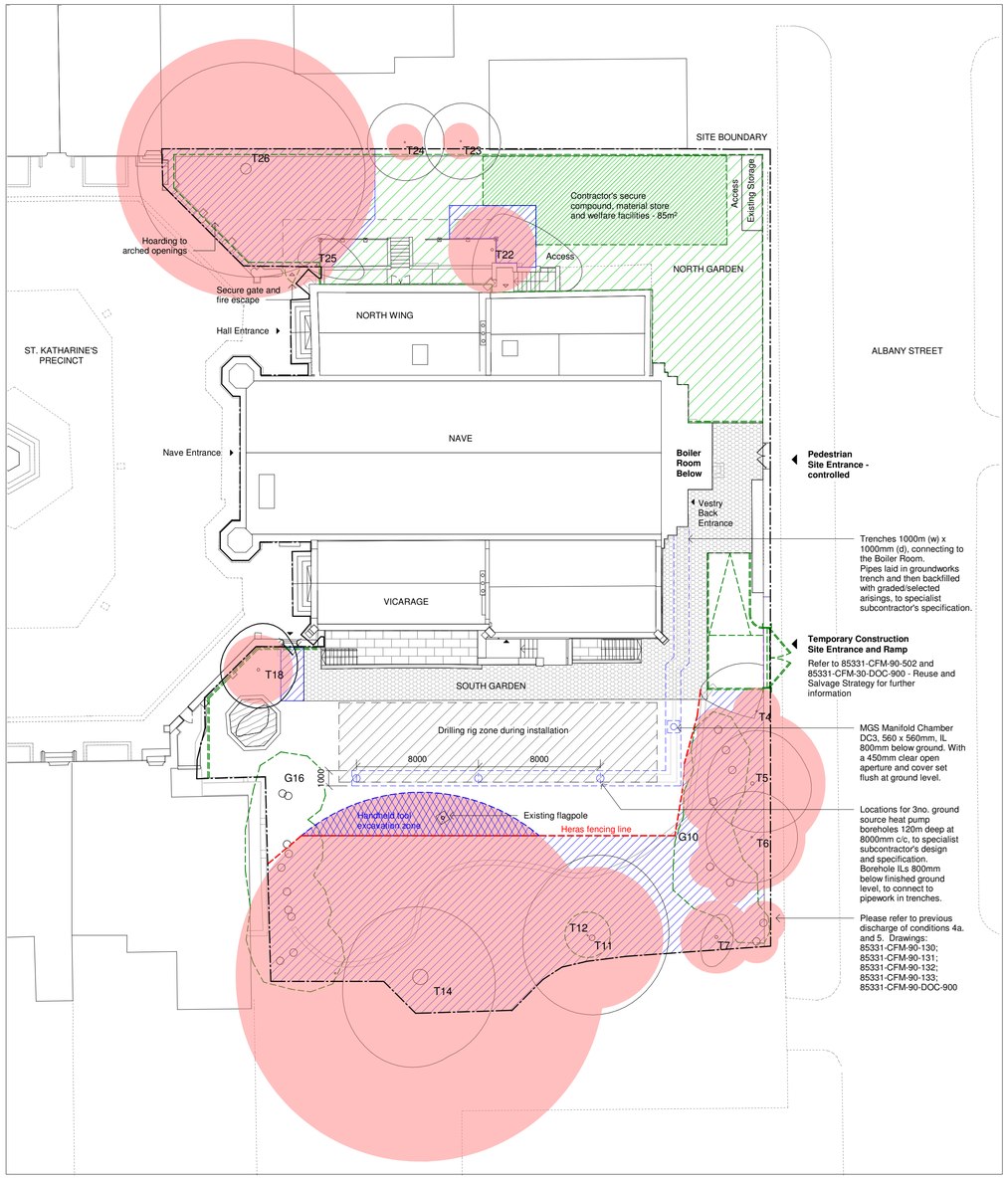
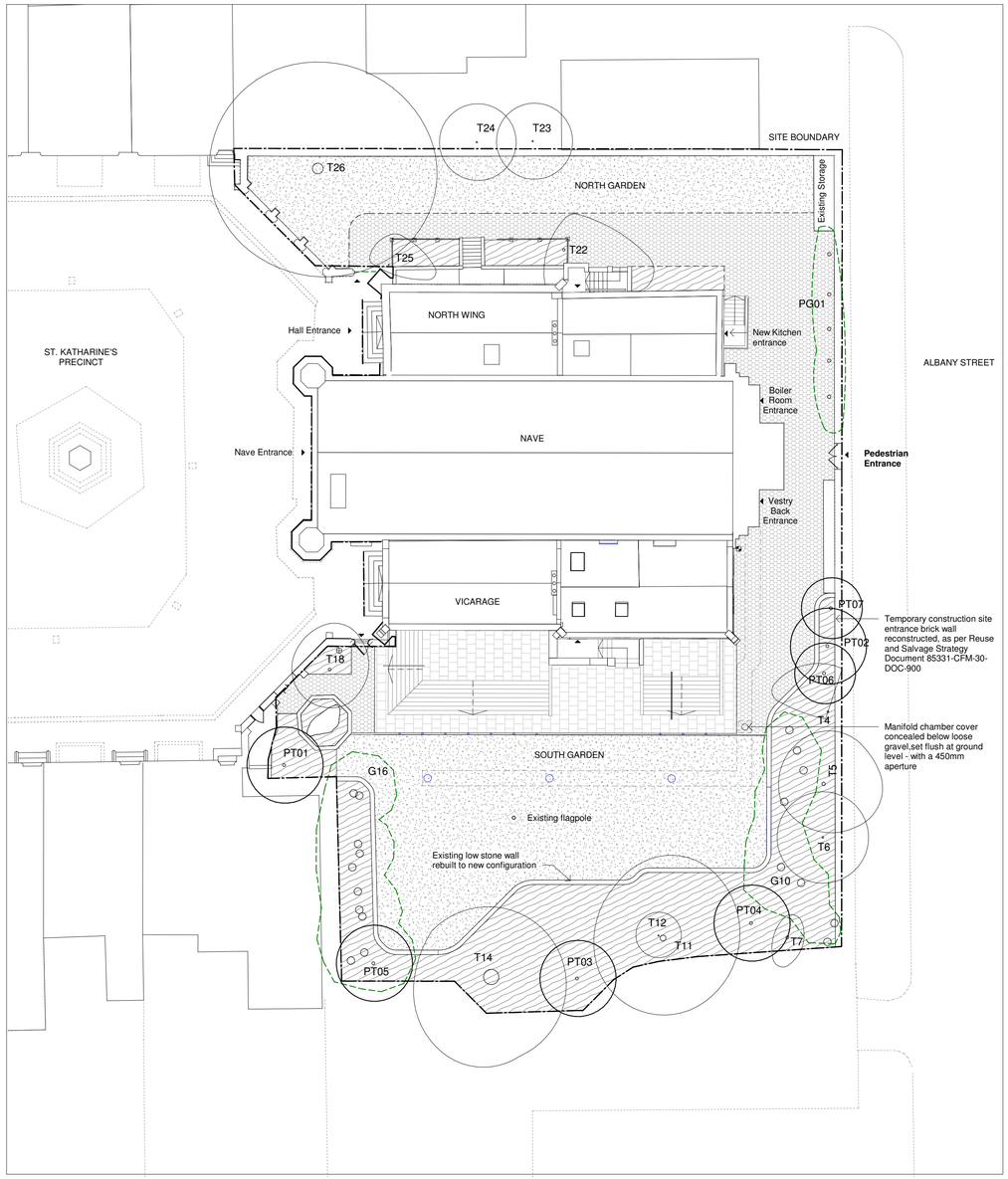


