

**Stoneywood Paper Mill, Aberdeen AB21 9AB
Archaeological evaluation and standing building survey**



**Cameron Archaeology
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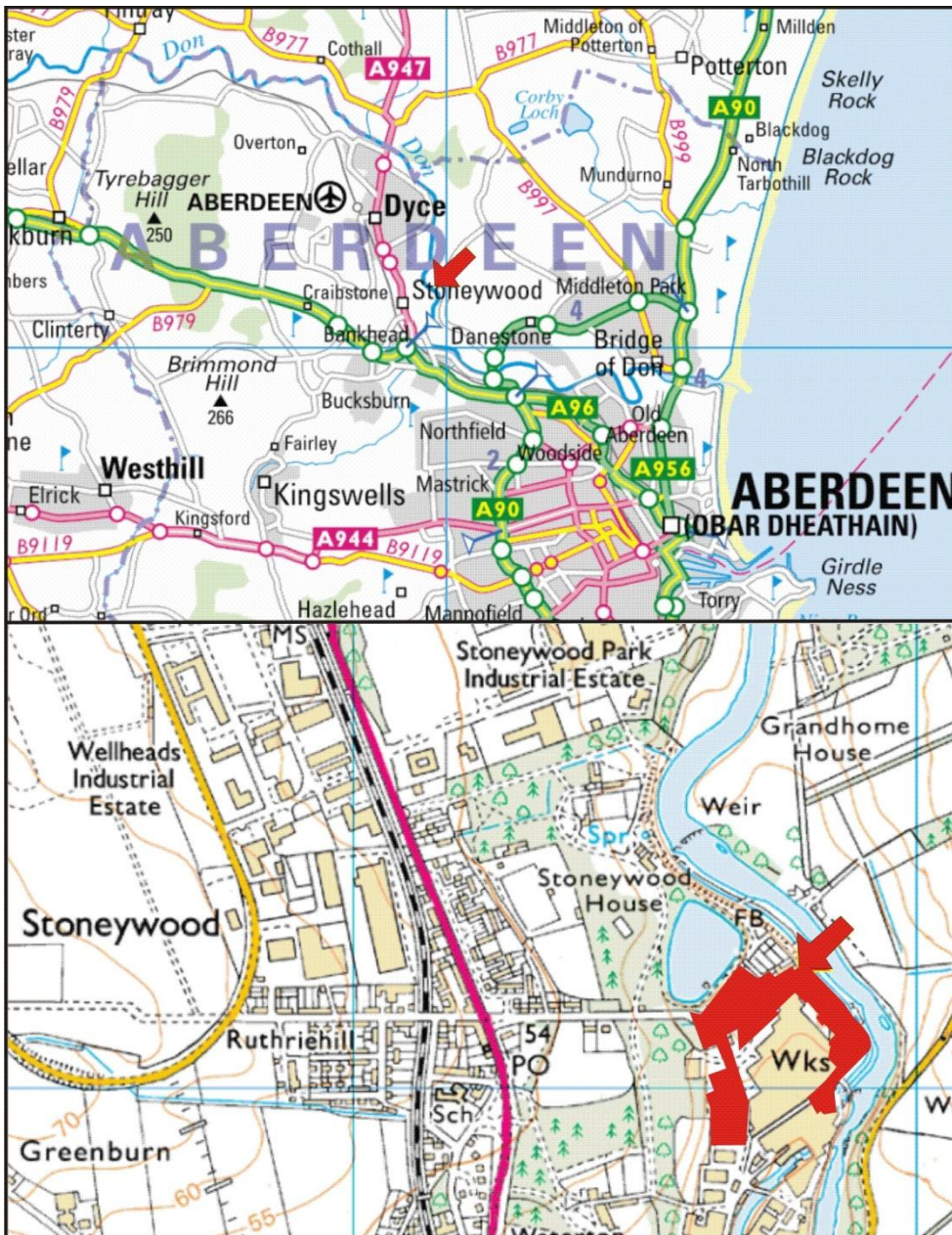
SUMMARY

A standing building survey and archaeological evaluation were carried out from 21 February-5 March 2013. A complex of 19th and 20th-century mill remains were uncovered. A 5m high soil bund (Illus 3) with mature trees growing on it was not available for excavation and it is recommended that a watching brief takes place during the removal of this bund. Further archaeological work will be required when the foundations for the new buildings are constructed and the extent of this work will depend on the type of foundations to be utilised. If structure 25 (Illus 3) is to be partially demolished it should be recorded further after the removal of the adjacent water tank.

1.0 INTRODUCTION

The site is located on the west bank of the river Don SE of Stoneywood House and NE of Waterton House. The site is at AB21 9AB, NJ 89790 11205, at 10-35m OD and in the parish of Newhills (Illus 1).

The site is subject to Aberdeen City Council planning application P121281 for the erection of a biomass combined heat and power (chp) plant and associated works which was passed on 17.1.13. The application site lies within the existing Arjo Wiggins papermill site at Stoneywood and the area is approximately 2.9 hectares in size. The site is 'U' shaped in footprint and includes an area of open yard alongside the mill lade, which runs parallel and alongside the west bank of the River Don along this stretch. The work was commissioned by Andrew Troup, Estover Energy.



Illus 1 Location plan of site (Contains Ordnance Survey data © Crown copyright and database right 2013)



Illus 2 Plan showing proposed development (copyright Halliday Fraser Munro) (north to right)

2.0 ARCHAEOLOGICAL BACKGROUND

The surviving archaeological sites in the vicinity of the proposed development are all related to the industrial history of this area of the city and primarily with Stoneywood Paper Mill. This is the last working paper mill on the river Don which historically was lined with mills which used the water for motive power which drove the mill machinery.

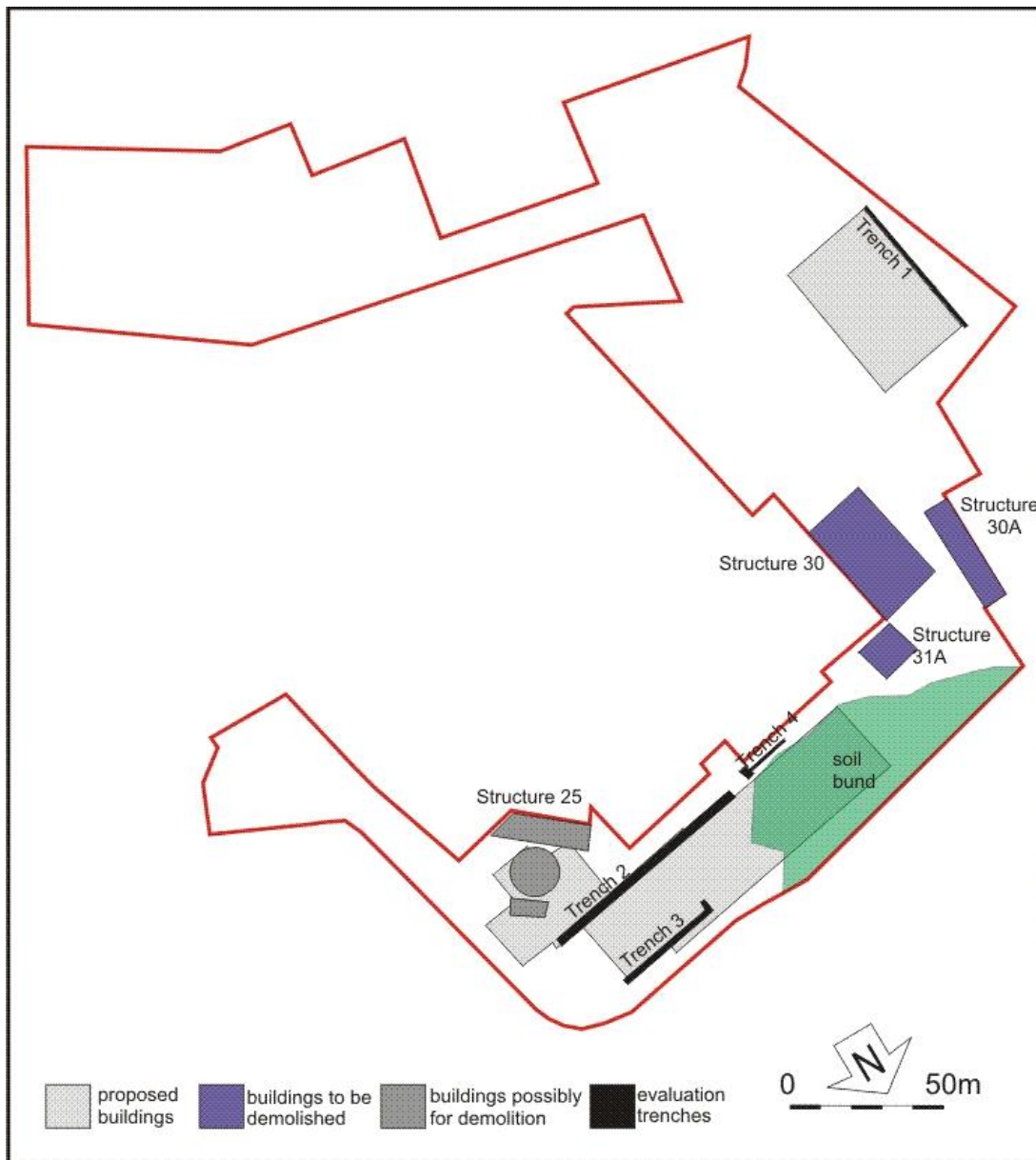
Stoneywood Mill (NJ81SE 54) is now the last working mill on the river Don. John Boyle, a bookseller, and Richard Hyde, a dyer, leased a mill at Stoneywood near Dyce in the 1770s (Perren 2000, 77), to produce fine writing papers. Boyle, whose shop lay in the Broadgate, was also a printer, bookbinder and newspaper proprietor, so he had a market in mind for the mill's products. The costs of setting up must have stretched the partners, however, as their shares were sold on to Alex Smith, an Aberdeen wigmaker, before production even began. It was Smith who made the first sheets of paper here, in 1773, and when his daughter married Patrick Pirie a few years later, a paper-making dynasty was founded. Their son Alexander duly went to work at Stoneywood and discovered his vocation. Water is fundamental to paper-making – it is an integral part of the process, and also provides the motive power which drove the machines. The lower reaches of the Don were once lined with mills, and downstream of Stoneywood you can still see the rusting machinery of Alex Pirie's Woodside Mill, which used to prepare linen rags for papermaking. On the opposite bank lay Crombie's woollen mill at Grandholm. Today's neighbouring mills at Stoneywood and Waterton – both run by Arjo Wiggins as one business – lie above sluices and lades on the same site as Smith's original mill, the Inch of Stoneywood. After the deaths of his father and grandfather, Smith's grandson Alexander Pirie took over Stoneywood at the age of 22, and produced the mill's first watermarked paper two years later in 1802. He is renowned for introducing machine-made paper to the North-East in 1820, and he was a pioneer of the white paper trade. To create white paper, linen rags were bleached in steeps, sizing was done by hand, the paper was dried in lofts, and finally surfaced using

embossed zinc plates (Chalmers 2011). A series of aerial photos from the 1940s and 50s show the buildings (Illus 4) and there is a series of internal photos in Aberdeen City Libraries.

