SECTION 3 : SCHEDULE OF WORKS

ALL DIMENSIONS ARE TO BE CHECKED AND VERIFIED ON SITE BEFORE ORDERING MATERIALS.

3.1 GENERAL

- The Contractor will be required to possess a high level of expertise in the repair of historic buildings and to carry out all of the work in accordance with current best practice. Read with section 2 'Materials & Workmanship'.
- Contractor to complete costing sheet at the end of this schedule and submit it with the Form of Tender.

3.2 SCAFFOLDING

See Materials & Workmanship item 2.7.

- Contractor to provide and maintain independent scaffolding for access, working and material loads to scheduled working areas (parapets, walls and windows).
- Form suitable support at the base of the scaffold including bridging over drains and accommodating buttresses and other projections and ensuring adequate load bearing at ground level in proximity of graves. Take care to avoid damage to masonry and stained glass.
- Fully enclose the base of the scaffolding with 3.5m high corrugated steel sheeting and provide additional security measures required by the church insurer – interior scaffold lighting controlled by solar sensor to be on all night, and monitored PIR & CCTV intruder alarm.
- Allow £750 for alarm to be installed by church security provider as an extension to existing system. 750 00
- Provide safety netting to prevent tools & materials dropping from higher level.
- Where necessary protect access routes with rigid sheets (the porch).

3.3 DEMOLITIONS

3.3.1 <u>Cast Iron Rainwater downpipes and hoppers:</u>

- Carefully dismantle hoppers and downpipes from north aisle and set aside for sand blasting, repainting and re-fixing.
- Set aside rainwater butt for reuse. Cart away existing plinth.

3.3.2 Stonework:

<u>South Aisle Parapet:</u>

- Allow to carefully dismantle the coping stone by stone (carefully removing surface cramps to avoid stone damage) and pierced work beneath down to string course and rebuild replacing cramps and dowels in stainless steel. Itemise all parapet stones prior to removal and set aside for cleaning, repair and re-use in existing location and position.
- If on inspection with the architect repair in-situ is feasible dismantling will NOT be done.

<u>North Aisle Parapet:</u>

- Allow to carefully dismantle 100% of coping and ashlar beneath down to string course and rebuild replacing cramps and dowels in stainless steel. Itemise all parapet stones prior to removal and set aside for cleaning, repair and re-use in existing location and position.
- If on inspection with the architect repair in-situ is feasible dismantling will NOT be done.

Porch Parapet:

- Allow to carefully dismantle 100% of coping and ashlar work beneath down to string course and rebuild replacing cramps and dowels in stainless steel (some new bed joint reinforcement will be needed across the south corners). Itemise all parapet stones prior to removal and set aside for cleaning, repair and re-use in existing location and position.
- If on inspection with the architect repair in-situ is feasible dismantling will NOT be done.

Drainage Channel at ground level:

- Carefully dismantle and set aside for reuse external channel walling stone (churchyard side) and stone base of drainage channel for inspection by Architect, cleaning and re-use, where possible.

3.4 STONEWORK REPAIRS

Read with section 2.2 of Materials & Workmanship.

3.4.1 Specialist works by stone conservator:

3.4.1.1 Parapet stonework and copings (all areas):

- The existing copings and pierced & plain ashlar stonework beneath to be lifted for re-bedding and removal of rusting iron cramps/fixings. Remove all old mortar. Clean exposed faces by brushing down using hard dry glass fibre bristle brushes to remove lichens and dirt generally, and re-bed. Take great care to minimise damage to friable pierced work, which is to be repaired.
- Allow to repair & consolidate 65% of South Parapet pierced work, grouting fissures, pining fragments, filling crevices with matching lime mortar and sheltercoating as necessary.
- Replace iron cramps with stainless steel. Allow for 2no. vertical dowels to each coping stone and also each stone beneath.
- Make good damaged stone where original dog cramps removed from coping tops (every joint along south aisle parapet) – in general filling slots with lime mortar repair and where necessary re-adhering fractured stone with acrylic resin.
- Ensure all water traps to coping stones are filled to a level surface to allow efficient shedding of rainwater with lime mortar repair.
- Re-lay stones solidly on a new bed of lime mortar and point similarly in lime mortar. Allow for lime putty mortar in the proportions 1:2 lime: aggregate with the aggregate comprising sharp sand and crushed stone suitably graded and matched to the stone, approved by the architect.
- Provide samples of suitable mortar for approval.
- To porch allow to renew entirely the render inside the parapet using lime mortar 1:2.5 NHL2 lime : aggregate, the aggregate to be well graded sharp sand and Doulting stone dust.
- Provide samples of suitable render for approval.