Tree Protection Plan - Borehole installation scenario
1 : 200

N.B. Existing building condition shown above due to contractor's proposed works sequencing in construction programme. Ground source heat pumps will be installed early on in the programme and the new South Garden sunken terraces will be created later in the programme.

Tree Protection Methodology During Borehole Installation:

- All Root Protection Areas have been avoided and will be protected with heras fencing, as per methodology described in previously discharged planning conditions 4a. and 5;
- Hand-dug inspection pits to 1m depth will be made prior to drilling and formation of trenches;
- Specialist drilling and ground source heat pump sub-contractors will work to a **Permit to Dig** system, which considerably minimises risks of any clashes with unforeseen obstructions. This looks to ensure drill zone is away from any unknown underground or buried services, major tree roots or other unforeseen discovery - not captured on existing surveys.
- By forming the sunken terraces later in the programme and installing the ground source heat pumps early on, this creates a greater zone for the drilling rig to operate entirely away from existing tree canopies in the South Garden.
- Please refer to specialist subcontractor's RAMS and drilling rig specification included in this planning condition discharge package.



Proposed Landscape - with ground source heat pump
1 : 200

Key

Hard Landscape

- Loose gravel surface to match existing
- Proposed limestone paving
- Plant bordering wall to match existing
- Block edging to match existing

Soft Landscape

- Existing trees/group of trees - to retain
- Proposed trees
- Herbaceous perennial planting
- Grass

GENERAL NOTES

DO NOT SCALE OFF THIS DRAWING.
ALL DIMENSIONS MUST BE CHECKED ON SITE INFORM THE ARCHITECT OF ANY DISCREPANCIES PRIOR TO CONSTRUCTION.