2.2 The proposed development includes areas occupied by buildings on the First and Second Edition Ordnance survey maps (Appendix 3). The lower area near the river is most likely to be the site of the earliest (Alex Smith) mill buildings but these areas were flooded in 1829 and the mill was rebuilt on higher ground (www.thepapeterie.com). This area was then occupied until the mid 20th century by a series of buildings including pasting machine, humidifiers, reel store, stock room and greenhouses (Illus 14) were constructed. These were demolished by the mid 1970s (Gordon McCann pers comm).

3.0 ARCHAEOLOGICAL EVALUATION

An archaeological evaluation was carried out from 26.2.13-5.3.13. Four trenches were excavated in the area of the proposed buildings (Illus 5) approximately 10% of the area to be disturbed by the development. Details of all features can be found in Appendix 2.



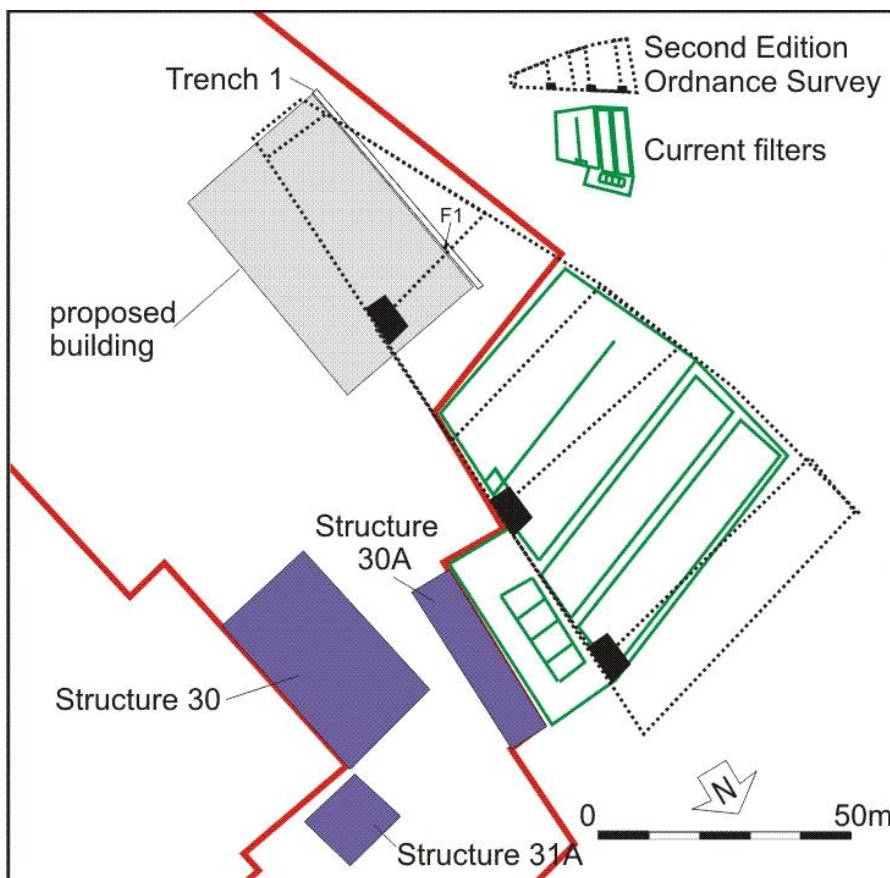
Illus 3 Plan showing Structures for demolition (30, 30A and 31A) and Trenches 1-4.

3.1 Trench 1

Trench 1 was excavated in the upper car park on the site of the NE wall of the proposed storage shed; it was 50m long and 2m wide. The trench was wholly within the late 19th-century filter beds (Illus 6) and one partition wall of these filters was uncovered (F1; Illus 4); it consisted of a shuttered poured concrete wall 0.5m wide and at least 1.8m deep. At the base of the wall was a layer of fine rusty brown sand which would have formed the base of the filter beds. The structure had been infilled with 1.8m of rubble including stone, brick, metal reinforcing bars, sewer pipe and metal. The filters (Illus 6, 7) can be seen on the Second Edition OS map but not the First Edition and so were built between 1867 and 1899.



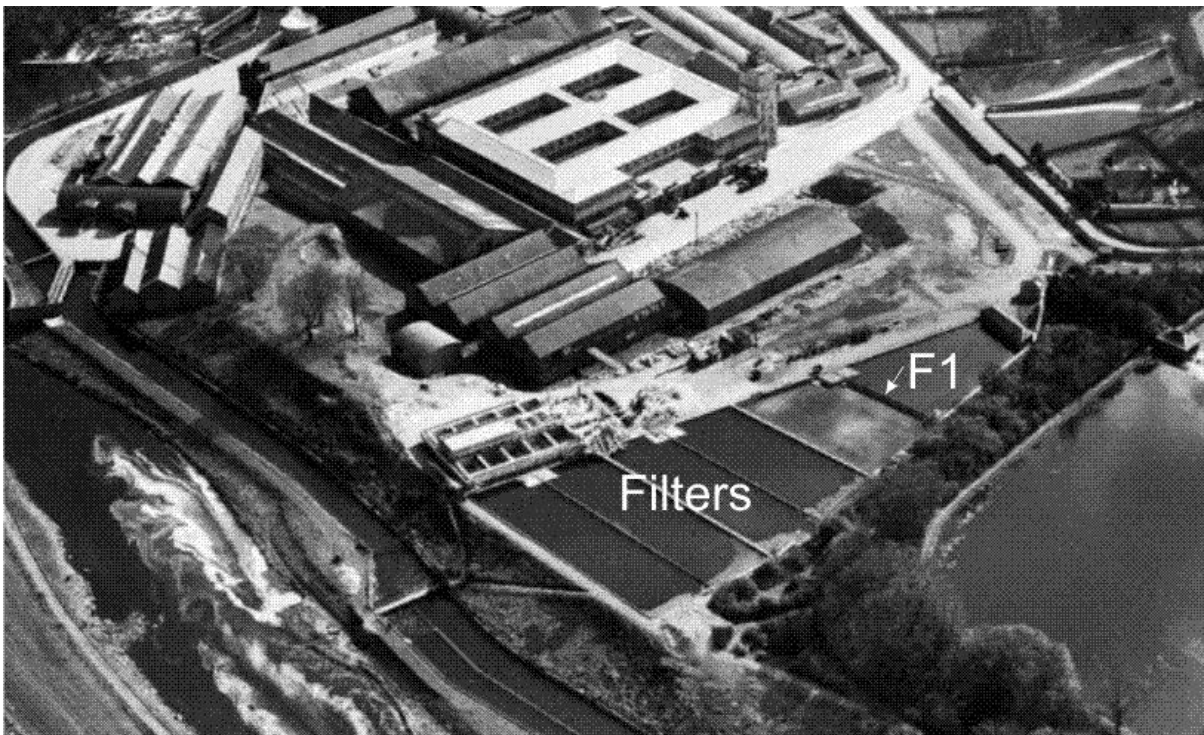
Illus 4 Shuttered poured concrete partition F1 within late 19th-century filter beds; facing WSW



Illus 5 Plan showing trench 1, current filters (in green) and filter beds on First Edition Ordnance Survey (black dotted)



Illus 6 Chemical house and filters being constructed in 1947; the original late 19th-century filter beds can be seen in the background (copyright The Papeterie, Arjo Wiggins).



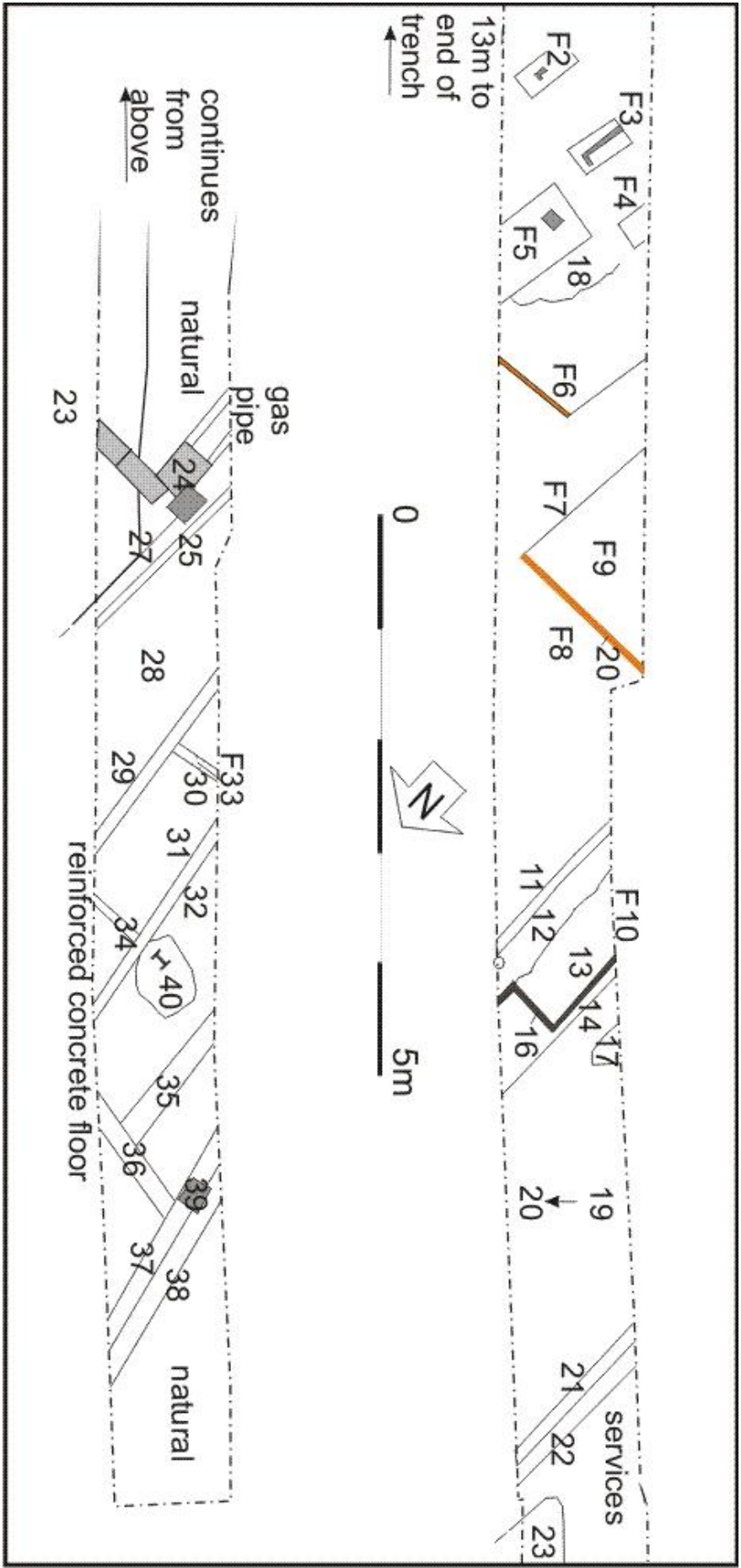
Illus 7 1948 aerial photograph showing filters and location of F1 (copyright Aerofilms and RCAHMS)