3.4.1.2 Repairs to window tracery/mullions, jambs, heads and cills:

Tower west, North & South aisles, South Chapel, North Organ chamber, Vestry and Chancel:

- Clean masonry by dry brushing with a glassfibre bristle brush, re-point cracked and failed joints in window stonework generally with 1:2 lime putty mortar as before, and repair decayed masonry to original profile with 1:2 matched lime putty mortar as before as necessary.
- For pricing allow to rake out and repoint approximately 35% of all joints in window surrounds, tracery, jambs, cills and mullions. Allow to renew 50% of

mortar in the glass margins. Allow to clean the tracery and mullions in each window and the inner parts of the jambs.

- To chancel east, organ chamber, north aisle & tower west windows allow to remove sulphate deposition with two applications of poultice cleaning.
- To western north aisle window allow to renew the external face of the eastern mullion entirely from top to bottom, cutting back to the glass line and piecing in new Doulting stone of matching profile. Pin and fix in place with acrylic resin. Make good mortar margin to glass each side.
- To central north aisle window allow to repair lost drip profile to window head by piecing in new stone 500 long x 75mm high x 75mm deep in matching Doulting stone.
- To tower west window re-paint ferramenta.

3.4.1.3 Vestry window internally:

- Carefully dismantle opening light and take to workshop for overhaul – stripping back iron to bare metal, priming & painting with Rust Anode cold galvanising primer and two coats Brouns linseed oil paint in black. Refix opening light. Re-lead glazing, reusing old glass.
- Re-lead glazing in each light, reusing old glass and replace saddle bars with matt black painted stainless steel of matching dimension.
- Make good damaged stonework from corrosion of old saddle bars and opening light, pining fractured pieces – in particular the east mullion.
- Repair mullion profile as necessary with stone matched 1:2 lime putty mortar.

3.4.1.4 West door (Tower exterior):

- Poultice clean upper parts of door head masonry to remove carbon/sulphate deposits (allow two applications), and carry out stone repairs as necessary as for windows. Pin laminating stone, lime grout fissures and form lime mortar cappings and supports to mouldings where vulnerable. Allow to apply 2no. layers lime sheltercoat comprising dilute lime putty with stone dust to match existing masonry.
- Provide samples of suitable sheltercoat for approval.
- Repair bottoms of both door leaves. Allow to piece in matching seasoned oak to top and bottom of rails 50mm high, and to bottoms of stiles 400mm high, neatly scarfed in at a 45 degree angle.
- For west door work allow to dismantle bookcase inside door, and reassemble on completion. The bookcase is designed to be removed. Carefully remove thermal insulation & draught stripping and reinstate on reassembly. Assume bookcase components will be stored within the church. Provide a sheet of 12mm plywood to ay on top of pews as a platform for storage and cover with dust sheets.
- Chip & scrape iron strap hinges to remove loose and defective paint and repaint as for window metalwork above (Vestry – Brouns linseed paint).
- Apply Nitromores paint stripper to remove modern graffiti paint from meeting stiles.
- Biocide exterior face of oak and apply a protective and nurturing dressing of beeswax & turpentine, buffed to a satin sheen when sufficiently dry.

3.4.1.5 Nave parapet SE corner:

- Pin vertical fracture between south & east parapets. Allow for 2no. 10mm dia. threaded ss dowels 750mm long set in acrylic resin with the bar ends recessed 15mm and pointed over with stone matched 1:2 lime putty : aggregate mortar.

3.4.1.6 Ringing chamber south window (tower):

Work to be done from Ringing chamber through open window/while frame removed for repair;

- Pin loose fragment of stone to east jamb.

