ENGINEERING

Construction Surface Water Management Plan for the Proposed Phase 2 Development on Land North of St Andrews Nurseries and East of Great North Road, Sawtry

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2070 - CSWMP

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Construction Surface Water Management Plan
for the Proposed Phase 2 Development
on Land North of St Andrews Nurseries and
East of Great North Road, Sawtry

1 Introduction

1.1 MTC Engineering (Cambridge) Ltd. has been asked to provide a Construction Surface Water Management Plan in relation to the proposed Phase 2 development on Land North of St Andrews Nurseries and East of Great North Road, Sawtry, to ensure that surface water quality and quantity is managed throughout the construction process to mitigate impacts off site.

2 Site Details

2.1 Conditional planning consent has been granted for the development of a business park comprising use classes E, B2 and B8 on land north of St Andrews Nurseries and East of Old Great North Road, Sawtry under planning reference 20/02138/FUL.

2.2 A copy of the site location plan is provided in Appendix 1. Surface water drainage systems proposed at the site includes the following:

- Detention basin/pond to serve/attenuate surface water discharge from both the Phase 1 and 2 impermeable areas at the site prior to discharge.
- Permeable paving to serve private access/parking areas.
- Hydrobrake flow control to restrict surface water runoff prior to discharge.

3 Roles and Responsibilities

3.1 The Main Contractor will be responsible for the full day to day management and coordination of the site.

3.2 The Main Contractor will be provided with a copy of this method statement prior to appointment and required to adhere to this method statement under their appointment.

3.3 As part of the Main Contractor appointment they will be required to provide a copy of this method statement to all sub-contractors undertaking work at the site and ensure that all sub-contractors adhere to this method statement under their appointments.

3.4 Should any alterations/deviation from this statement be requested by the Main Contractor or any sub-contractor these will be discussed prior to appointment and only be permitted if acceptable to all relevant parties.

3.5 The Main Contractor will be responsible for assessing the work from a Health and Safety/Risk Assessment perspective, and any associated alterations thereby required to the method statement will be agreed prior to commencement of works.

3.6 Provision should be made for inspection at key stages, and on completion of construction to ensure that the system has been constructed in accordance with the approved design and specification, as a minimum inspections should be undertaken as follows:

- Pre-excavation inspection to ensure that construction runoff is being adequately dealt with on site and will not cause clogging of SuDS.
- Inspection during laying of any pipework.
- Inspection and testing during the placing of earthworks, pavement or filter materials.
- Inspection and level check of the prepared SuDS components.
- Inspection of completed SuDS.
- Final inspection before handover to ensure that all construction silt has been

removed, the final construction is in accordance with the design and there are no visible defects.

3.7 The Main Contractor will ensure that copies of adequate employers and public liability insurance certificates have been issued to the client prior to commencement of works, and ensuring that any sub-contractors are adequately insured.

4 Key Considerations Identified During Construction

4.1 Several key risks have been identified in relation to flood risk, drainage, and the environment during the construction phase of the development,and require management strategies/method statements to ensure that risks are adequately minimised.

- There is a risk associated with the potential for increased surface water runoff rates from the site during extreme rainfall events.
    - There is a risk associated with the potential for pollutants from construction material to runoff onto adjacent land, particularly during heavy rainfall.
        - Runoff from exposed ground and materials
        - Plant washing areas
        - Fuel and chemical storage/refueling areas

5 Managing Surface Water During Construction

5.1 Increased Surface Water Runoff

- The initial phase of construction works will not involve the introduction of impermeable surfaces, thus during this initial phase there will be limited surface water runoff from the site.

- The proposed surface water drainage system, including large pipes beneath the access, detention basin and flow control will be installed as part of the Phase 1 development, thus discharge can be made to this system prior to any major earthworks being completed.

- The proposed drainage systems, including pipework and permeable paving that was not constructed as part of the Phase 1 development will be constructed as early as is feasible in the construction process and before any major earthworks/ground works and before any impermeable surfacing is completed.

- The construction of the surface water drainage system prior to any major earth works and impermeable surfacing being completed will ensure that surface water discharging to the adjacent drain and sewer to the south is suitably restricted prior to discharge.

- The proposed areas to be surfaced using permeable paving are to be protected from the accumulation of silt during the construction stage, construction equipment should be kept away from these areas and work should be planned to avoid trafficking the permeable paving sub-base where possible.