3.2 Trench 2

Trench 2 (Illus 3, 9) was positioned along the south edge of the proposed biomass CHP Plant and was 61m long and 2m wide. The remains of several buildings were recorded and these have been identified as remains of the pasting machine and humidifier building (Illus 9; buildings 21) and the stock room (building 20). Most of the remains were late 19th or early 20th century but earlier structures might include F10 a duct or inspection pit for a machine (Illus 8) which was originally built in stone and mortar with a brick floor. A foundation for machinery and inspection pit F22 was also originally 19th century and had been sealed under an 20th-century concrete floor.



Illus 8 Duct or inspection pit F10 was originally constructed in stone and mortar with a brick floor; it was altered in the late 19th-century and a poured shuttered concrete wall added (left)



Illus 9 Trench 2 plan of features

3.3 Trench 3

Trench 3 was positioned along the north edge of the proposed biomass CHP Plant. Again the remains were mainly 19th and early 20th century in date. The trench had been positioned over the reel store (structure 21B) and over a lade intake. At the SE end of the trench a cobbled surface was the remains of a yard area (Illus 10, 11, 12) between the main lade and the reel store. This area had been raised in height by 1.5m since the late 19th century and this is probably due to several floods including a devastating flood of 1829. In the centre of the trench the NE corner of the reel store was revealed (Illus 10) and at the NW end a concrete lade intake (F55; Illus 12). The structure was constructed of concrete blocks 82 x 40cm in size with a poured concrete foundation, base and top and was 5.2m wide. A cast iron pipe in the base revealed how the water was carried from the river, syphoned through this intake and into the individual mill buildings. The structure is probably late 19th century in date but may have an earlier mortared stone structure on the interior which was inaccessible during this work.



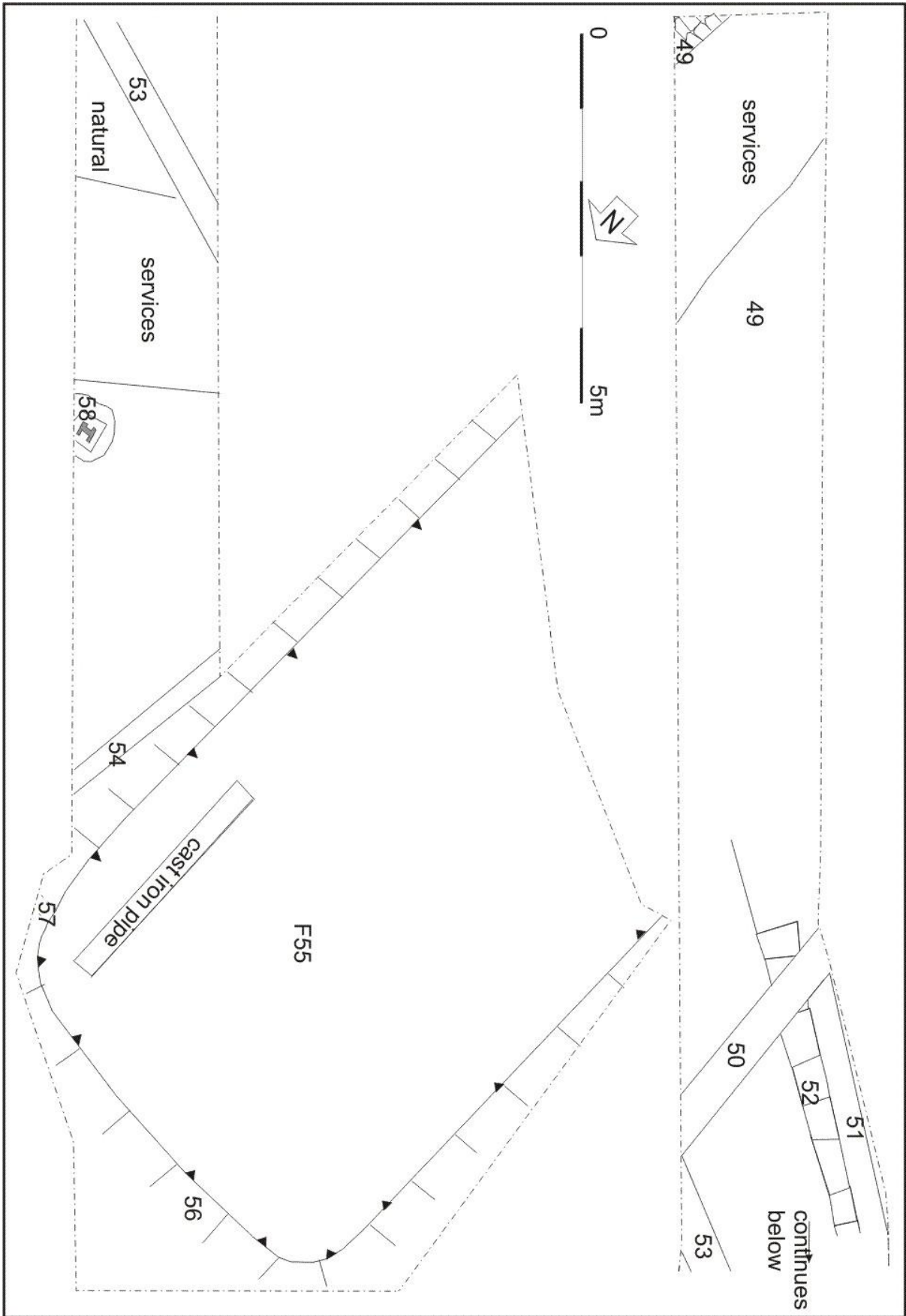
Illus 10 cobbled surface 40 (below) with yard layers above; the level of the area has been raised by 1.5m since the late 19th century; facing NNE



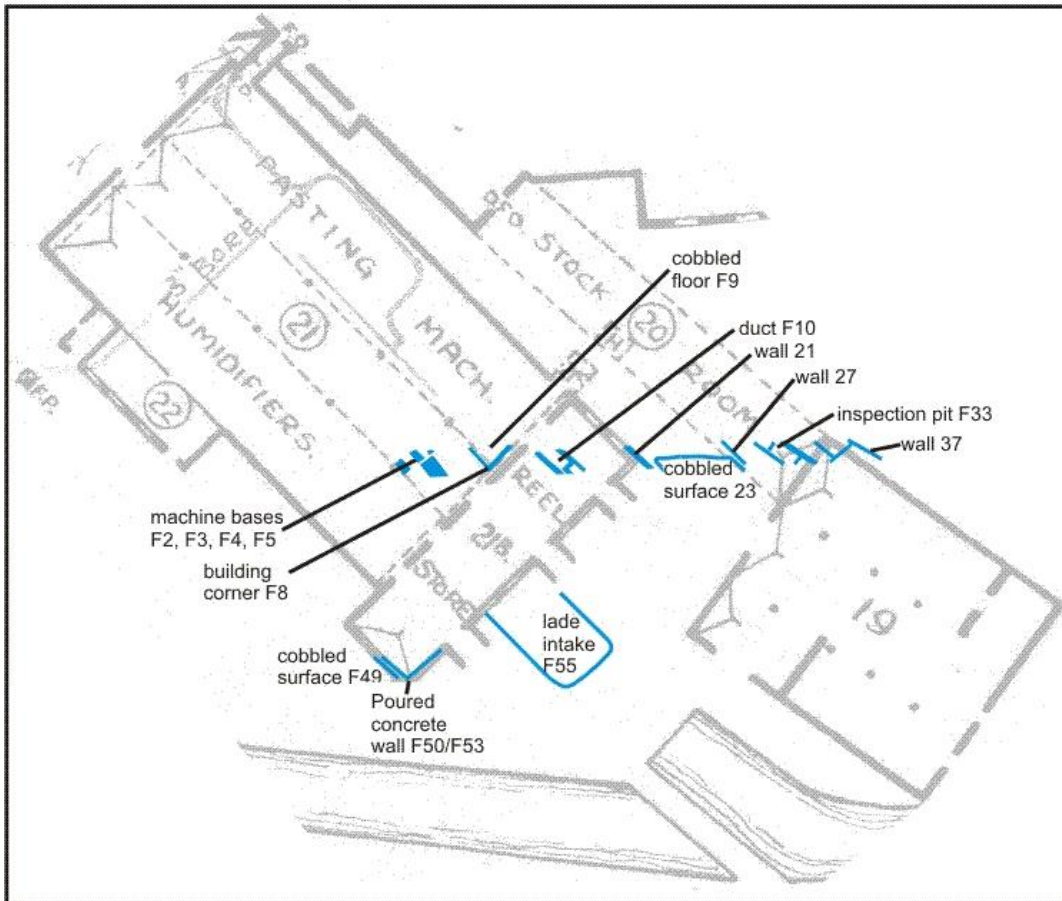
Illus 11 Walls F53 and F61 forming the NE corner of the reel store facing NE