READ IN CONJUNCTION WITH M.E.P, S.E. AND CIVIL ENGINEER'S DRAWINGS.

CDM REGULATIONS 2015

ALL CURRENT DRAWINGS AND SPECIFICATIONS FOR THE PROJECT MUST BE READ IN CONJUNCTION WITH THE DESIGNER`S HAZARD AND ENVIRONMENTAL ASSESSMENT RECORD

TREE PROTECTION PLAN BASED ON 'ARBORICULTURAL IMPACT ASSESSMENT & TREE SURVEY'

Key

- Site boundary line
- Existing trees/group of trees - to retain
- Root Protection Area (RPA)
- Contractor's Secure Compound
- Non PPE Area
- Tree Protection Fencing - Heras Fencing (3.5 x 2.0m panels, with heavy weight footing and 2 bolted clips between each fencing panel)
- Ground Protection Mats
- Hand-held tool excavation zone (preferably compressed air soil displacement)
- Construction Exclusion Zone (CEZ)

MITIGATION

ALL EXISTING INDICATED TREES ARE TO BE RETAINED AND PROTECTED BY THE ERECTION OF BARRIERS ESTABLISHING A CONSTRUCTION EXCLUSION ZONE (CEZ) BEFORE THE START OF ANY CONSTRUCTION WORK.

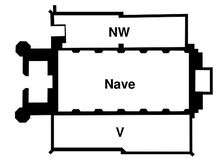
RPA'S ARE TO BE MEASURED AND MARKED ON SITE AS A CIRCLE WITH A DIAMETER 12 TIMES THE GIRTH, AS PER BS 5837:2012. ALL RPA'S TO BE SECURELY FENCED FOLLOWING GUIDANCE IN BS5837:2012, EXCEPT T14 PARTIALLY (PILING) AND T22 WHICH IS ALREADY PROTECTED BY AN EXISTING FENCE. FENCES TO BE RETAINED AT ALL TIMES, AND NOT TO BE ENTERED AT ANY TIME, EXCEPT WHEN NECESSARY FOR CONSTRUCTION PURPOSES. ALL PROTECTION FENCING SHOULD CARRY INDENTIFYING SIGNS STATING ITS PURPOSE AND PRESCRIBE ITS REMOVAL UNTIL ALL CONSTRUCTION WORK IS COMPLETE. IN ADDITION:

- NO MATERIALS TO BE STORED IN RPA'S;
- ALL WORK WITHIN RPA'S TO BE COMPLETED BY HAND, OR BY MACHINES POSITIONED OUTSIDE RPA'S';
- NO CHEMICALS, FUEL, CONTAMINATED WATER OR OTHER TOXIC SUBSTANCE IS TO ENTER OR BE ALLOWED TO SEEP INTO ANY RPA;
- NO DAMAGE TO BE CAUSED TO BARK OR VISIBLE PARTS OF TREES;
- ANY EXPOSED ROOTS TO BE IMMEDIATELY COVERED TO PREVENT DESSICATION AND RAPID TEMPERATURE CHANGES AND BACK-FILLED AS SOON AS POSSIBLE.
- NO ROOTS OVER ⌀25 TO BE CUT. ANY CUTS TO TREE ROOTS TO BE CLEAN SAW CUTS TO MINIMISE EXPOSED AREA. NO DAMAGE TO BE CAUSED TO ROOT BARK, INCLUDING ANY ROOTS OUTSIDE RPA'S;

IN THE EVENT OF ANY UNFORESEEN DIFFICULTY ASSOCIATED WITH TREE ROOTS, THE ARBORICULTURAL CONSULTANT MUST BE CONTACTED IMMEDIATELY, FOR ADVICE AS REQUIRED.

ALL TREES WILL HAVE THEIR RPA'S WITHIN SOFT LANDSCAPED AREAS. TREES T4, T5, T6, G10, T11, T14 AND G16 WILL HAVE A SMALL BRICK WALL CROSSING THEIR RPA'S. THE DEPTH OF EXCAVATION AND LONG TERM IMPACT OF THE KERB WILL BE KEPT TO A MINIMUM. PERMEABLE SELF BINDING AGGREGATE WITH MOT TYPE 1 WILL BE INTRODUCED TO ENCOURAGE WATER AND AIR TO REACH THE ROOTS AND ALLOW AERATION FOR ROOT GROWTH.

Building Key



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Rev	Description	By	Chk	Date
A	Planning Condition Discharge	HBA	PTW	21.08.19

Project
The Danish Church

Title
Landscape - Ground Source Heat Pumps
Installation & Proposed Scenarios

Project No.
85331

Status
Stage 4 - **Pre-Start**

Scale @ A1	Date	Revision
As indicated	21.08.19	A

Drawing Number
85331-CFM-90-134