- If plant is required to traffic the permeable paving sub-base then this will be covered with a protective layer of asphalt which is then cored to allow water through. The correct size and spacing of holes should be cored and they should be filled with the correct material.

- To protect the permeably paved areas, silt fences will be provided around the permeable paving where feasible, with temporary filter strips used to divert runoff away from these areas and to the surface water drainage system.

- Surface water discharge from the areas in which plant and materials are stored and surface water runoff from areas of impermeable surfacing will also be towards the surface water drainage systems via sheet flow and temporary filter drains.

- The filter drains are vegetated strips that provide an area in which surface water flow is treated prior to entering the cellular storage systems.

- The filter strips should have stable outlets before opening major areas for development.

- Inlet protection for surface water sewers should be installed as soon as the drain is functional to trap sediment on site to prevent silt building up within the proposed drainage system during construction.

- The surface water drainage system (including, basin and permeable paving) and new surfaces are to be checked and cleaned regularly throughout the construction phase.

- The surface water drainage system is to be thoroughly cleaned and rehabilitation works carried out to restore them to their design condition prior to completion. Once the permanent facilities have been demonstrated to work as envisaged, temporary drainage and sediment control measures can be dismantled.

5.2 Potential for Pollution from Materials and Plant

- All materials, plant and all fuels, oils and chemicals will be stored in an impermeable bund compound.

- Stockpiles are to be located away from on site drainage system.

- Plant and materials will only be moved from their designated storage area whilst in use

around the site, and at all times when not in use will be stored in this area.

- Materials and plant will only be ordered/delivered to the site as close as is reasonably practicable to when they are required in the construction process in order to minimise the presence of stored materials and plant on the site and thus the risk of pollution.

- Where reasonably practicable materials and plant will remain covered to prevent rainfall landing on and running off materials/plant.

5.2.1 Planting Washing Areas

- Plant and wheel washing should be in a designated area, the designated area should be tanked and should not be allowed to infiltrate into the ground. The Tanked area will be emptied of water by a tanker on a weekly basis or as required.

5.2.2 Fuel/Chemical Storing/Refueling Area

- Any fuels or liquids pollutants required to be stored at the site at any point during construction activities will be stored in appropriately sealed containers, and adequate care taken when using fuels/materials to ensure that spillages do not occur.

- Bunded fuel bowsers to be used at all times, this must be with a control 'nappy' under the inlet with pads and socks also present, with refueling to only be carried out by a designated person(s) under control of the Site Agent.

- The designated locations to refuel mobile plant is to be located at least 10m away from the watercourse.

5.2.3 Additional Measures

- Hazardous materials, if found, must be removed same day, whilst waste materials must be removed within 2 days.

- Materials will be stored securely in designated areas with protection (e.g skips to be provided with covers) to stop misplacement of materials across the site.

- Lorries are to be covered to avoid dust from aggregate deliveries or much contaminating the site.

- Spill kits are to be retained on site throughout the construction period with training provided to employees on how to use.

- The site will be managed and controlled in accordance with the Construction Phase Health and Safety Plan with monthly inspections from our H&S Consultant.

- The following list provided in Table 5.1 should be used as a basis for onsite inspections

Pre-construction checklist – managing Silt	√
Exposed soils are not washing out and causing silt problems	
Silt fences or temporary basins required to manage silt are provided where necessary	
Where SuDS are used ensure they are cleaned out	
Protection is in place to prevent silt washing into pervious paved areas	
Protection is in place for all underground storage systems and they have provision for cleaning	
A mobile silt catchment plant is necessary	
Runoff from fresh concrete is managed	

Table 5.1 Pre construction checklist for managing silt

5.3 Accidental/Unforeseen/Unexpected Impacts and Events

- In the event that any accidental/unforeseen/unexpected impact or event occurs during construction that has the potential to result in either pollution to groundwater, result in an increased risk of flooding, or cause other environmental damage all work at the site will cease immediately, with all plant and material present on site being moved to the material storage area.

- Examples of such events may include a fuel/liquid container being accidentally split resulting in spillage.

- Should any such event occur, the Mai Contractor will firstly take any reasonable action available to minimise the risk associated with the event that occurs, and secondly will immediately contact the Environment Agency and provide details of the event that has occurred to the Environment Agency, who will likely send an engineer to inspect the incident as soon as possible.