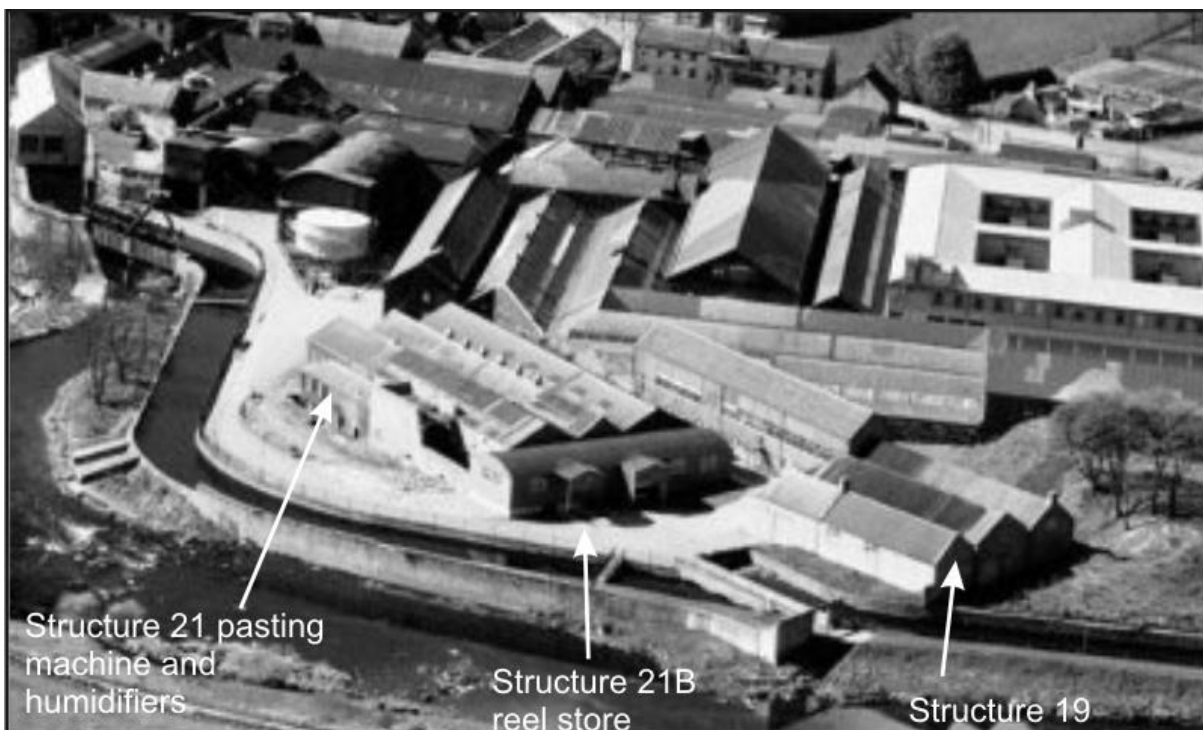
Illus 12 concrete lade intake F55 facing NE



Illus 13 Trench 3 Plan of features



Illus 14 Trenches 2 and 3 on mid 20th-century plan (dated 1958-63) of mill (copyright Arjo Wiggins) showing excavated features in blue.



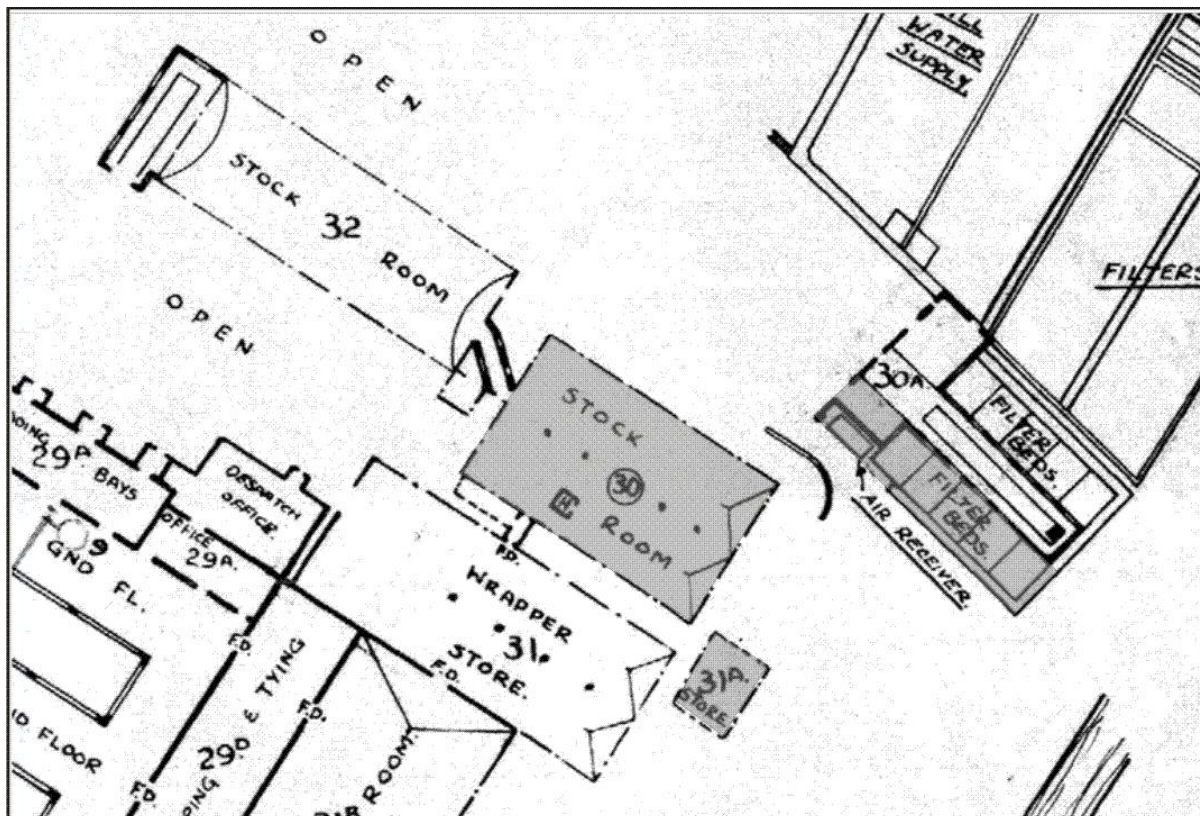
Illus 15 1948 aerial photograph showing structures 19, 21 and 21B (copyright Aerofilms and RCAHMS)

3.4 Trench 4

Trench 4 was excavated SE-NW between an existing building and the 5m high bund of soil. The SE end revealed rusty brown stony natural subsoil at 31.39m OD but the NW end of the trench was occupied by at least 3 service trenches.

4.0 STANDING BUILDING SURVEY

Three buildings were recorded prior to demolition for the proposed development. They have been numbered according to the Mill system (Illus 14).



Illus 16 Mid 20th-century plan showing buildings 30 and 31A and filter beds 30A (copyright Arjo Wiggins)

4.1 Building 30

Building 30 was a stock room. It was probably constructed in the mid 20th century period. It was 22.5m wide and 48m long and is constructed of corrugated iron panels. It is a two-storey buildings with the ground floor being a large open space supported by cast iron pillars and the upper floor now divided for use as The Papeterie, a shop and classroom facility for schools and visitors. There is one main door in the ground floor and access to the upper floor is across a bridge from the upper car park to the first floor level.



Illus 17 Building 30 SW facade

4.2 Building 30A

Building 30A was part of the filters and chemical plant built between 1947-49; it is dated 1949 on the SW wall and is featured in photographs being constructed in 1947 (Illus 5). The portion for demolition consists of one concrete filter tank and an air receiver tank. It is constructed of poured shuttered concrete and is a filter tank used for filtering water from the plant prior to returning it to the river.



Illus 18 Building 30A section to be demolished facing W

4.3 Building 31A

Building 31A was a store probably constructed in the mid 20th century period. It was 12.3 x 10.8m in size and is constructed of corrugated iron panel walls and roof. It is one storey and is a large open room built on a wooden frame and with a domed roof. There are windows in two walls and two doors.



Illus 19 Building 31A facing SE



Illus 20 'Air receiver' to be demolished



Illus 21

Poured shuttered concrete embankment between buildings 30 and 30A

5 RECOMMENDATIONS

Following the archaeological evaluation and standing building survey it is recommended that a watching brief is carried out during the removal of a 5m high soil bund (Illus 3). Further archaeological work will be required when the foundations for the new buildings are constructed and the extent of this work will depend on the type of foundations to be utilised. If structure 25 (Illus 3) is to be partially demolished it should be recorded further after the removal of the adjacent water tank.

6 REFERENCES

Chalmers, M 2011 'Last Mill on the Don'. Leopard Magazine, September 2011.