3.4.1.7 Nave S arcade (internally):

- Pin fracture above first from west pier. Allow for 2no. 3mm dia. ss pins 100mm long.

3.4.1.8 Chancel step (internally):

- Repair decayed edge of grey sandstone step where nave floor tiling adjoins. Allow to build back stone profile with stone matched 1:2.5 NHL3.5 : aggregate mortar. For pricing assume repair strip 50mm wide, 2m long nominally 15mm deep.

3.4.1.9 South Gate Piers:

- Repair decayed and rust jacking damage to apex of both gate piers with matched 1:2 lime putty : aggregate mortar.

3.4.2 Repointing (refer also parapet & drainage channel repairs):

Pointing to be 1:2 – 2.5 lime putty : aggregate, the aggregate to be sharp sand and stone dust to match existing.
Provide samples of suitable pointing for approval.

Porch;

- Allow to rake out and repoint west wall 100%, with raking out to lower half minimum 50mm deep.
- Allow to rake out and repoint 1sqm of south wall; individual joints in isolated places to be agreed on site.
- Allow to rake out and repoint 2sqm of east wall; individual joints in isolated places to be agreed on site.
- Allow to insert 2no. crack stitches 600mm long in south wall immediately beneath parapet 500mm east of west corner across existing vertical crack. Use 2no. 6mm twisted stainless steel bars per stitch – Helibar or equal approved, recessed 150mm and 50mm respectively and set within pointing mortar.

South aisle;

- Allow to rake out and repoint 5sqm of south wall; individual joints in isolated places to be agreed on site.

North aisle;

- Allow to rake out and repoint 5sqm of north wall; individual joints in isolated places to be agreed on site (centrally beneath parapet & at plinth level).
- Rebed loose stone at base of north west buttress.

3.4.3 Existing Ground Level Drainage Works (refer drawings for scope and see east end of church for example of work already completed):

Allow for Archaeologist watching brief for all excavation works Provisional sum 750 00

3.4.3.1 Battered stone to inside of existing drainage channel (i.e. church walling):

- Carefully rake out and deeply re-point existing joints, re-building areas of loose stonework as required. Allow for 100% re-pointing using NHL 5 lime mortar and ensure all stonework is securely fixed prior to re-pointing.
- Expect to rake out to depth of 75mm generally.

3.4.3.2 Formation of base and external walls of re-built drainage channel:

- Base of channel to be formed by re-laying sound existing lias paving on 25mm

lime/sand 1:2.5 NHL5 bedding mortar over 100mm of concrete nominally 1:2:4 mix (Ordinary Portland cement : sharp sand : 10mm coarse aggregate). Concrete to extend under outside wall of channel as a footing, and to be separated from church wall with 12mm Flexcell strip. Allow to excavate 150mm beneath existing formation and cart away arisings. For pricing assume supply of additional 25% base stone to match existing (assumed 75-100mm thick).

- Allow to take out 4 no. trial holes along aisles to determine depth of wall foundations; say 450 x 450 x 600mm deep & report findings to CA.
- Rebuild external channel retaining wall re-using stone bedded in 1:2.5 NHL5 lime mortar on concrete channel sub-base.
- Provide new coping/edging to top of channel external wall using 100 x 300mm random lengths of Lias stone laid to existing ground level. NB. Stone adjacent to catch pit channel to be omitted to allow insertion of Stainless Steel hollow box section (50 x 50mm) for drainage (see drawing & example completed at east end).
- Channel base, sides and coping to be pointed with NHL5 lime mortar.

Details provided are for pricing purposes and subject to confirmation after trial pits are undertaken to establish foundation depths of the church building. Fall and outlet to be confirmed.

