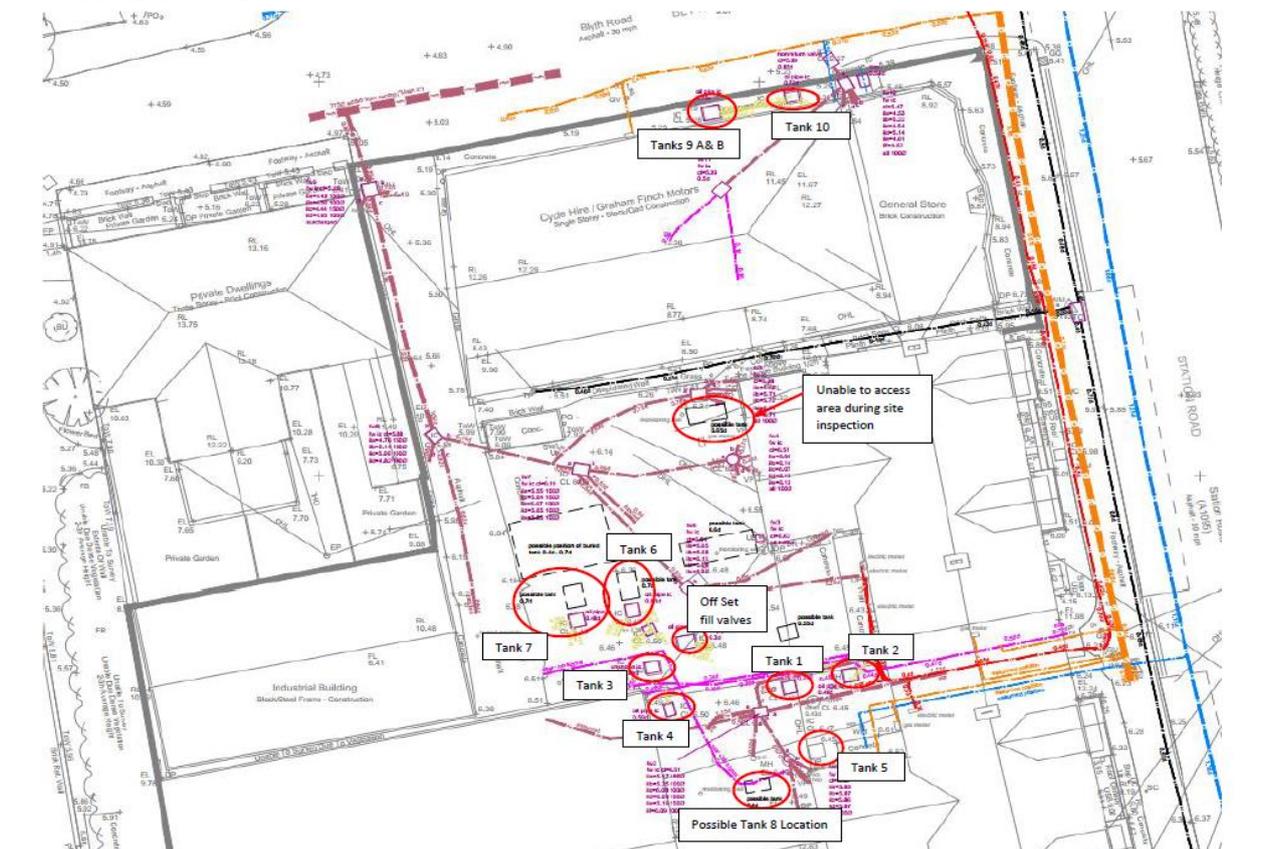




**Existing Site Plan**



**GPR, CCTV, Utility Survey**





- 7.3 Given the anticipated age of the properties the foundations are considered to be in the region of 0.5 m deep, however this will need to be confirmed by the contractor prior to undertaking any excavation works. The underlying geology is not known with certainty at this time.
- 7.4 The tanks are generally noted as being approximately 1.2 m in diameter so an overall excavation depth of 1.8 – 2.0 m is assumed to be required for the removal of tanks of this size to allow for concrete surrounds etc.
- 7.5 Tank 1 is located approximately 4 m remote from Unit 5 and therefore it is considered that this may be simply excavated without any special precautions, subject to the existing foundation provision being of suitable depth.
- 7.6 Tank 2 however is only approximately 1.0 m remote from the rear of Unit 5. It is therefore recommended that the tank be carefully exposed and precisely located. The existing foundation will need to be exposed to confirm its depth and construction. Following this an appropriate temporary works design and method statement will need to be established to safely remove the tank and provide a suitable backfill material. This will likely be temporary shoring with sheet piling.
- 7.7 Tanks 3 and 4 are sufficiently remote from Units 1- 13 not to be of concern. However they are in close proximity to the corner of the garage structure. We understand that this structure is to be demolished and clearly this will need to be undertaken prior to the removal of the tanks.
- 7.8 Tank 5 appears to be within 1.0 m of the foundation to the rear of Unit 7. This will need to be addressed as per the recommendations for Tank 2 above.
- 7.9 Tanks 6 and 7 are larger than the general tanks and noted as being 1.6 m in diameter. However these are located toward the centre of the courtyard and sufficiently remote from any structures such that their removal will not adversely affect any existing foundations.
- 7.10 Tank 8 appears to be within 2.0 m of the foundation to the rear of Unit 7, however it was not possible to ascertain the tanks size and depth. This will need to be confirmed and if the excavation will result in undermining of the adjacent foundations the recommendations will be as for Tank 2 above.



- 7.11 Tanks 9A/B and 10 are sufficiently remote from Units 1 not to be of concern. However, they are in close proximity to the flank wall of the cycle shop. We understand that this structure is to be demolished and clearly this will need to be undertaken prior to the removal of the tanks.
- 7.12 A further tank may exist adjacent to the rear of Unit 3 however this could not be investigated at the time of our inspection.

## 8.0 CONCLUSIONS AND RECOMMENDATIONS

- 8.1 In summary the foundations to the rear projections of Units 3, 5 and 7 will require exposing and assessment by J P Chick and Partners Ltd. Once foundations and supporting strata have been established, this can be reviewed against the required excavation depths for tanks 2, 5 and 8. The potential tank to the rear of Unit 3 will also need to be investigated for its depth and location etc.
- 8.2 Temporary shoring will be required where the excavations undermine existing foundations. This will need to be designed by a suitably qualified and experienced temporary works designer.
- 8.3 A suitable backfill material and method statement will need to be specified for the tank excavations by J P Chick and Partners Ltd. This may require a lean mix concrete where excavations are below the angle of repose for the existing foundations.
- 8.4 The Garage and Cycle hire structures will require demolition prior to the removal of any tanks.
- 8.5 Any further tanks or below ground apparatus not identified will require review in the manner outlined above.



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## 6.0 APPENDICES



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## Appendix A – Photographic Schedule



Photograph No. 1 – Front Elevation to Unit 1



Photograph No. 2 – Typical front Elevation



Photograph No. 3 – Modern Front Bay Structure



Photograph No. 4 – Front Elevation of Unit 3A



Photograph No. 5 – Rear elevation of Units 3 and 3A



Photograph No. 6 – Flank wall of Unit 5 within access way



Photograph No. 7 – Flank wall of Unit 7 within access way



Photograph No. 8 – Rear elevation of Unit 5



Photograph No. 9 - Rear elevation of Unit 3A & 5



Photograph No. 10 – Rear elevation of Unit 3a



Photograph No. 11 – Rear corner of Unit 7



Photograph No. 12 – Elevation to south of courtyard