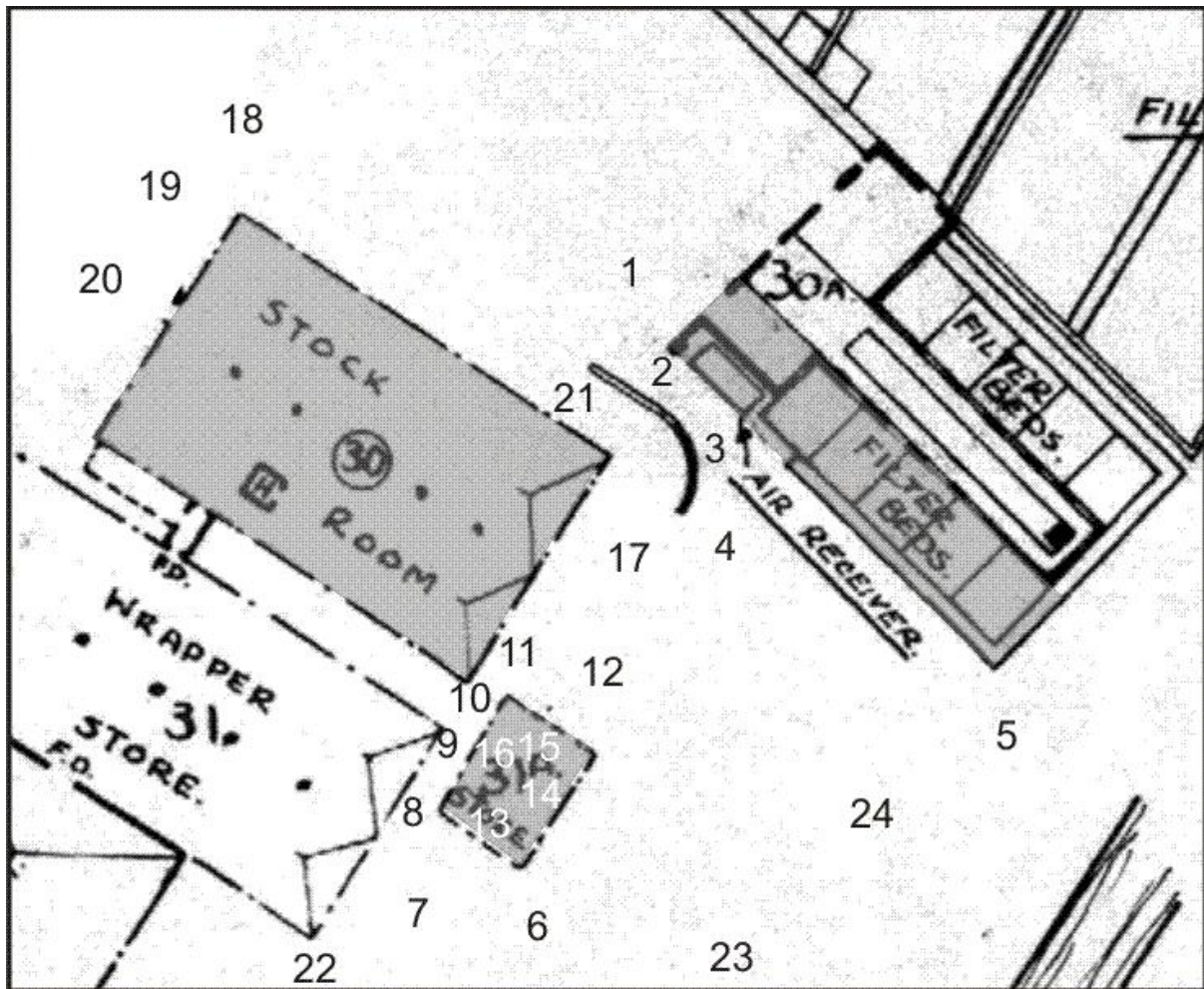
Perren, R 2000 'The Nineteenth-Century Economy' in *Aberdeen 1800-2000: A New History*. Tuckwell Press.

Papeterie http://www.thepapeterie.com/Pages/stoneywood_mill_19_century.aspx

7 ACKNOWLEDGEMENTS

Thanks to Judith Stones, Aberdeen City Council; to Andrew Troup and Gillon Dobie, Estover Energy; to Gordon McCann and Austin Clark, Arjo Wiggins; and to Marshall, Nathan and staff of MTM.

APPENDIX 1 PHOTOGRAPHS



Illus 22 Camera points used in the standing building survey

| General photos | | | |
|----------------|--|--------------------------------|--|
| Photo no | | Description | |
| DSC_4375-4378 | | Mill from opposite side of Don | |
| DSC_4379-4381 | | Mill from opposite side of Don | |
| DSC_4382-94 | | Mill from opposite side of Don | |



| Standing building survey | | | |
|--------------------------|--------------|--|--------|
| Photo no | Camera point | Description | Facing |
| DSC_3086-87 | | 1 Filter and chemical plan started 1947 and dated 1949; this section of building is being retained | NE |
| DSC_3088-93 | | 2 Air receiver | N |
| DSC_3084-99 | | 3 Air receiver (left) with filter building (right) to be demolished | N |
| DSC_3100-3111 | | 4 Filter building 30A to be demolished | N |
| DSC_3112-3117 | | 4 Filter building 30A to be demolished | N |
| DSC_3118-3123 | | 5 Filter building 30A to be demolished | NW |
| DSC_3124-3128 | | 6 Building 31A store to be demolished | W |
| DSC_3129-3134 | | 6 Building 31A store to be demolished | W |
| DSC_3135-3141 | | 7 Building 31A store to be demolished | NW |
| DSC_3142-3147 | | 8 Building 31A store to be demolished | N |
| DSC_3148-3155 | | 9 Building 31A store door | NE |
| DSC_3156-3162 | | 10 Building 31A store metal panels | NE |
| DSC_3163-3168 | | 11 Building 31A store metal panels | E |
| DSC_3169-3180 | | 12 Building 31A store to be demolished | SE |
| DSC_3181 | | 13 Building 31A store interior | NW |
| DSC_3182 | | 14 Building 31A store interior | SW |
| DSC_3183 | | 15 Building 31A store interior | SE |
| DSC_3184 | | 16 Building 31A store interior | NE |
| DSC_3185 | | 16 Building 31A store interior | NE |
| DSC_3186-3193 | | 11 Building 30 stock room to be demolished | NW |

| | | | |
|---------------|----|---|----|
| DSC_3194-3199 | 17 | Building 30 stock room window and metal panel detail | SW |
| DSC_3200-3205 | 17 | Building 30 stock room (left) concrete embankment (right) | NW |
| DSC_3206-3211 | 18 | Building 30 stock room | NE |
| DSC_3212-3217 | 19 | Building 30 stock room | NE |
| DSC_3218-3223 | 20 | Building 30 stock room | NE |
| DSC_3224-3229 | 19 | Building 30 stock room detail of metal panels and windows | NE |
| DSC_3230-3236 | 21 | Building 30 stock room (right), concrete embankment (left) with bridge to upper floor ;The Papeterie' (top) | NE |
| DSC_3237-3242 | | Cassie cobbled surface F23 | SE |
| DSC_3243-3248 | | Cassie cobbled surface F23 | S |
| DSC_3249-3254 | 22 | Building 31A SE wall | NW |
| DSC_3255-3267 | 23 | Building 31A NE wall | SW |
| DSC_3268-3274 | 24 | Building 30 NE gable | SW |
| DSC_3275-3280 | 25 | Building 31A NW wall showing concrete embankment (foreground) | |
| DSC_3281-3286 | 24 | Building 30 NE gable showing concrete embankment (foreground) | SW |
| DSC_3287-3293 | 3 | Building 30 N corner showing concrete embankment (foreground) | S |
| DSC_3294-3313 | 3 | Building 30 N corner showing concrete embankment (foreground) | S |
| DSC_3314-3320 | 3 | Building 30 N corner | SE |
| DSC_3321-3326 | 3 | Building 30 N corner | SW |
| DSC_3351-3358 | | South end stock room 20 possibly for demolition | SW |



DSC_3086



DSC_3087



DSC_3088



DSC_3099



DSC_3100



DSC_3111



DSC_3112



DSC_3123



DSC_3124



DSC_3134



DSC_3135



DSC_3147



DSC_3148



DSC_3162



DSC_3163



DSC_3180



DSC_3181



DSC_3182



DSC_3183



DSC_3184



DSC_3185



DSC_3186



DSC_3199



DSC_3200



DSC_3211



DSC_3212



DSC_3223



DSC_3224



DSC_3236



DSC_3237



DSC_3248



DSC_3249



DSC_3260



DSC_3267



DSC_3268



DSC_3280



DSC_3281



DSC_3293



DSC_3294



DSC_3305



DSC_3306



DSC_3313



DSC_3319



DSC_3321



DSC_3358

| Photo no | Trench | Description | Facing |
|---------------|--------|---|--------|
| DSC_2922-2947 | 1 | SW end of trench showing 1.8m upfill and sand at base of trench | NE |
| DSC_2948-2952 | 1 | Rubble 1A infill including brick, stone | |
| DSC_2953-2955 | 1 | SW end of trench showing 1.8m upfill and sand at base of trench | SW |
| DSC_2956-2961 | 1 | SW end of trench showing 1.8m upfill and sand at base of trench | NW |
| DSC_2962-2975 | 1 | Rubble 1A infill including brick, stone | SW |
| DSC_2976-2982 | 1 | SW end of trench showing 1.8m upfill and sand at base of trench | SW |
| DSC_2983-2994 | 1 | Location | W/SW |
| DSC_2995-3000 | 1 | Rubble 1A infill including brick, stone | NW |
| DSC_3001-3019 | 1 | Centre of trench | NE |
| DSC_3020-3032 | 1 | Centre of trench MTM/Arjo Wiggins staff | NE |
| DSC_3033-3047 | 1 | Concrete wall F1 | NNE |
| DSC_3048-3056 | 1 | Concrete wall F1 | NW |
| DSC_3057-3070 | 1 | Concrete wall F1 | WNW |
| DSC_3071-3083 | 1 | Concrete wall F1 | SW |
| DSC_3084-3085 | 1 | NE end of trench | WSW |