3.4.3.3 <u>New ground level drainage works (refer drawings & see example of completed work at east end):</u>

3.4.3.4 <u>Catch pit details to north and south aisles:</u>

- Sides of catch pits to be formed using concrete kerbing retaining detail and allowing sufficient depth below finished ground level to install porous plastic grass pavers over 35mm 60/40 compacted root-zone sandy soil. Sub-base layer to be min 75mm deep with free draining, compacted, sharp, angular fill, 95% between 5-45mm (MOT type 3 or similar with reduced fine content) with geotextile membrane separation to root zone, to manufacturer's instructions. Grass surface to be reinstated over geotextile membrane.
- Base of catch pits to be formed using min 90mm deep concrete, bedded on hardcore and geotextile membrane as described above.
- Base to be formed with 1:40 falls from both sides to 300mm wide central channel, and channel also laid to fall of min 1:40 towards main drainage channel allowing water to discharge into it.
- Central 300mm drainage detail adjacent to channel to be formed using 50mm wide x 185mm deep stainless steel RHS drilled through using 12mm dia. bit at 20mm ctrs, to form a row of drainage holes at base, allowing flow of water into channel but retention of gravel behind. (See drawing.)
- Catch pit kerb to be pointed with NHL5 lime mortar.
- Channel to be filled with freely draining porous grass pavers such as Suregreen PP40 or similar approved.

3.5 LEADWORK

<u>South aisle;</u>

• Allow £250 to repair & straighten western rainwater spout.	250	00
• Leadburn creep ridges in eastern roof bay with hot work permit and fire extinguisher in attendance. Allow £250 for leadburning.	250	00

<u>Chancel:</u>

- Several panels of old lead bearing graffiti are leadburned onto the roof covering. A blister in the lower-most graffiti panel may be a result of trapped moisture expanding.

- Allow to cutting a small outlet at the base of the panel, with careful dressing back of the blister.
- Allow also to remove silicone sealant from west abutment flashing where masonry crumbly, rake out and point with lime mortar. Say 2m length for pricing purposes.

3.6 RAINWATER GOODS

- Repaint and refix CI hoppers and downpipes to north aisle. Dismantle and sandblast back to bare metal. Prime with Rust Anode cold galvanising and paint with 2 coats Brouns linseed paint in black.
- Caulk joints with red lead putty.
- Refix with driven pipe nails reusing old holes fitted with new oak plugs.

3.7 BELOW GROUND DRAINAGE

- Contractor to clean out 2 no. gullies discharging to north (to soakaway) and south (drain beneath path at porch), and ensure they are flowing freely.

3.8 WOODWORK REPAIRS

Ringing chamber south window:
Work to be done from Ringing chamber;

- Carefully remove window casements and take to bench for repair.
- Check over oak subframe.
- Allow £250 to make repairs to subframe. 250 00
- On workbench remove glazing and set aside for refixing.
- Clean down woodwork and check over for decay.
- Allow to replace bottom rails of both casements in new season oak. Allow also to scarf in new oak to bottoms of stiles of both casements.
- Check over glazing for defect.
- Allow to re-cement leadwork inside & out.
- Refix glazing, sealing all round with glaziers linseed putty.
- Paint oak (casements & subframe inside & out) with clear UV resisting Osmo oil.
- Repaint 2no. external iron bars.

3.9 REDECORATION

Vestry:

- Brush down walls to remove loose & deleterious material.
- Make good damp damaged wall plaster. Allow to replaster 3sqm in three coat haired lime plaster, 1:2.5 Lime putty : aggregate.
- Allow new plaster to dry/cure thoroughly before painting.
- Patch prime new plaster with Graphenstone ambient primer L42.
- Prime previously painted plaster with Graphenstone GCS Premium Internal Primer.
- Paint wall plaster with Graphenstone GCS Interior Premium. Allow to apply three coats "White Linen".

On A3.8 Costing Sheet
Contractor to complete the following and submit with the Form of Tender:

S of W item		***Form of Tender***
3.2	Scaffolding	£
	Scaffolding additional security	£750
3.3	Demolitions	£
3.4.1	Stonework repairs - parapets	£
3.4.2	Stonework repairs - windows	£
3.4.3	Stonework repairs - drainage	£
3.4.3	Provisional sum for Archaeology watching brief	£750
3.5	Leadwork:	£
	Provisional sum for Straightening spout	£250
	Provisional sum for Leadburning	£250
3.6	Rainwater goods	£
3.7	Drainage below ground	£
3.8	Woodwork Repairs	£
	Provisional sum for subframe repairs	£250
3.9	Painting	£
	Preliminaries, oh & p:	£
	Contingency sum	£2,500
	TOTAL:	**£**