DSC_2922



DSC_2933



DSC_2947



DSC_2948



DSC_2956



DSC_2968



DSC_2969



DSC_2983



DSC_3010



DSC_3033



DSC_3039



DSC_3040



DSC_3051



DSC_3063



DSC_3064



DSC_3071



DSC_3078



DSC_3079

| Photo no | Trench | Description | Facing |
|---------------|--------|--|--------|
| DSC_3359-3366 | 2 | SE end of trench showing disturbance by services | NW |
| DSC_3367-3372 | 2 | F5 centre, F2 (right) | NNW |

| | | | |
|---------------|---|---|-----|
| DSC_3373-3377 | 2 | F5 top right, F4, F3, F2 (L-R foreground) | NNE |
| DSC_3378-3385 | 2 | F5 top right, F4, F3, F2 (L-R foreground) | N |
| DSC_3386-3396 | 2 | Brick-faced wall F8 (right) concrete F7 (right) | N |
| DSC_3397-3403 | 2 | F8 (foreground) F7 centre F5 (background) | SE |
| DSC_3404-3412 | 2 | F8 left F7 right corner of room | NNE |
| DSC_3413-3419 | 2 | F7 centre F8 left | NNE |
| DSC_3420-3425 | 2 | F7 centre | SSW |
| DSC_3426-3430 | 2 | Stone floor F9 top with F7 foreground | SSW |
| DSC_3431-3435 | 2 | F5 (centre) with F4 (top) and F3 (left) | SSW |
| DSC_3436-3441 | 2 | F5 (right) with F4 (top right) and F3 (centre) and F2(left) | S |
| DSC_3442-3450 | 2 | F5 (centre) with F2, F3, F4 (left) and Marshall, MTM digger driver | W |
| DSC_3451-3458 | 2 | F5 (centre) with F2, F3, F4 (left) | W |
| DSC_3459-3464 | 2 | Shuttered concrete wall F14 (centre) with wood shuttering in situ (16) F10 floor 12 (foreground) and 13 | WSW |
| DSC_3465-3470 | 2 | Shuttered concrete wall F14 (centre) with wood shuttering in situ (16) F10 floor 12 (foreground) and 13 | W |
| DSC_3471-3482 | 2 | Shuttered concrete wall F14 with wood shuttering in situ (16) | W |
| DSC_3483-3489 | 2 | Shuttered concrete wall F14 with wood shuttering in situ (16) corner | NW |
| DSC_3490-3496 | 2 | Cast iron down pipe F15 | NNE |
| DSC_3497-3502 | 2 | F10 brick floor two phases 13 left 12 right | NNW |
| DSC_3503-3508 | 2 | F10 | N |
| DSC_3509-3516 | 2 | F10 | NNW |
| DSC_3517-3522 | 2 | F10 | N |
| DSC_3523-3528 | 2 | F10 | W |
| DSC_3529-3540 | 2 | F2 foreground F3 top | W |
| DSC_3541-3547 | 2 | F2 foreground F3 centre F4 top F5 right | W |
| DSC_3548-3554 | 2 | F2 foreground right F3 centre F4 top left F5 right | NW |
| DSC_3555-3560 | 2 | F2 foreground right F3 centre F4 left F5 top | N |
| DSC_3561-3566 | 2 | F2 top F3 centre right F4 bottom F5 left centre and floor 18 left foreground | E |
| DSC_3567-3573 | 2 | F5 detail | NNE |
| DSC_3574-3592 | 2 | Brick faced wall F6 | NNW |
| DSC_3593-3610 | 2 | Brick faced wall F8 and corner with F7 (right) | NNW |
| DSC_3611-3615 | 2 | F7 (right) with F8 (left) | ENE |
| DSC_3616-3625 | 2 | F7 (left) with F5 background | SE |
| DSC_3626-3634 | 2 | F5 west face showing shuttering marks | ENE |
| DSC_3635-3640 | 2 | Brick faced wall F8 and corner with F7 (right) | NNW |
| DSC_3641-3647 | 2 | F5 west face showing shuttering marks with F4 (right) | E |
| DSC_3648-3654 | 2 | F5 west face showing shuttering marks with F4 (right) | ESE |

| | | | |
|---------------|---|--|------|
| DSC_3655-3677 | 2 | F5 | WNW |
| DSC_3686-3691 | 2 | F5 (foreground) with F2, F3, F4 r-l background | SW |
| DSC_3692-3697 | 2 | F5 (foreground) with F2, F3, F4 r-l background | NNE |
| DSC_3698-3703 | 2 | F7 centre | SW |
| DSC_3704-3709 | 2 | F7 centre | NE |
| DSC_3710-3715 | 2 | F8 right | NE |
| DSC_3716-3721 | 2 | F5 foreground | NW |
| DSC_3722-3727 | 2 | F8 left F7 right corner of room | NE |
| DSC_3728-3733 | 2 | F10 | SW |
| DSC_3734-3738 | 2 | F10 | NNW |
| DSC_3739-3745 | 2 | F10 | N |
| DSC_3746-3751 | 2 | Natural sand and stone 20 under brick surface 19 | E |
| DSC_3752-3756 | 2 | Natural sand and stone 20 under brick surface 19 | NE |
| DSC_3757-3767 | 2 | Wall 21/22 centre | W |
| DSC_3768-3773 | 2 | Wall 21/22 | S |
| DSC_3774-3779 | 2 | Wall 21/22 | SSE |
| DSC_3780-3790 | 2 | Cassies 23 top, natural sand 28 below | NE |
| DSC_3791-3801 | 2 | Cassies 23 top, natural sand 28 below F33 left | NE |
| DSC_3802-3806 | 2 | wall F27/25 right, inspection pit F24 left with slate cover 24A | SE |
| DSC_3807-3821 | 2 | Inspection pit/foundation F24 (bottom) with wall F27 (top) | W |
| DSC_3822-3839 | 2 | Location with SE end brick slitting and winding Building 25 | W/NW |
| DSC_3840-3856 | 2 | Wall 21/22 | WSW |
| DSC_3857-3862 | 2 | Gas pipe duct F24 with wall 27 Left and slate cover 24A centre | NE |
| DSC_3863-3867 | 2 | Gas pipe duct F24 with wall 27 right and slate cover 24A centre | SW |
| DSC_3868-3875 | 2 | Gas pipe duct F24 with wall 27 top and slate cover 24A centre | WSW |
| DSC_3876-3881 | 2 | Gas pipe duct F24 with wall 27 right and slate cover 24A centre | S |
| DSC_3882-3888 | 2 | Gas pipe duct F24 with wall 27 right and slate cover 24A centre | SSW |
| DSC_3889-3894 | 2 | Inspection pit/machine base F33 wall F32 centre | NE |
| DSC_3895-3901 | 2 | Inspection pit/machine base F33 wall F32 left, wall F29 right and foundation for H-frame (left) | NNW |
| DSC_3902-3907 | 2 | Inspection pit/machine base F33 wall F32 left, wall F29 right; partition wall with cast iron fitting 34 (top left) | NE |
| DSC_3908-3913 | 2 | F40 with cinders 41 | NE |
| DSC_3914-3919 | 2 | wall 38 right with metal column base 39 centre | S |
| DSC_3920-3925 | 2 | wall 38 right with metal column base 39 centre | SSE |
| DSC_3926-3930 | 2 | Inspection pit/machine base F33 with F40 Right | S |
| DSC_3931-3936 | 2 | Inspection pit/machine base F33 with F40 Right | SSW |
| DSC_3937-3943 | 2 | Inspection pit/machine base F33 with F40 Right | SW |

| | | | |
|---------------|---|---|-----|
| DSC_3944-3949 | 2 | Inspection pit/machine base F33 with F40 foreground | SSE |
| DSC_3950-3955 | 2 | F38, F40, F33 background | SE |
| DSC_3956-3961 | 2 | F38 with F39 | SE |
| DSC_3962-3967 | 2 | F36 | E |
| DSC_3968-3973 | 2 | F36 centre F37 (left) | N |
| DSC_3974-3979 | 2 | F40 with cinders 41 | E |
| DSC_3980-3985 | 2 | F40 with cinders 41 | S |
| DSC_3986-3997 | 2 | NW end of trench | WNW |
| DSC_3998-4003 | 2 | NW end of trench | NW |
| DSC_4005-4015 | 2 | NW end of trench | WNW |



DSC_3366



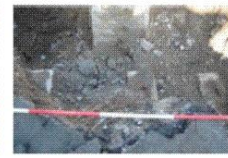
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DSC_3377



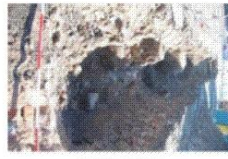
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DSC_3385



DSC_3386



DSC_3403



DSC_3404



DSC_3412



DSC_3415



DSC_3425



DSC_3426



DSC_3435



DSC_3436



DSC_3450



DSC_3451



DSC_3464



DSC_3465



DSC_3474



DSC_3482



DSC_3489



DSC_3495



DSC_3502



DSC_3503



DSC_3516



DSC_3517



DSC_3528



DSC_3529



DSC_3536



DSC_3542



DSC_3554



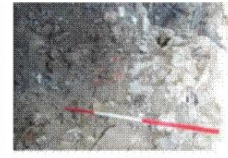
DSC_3555



DSC_3566



DSC_3567



DSC_3580



| Photo no | Tr | Description | Facing |
|---------------|----|--|--------|
| DSC_4016-4020 | 3 | SE end of trench with section through layers 43-cassies 49 | NNE |
| DSC_4021-4025 | 3 | SE end of trench with section through layers 43-cassies 49 | N |
| DSC_4026-4031 | 3 | SE end of trench with section through layers 43-cassies 49 | W |
| DSC_4032-4042 | 3 | SE end of trench | NW |

| | | | |
|---------------|---|--|-----|
| DSC_4043-4048 | 3 | SE end of trench with section through layers 43-natural | NE |
| DSC_4049-4054 | 3 | SE end of trench with section through layers 43-natural | NNW |
| DSC_4055-4070 | 3 | SE end of trench with section through layers 43-natural | NE |
| DSC_4071-4077 | 3 | SE end of trench with section through layers 43-natural | NNW |
| DSC_4078-4087 | 3 | trench | NW |
| DSC_4088-4092 | 3 | Poured concrete wall F61 | NE |
| DSC_4093-4102 | 3 | Poured concrete wall F61 (right) foundation stones 63 foreground | NE |
| DSC_4103-4108 | 3 | foundation stones 63 centre and wall F62 foreground | NE |
| DSC_4109-4114 | 3 | vertically shuttered concrete wall F61 with F53 (left) | E |
| DSC_4115-4119 | 3 | F53 | N |
| DSC_4120-4124 | 3 | F53 left F61 right | N |
| DSC_4125-4131 | 3 | F53 left F61 right | E |
| DSC_4132-4137 | 3 | F53 left F61 right | NE |
| DSC_4138-4143 | 3 | foundation stones 63 centre and wall F62 above | WSW |
| DSC_4144-4159 | 3 | foundation stones 63 centre and wall F62 above | SSW |
| DSC_4160-4169 | 3 | foundation stones 63 centre and wall F62 above and natural subsoil below F53 right | SSW |
| DSC_4170-4174 | 3 | foundation stones 63 centre and wall F62 above and natural subsoil below F53 right | WSW |
| DSC_4175-4179 | 3 | F58 | NE |
| DSC_4180-4191 | 3 | F55 with ranging rod on F54/F55 | NNW |
| DSC_4192 | 3 | trench | NW |
| DSC_4193-4204 | 3 | F55 with ranging rod on F54/F55 | N |
| DSC_4205-4210 | 3 | F55 wall 56 concrete blocks | NNW |
| DSC_4211-4216 | 3 | F55 wall 56 concrete blocks | NE |
| DSC_4217-4223 | 3 | F55 interior | NNW |
| DSC_4224-4239 | 3 | F55 concrete blocks 56 | NNW |
| DSC_4240-4241 | 3 | F55 cast iron pipe in base | NNE |
| DSC_4242-4246 | 3 | F55 NE wall with ceramic drain pipe | NE |
| DSC_4247-4249 | 3 | F55 interior | NNW |
| DSC_4250-4254 | 3 | 63 left 62 right | SSW |
| DSC_4255-4259 | 3 | wall 54 part of F55 | SW |
| DSC_4260-4264 | 3 | natural sand between 54 and 53 | SW |
| DSC_4265-4269 | 3 | F53 with 63 left | SW |
| DSC_4270-4274 | 3 | F61 with 63 right | SW |
| DSC_4275-4289 | 3 | F55 | N |
| DSC_4290-4304 | 3 | Trench 3 from site of building 19 | SE |
| DSC_4305-4318 | 3 | F55 | ENE |
| DSC_4319-4323 | 3 | Trench 3 being backfilled | NW |
| DSC_4395-4398 | 3 | F55 | NNW |

| | | | |
|---------------|---|-----------------------|-----|
| DSC_4399-4403 | 3 | F55 | NE |
| DSC_4404-4408 | 3 | F55 | NW |
| DSC_4409-4413 | 3 | F55 | W |
| DSC1670 | 3 | Ceramic drain pipe 57 | E |
| DSC1671-79 | 3 | F55 interior | NNW |



DSC_3834



DSC_3844



DSC_3845



DSC_3856



DSC_3857



DSC_3867



DSC_3868



DSC_3881



DSC_3882



DSC_3894



DSC_3895



DSC_3907



DSC_3908



DSC_3919



DSC_3920



DSC_3930



DSC_3931



DSC_3940



DSC_3947



DSC_3955



DSC_3956



DSC_3967



DSC_3968



DSC_3979



DSC_3980



DSC_3991



DSC_3992



DSC_4003



DSC_4004



DSC_4015



DSC_4016



DSC_4025



DSC_4026



DSC_4036



DSC_4037



DSC_4048



DSC_4049



DSC_4057



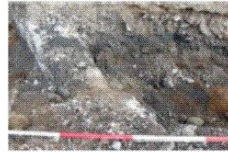
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DSC_4074



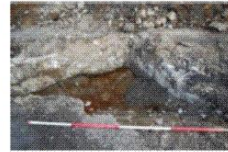
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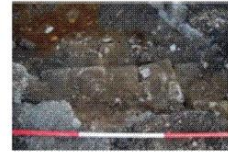
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DSC_4093



DSC_4098



DSC_4108



DSC_4109



DSC_4119



DSC_4120



DSC_4131



DSC_4132



DSC_4138



DSC_4154



DSC_4155



DSC_4169



DSC_4170



DSC_4179



DSC_4180



DSC_4191



DSC_4192



DSC_4193



DSC_4204



DSC_4205



DSC_4216



DSC_4217



DSC_4218



| Photo no | Trench | Description | Facing |
|--------------|--------|----------------------------|--------|
| DSC4324-4328 | 4 | Natural subsoil at SE end | NE |
| DSC4329-4333 | 4 | Natural subsoil at SE end | N |
| DSC4334-4343 | 4 | Natural subsoil at SE end | NW |
| DSC4344-4348 | 4 | Natural subsoil at SE end | NNW |
| DSC4349-4353 | 4 | trench location | NW |
| DSC4354-4358 | 4 | trench location | WNW |
| DSC4359-4364 | 4 | services in base of trench | NW |
| DSC4365-4374 | 4 | services in base of trench | SE |



DSC_4325



DSC_4338



DSC_4339



DSC_4348



DSC_4349



DSC_4358



DSC_4359



DSC_4367



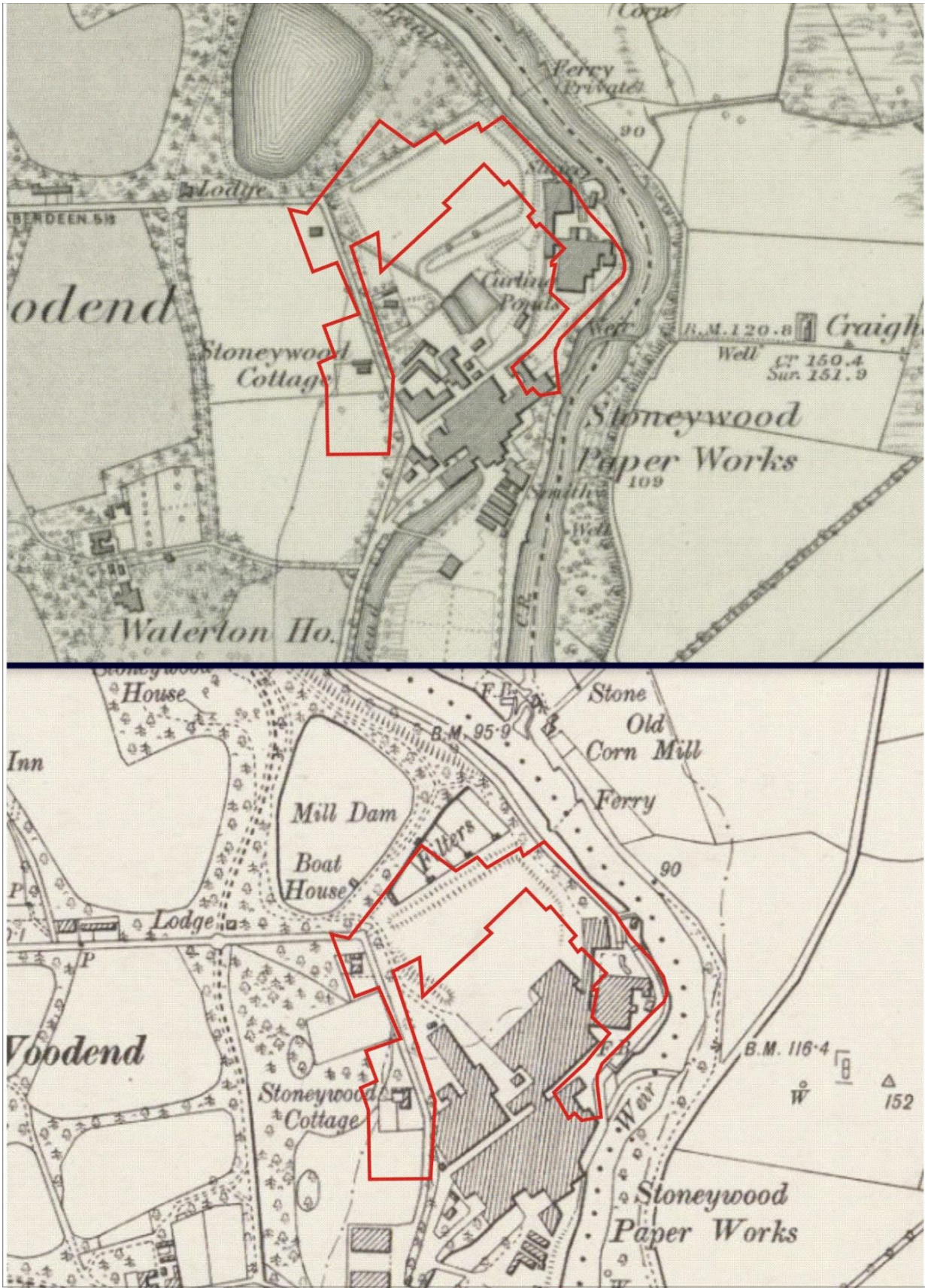
DSC_4374

APPENDIX 2 FEATURES

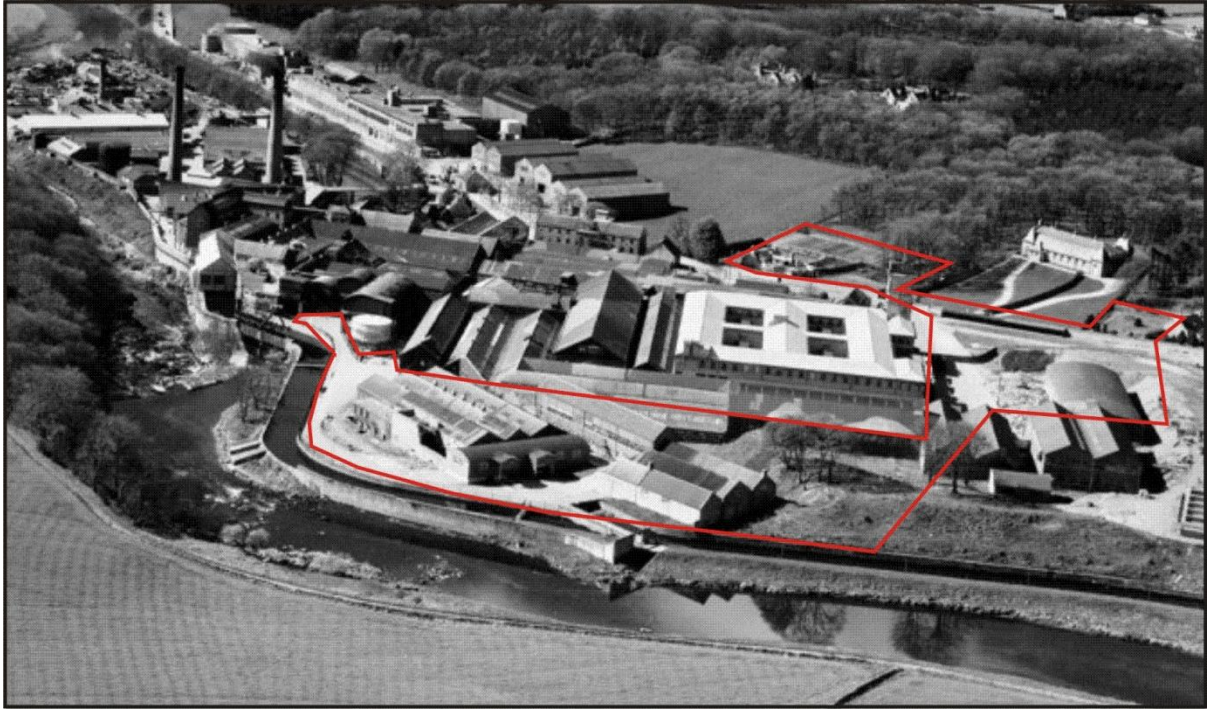
| Feature no | Trench | Description (building numbers based on 1950s plan) |
|------------|--------|--|
| F1 | 1 | Shuttered poured concrete wall 0.5m wide and 1.8m deep |
| F2 | 2 | Concrete base with cast iron fitting 90x40xm; base for machinery in Building 21 humidifiers |
| F3 | 2 | Concrete base with cast iron fitting 60x at least 40xm; base for machinery in Building 21 humidifiers |
| F4 | 2 | Concrete base 50x at least 60xm; base for machinery in Building 21 humidifiers |
| F5 | 2 | Concrete base 90x1'50x1'40m deep; base for machinery in Building 21 humidifiers |
| F6 | 2 | Concrete wall with brick skin part of pasting machine room 21 |
| F7 | 2 | Concrete wall associated with F6 |
| F8 | 2 | Concrete wall with brick skin south corner of pasting machine room 21 |
| F9 | 2 | Cobbled floor between walls F7/F8 Room 21 pasting machine |
| F10 | 2 | Brick on internal face wall F8 |
| F11 | 2 | Stone and mortar wall |
| F12 | 2 | Red brick floor 50cm wide; bricks 23 x 10cm |
| 13 | 2 | Darker red bricks 90cm wide; bricks 24 x 11cm |
| 14 | 2 | shuttered concrete wall with shuttered wood 90 x 16xm |
| 15 | 2 | cast iron down pipe |
| 16 | 2 | Wood 90 x 16cm shuttering for wall |
| F17 | 2 | Concrete base |
| F18 | 2 | concrete floor - not investigated due to depth. In Room 21 pasting machine |
| F19 | 2 | Brick surface with brick, tar, mortar underneath |
| 20 | 2 | Rusty brown natural subsoil 29.21m OD |
| F21 | 2 | Stone and mortar footing 40cm wide |
| F22 | 2 | Stone and mortar wall 0.65m wide |
| F23 | 2 | Stone cassies surface between pasting machine buyilding (21) and stock room (20) - see photos DSC3237-3248 |

| | | |
|-----|---|--|
| F24 | 2 | Slate cover of gas pipe |
| F25 | 2 | Edging to concrete surface in stock room 20 (building demolished 2000) |
| F26 | 2 | Metal base for pillar; building demolished 2000 but truncated remains survive (see photos DSC3351-58 and 3828-3839) |
| F27 | 2 | Concrete wall east wall stock room 20 |
| F28 | 2 | Natural sand and rounded boulders 29.18m OD |
| F29 | 2 | Mortared stone wall 40cm wide; east wall inspection pit F33 |
| F30 | 2 | south wall inspection pit F33 with drain hole |
| F31 | 2 | waterlogged white mortar infill F33 |
| F32 | 2 | Mortared stone wall 40cm wide; west wall inspection pit F33 |
| F33 | 2 | Inspection pit under machinery along centre of stock room; 1.8m wide |
| F34 | 2 | north wall inspection pit F33 with cast iron beam attached |
| F35 | 2 | stone and mortar wall 0.5m wide |
| F36 | 2 | stone and mortar wall 0.5m wide |
| F37 | 2 | concrete edging to concrete floor of stock room 20 |
| F38 | 2 | stone and mortar wall 0.5m wide |
| F39 | 2 | Metal base for pillar; building demolished 2000 but truncated remains survive (see photos DSC3351-58 and 3828-3839); Pillars are built into wall and visible from exterior |
| F40 | 2 | Pit filled with stones and mortar - base for metal H-frame; base of cast iron in situ |
| 41 | 2 | Cinders over F40 |
| 42 | 2 | natural subsoil at NW end of trench 29.6m OD |
| F43 | 3 | tarmac |
| F44 | 3 | large stone infill; base for tarmac |
| F45 | 3 | brown sand |
| F46 | 3 | cinder surface |
| F47 | 3 | light brown clay and gravel |
| F48 | 3 | small stones |
| F49 | 3 | large granite cassie surface 28.2m OD |
| F50 | 3 | brown sand |
| F51 | 3 | dark grey loam and sand |
| F52 | 3 | natural boulders and clay 27.2m OD |
| F53 | 3 | concrete wall NE wall reel stone 21B |
| F54 | 3 | flat stone foundation for concrete wall F55 |
| F55 | 3 | Lade intake - concrete block structure 5.2m wide and 1.65m deep; concrete floor; cast iron pipe in base |
| F56 | 3 | concrete blocks 82cm long 40cm high |
| F57 | 3 | ceramic drain in wall 55 |
| F58 | 3 | concrete base with cast iron H-frame |
| 59 | 4 | Gravel, soil on top of natural |
| 60 | 4 | Trenches with at least 3 services - gas, water, cut into natural subsoil |
| F61 | 3 | poured concrete wall shuttered vertically; east corner of reel store building 21B |
| F62 | 3 | concrete edging; internal partition in reel store |
| F63 | 3 | foundation for concrete |
| 64 | 3 | natural 21.6m OD |

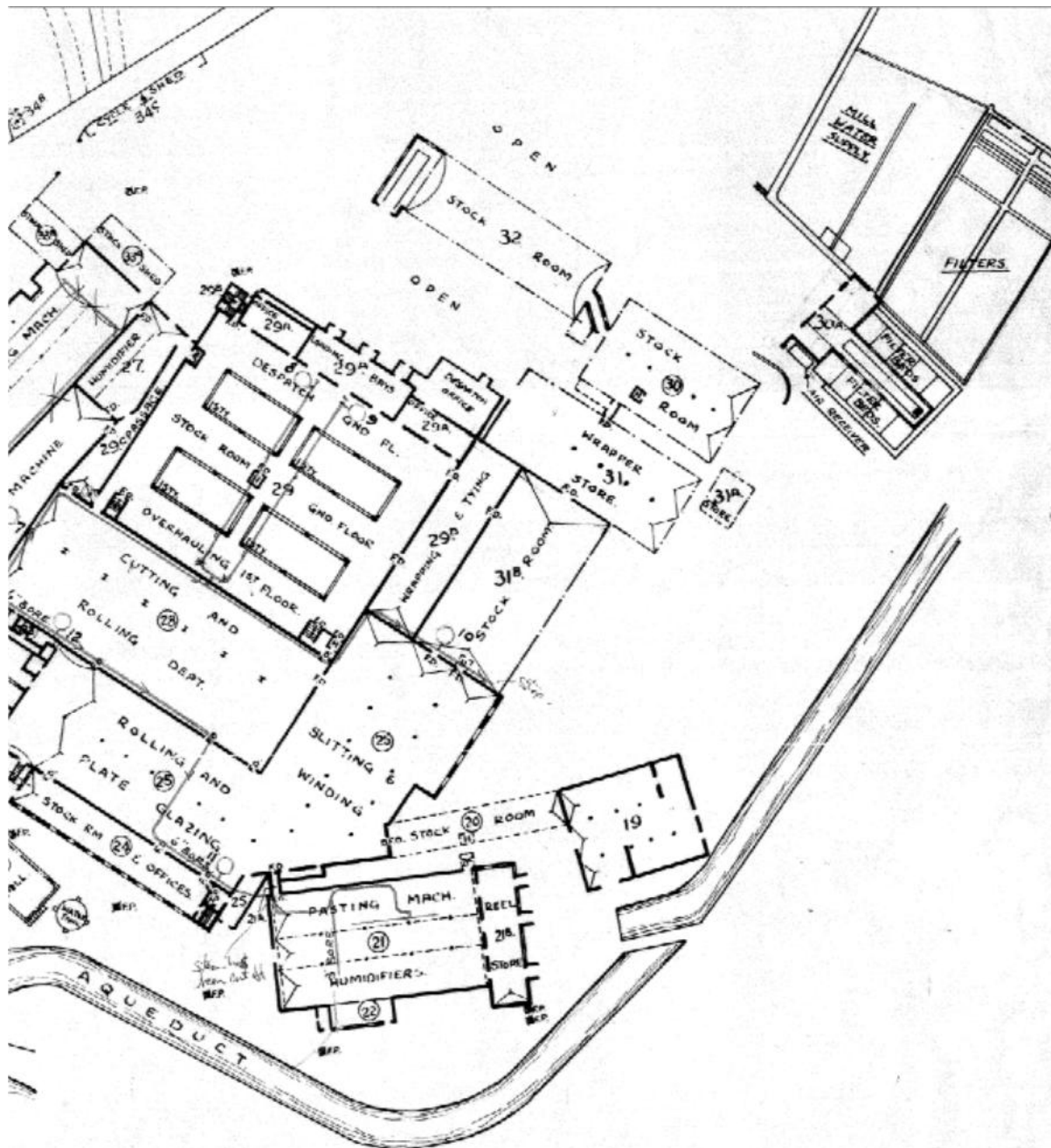
APPENDIX 3 MAPS AND AERIAL PHOTOS



Illus 23 (top) First Edition Ordnance Survey extract Aberdeenshire, Sheet LXVI Survey date: 1865 Publication date: 1868; (bottom) Second Edition Ordnance Survey extract Aberdeenshire Sheet LXVI.SW Publication date: 1901 Revised: ca. 1899 (copyright National Library of Scotland)



Illus 24 1948 aerial photograph from north of mill with approximate area of proposed development shown in red. (copyright Aerofilms and RCAHMS External Reference SAW014788; Accession number 2011/149)



| REVISED. | |
|----------|----------|
| As At. | 20.6.53 |
| " " | 2.5.60 |
| " " | 6.9.60 |
| " " | 10.9.60 |
| " " | 26.1.61 |
| " " | 14.3.61 |
| " " | 11.12.61 |
| " " | 31.5.63 |
| " " | |
| " " | |
| " " | |

| | |
|---|-------------------------------|
| MESSRS ALEX PIRIE & SONS LTD ENGINEERING DEPARTMENT STONEYWOOD WORKS ABERDEENSHIRE | |
| TITLE: | SCALE: 1" = 60 Feet |
| <u>MILL SITE PLAN</u> | DRAWING/876 X. DRAWER |
| <u>SHOWING H.A. & L.P. STEAM PIPES</u> | DATE 29.3.56 REVISED |
| <u>ETC.</u> | DRAWN BY TRACED BY <i>Yuk</i> |
| FILE N ^o | JOB N ^o |

Illus 25 Mid 20th-century plan (dated 1958-63) of mill (copyright Arjo Wiggins)