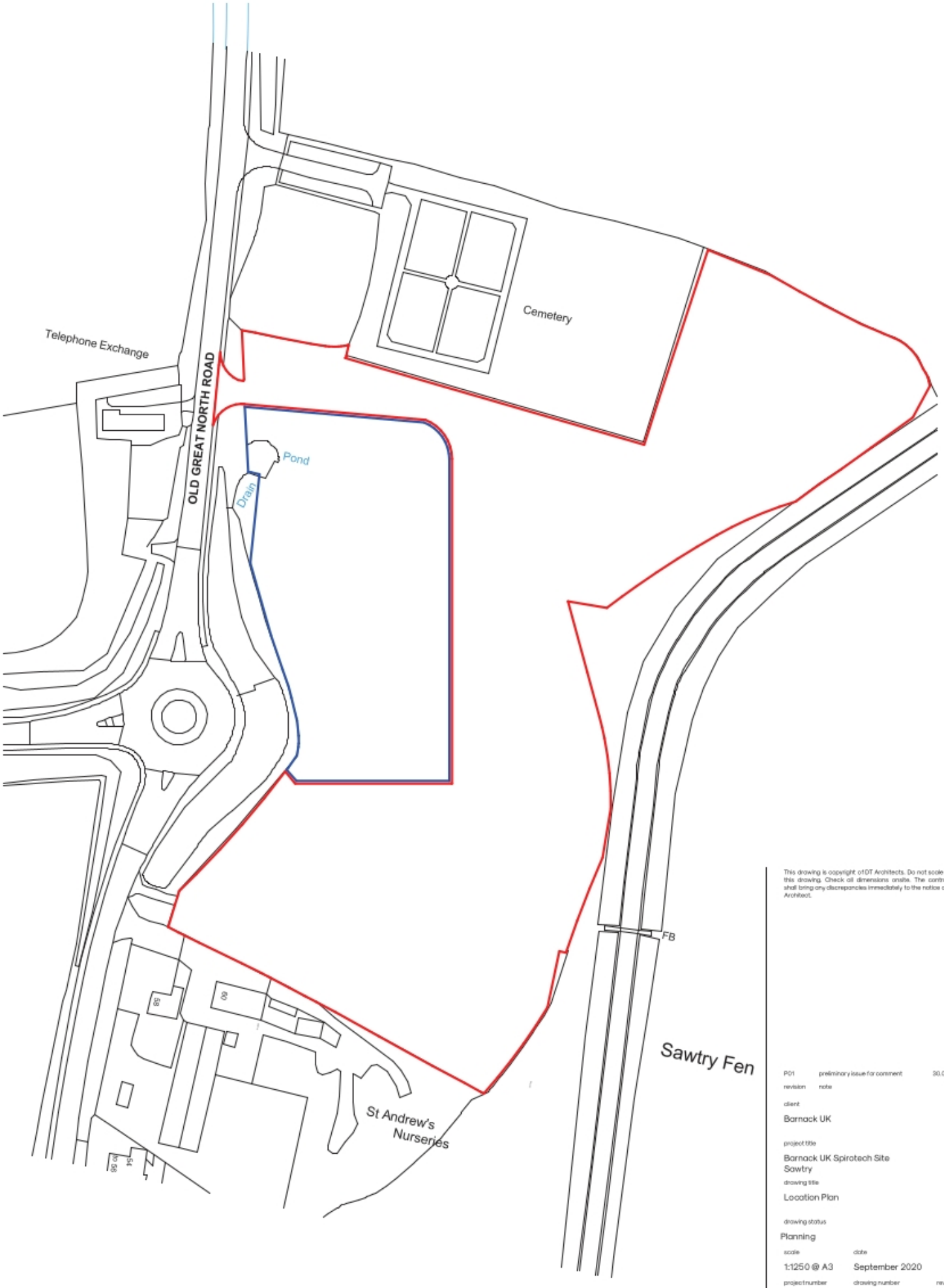
- An appropriate remedial works strategy will then be developed in consultation with the Environment Agency and will then be carried out at the expense of the Main Contractor or via their insurance. The contractor will have ensured that copies of appropriate employers and public liability insurance certificates have been issued to the client prior to commencement of works.

- Upon completion of works these will be checked by the Environment Agency and either approved or any further remedial works required agreed and undertaken.

- Work will only recommence once a cause for the accidental damage has been established, any resultant alterations to the construction method or plans have been made, and the Environment Agency have approved works to continue.

APPENDIX 1

SITE LOCATION PLAN



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revision	note	date
P01	preliminary issue for comment	30.09.20

client
Barnack UK

project title
Barnack UK Spirotech Site
Sawtry

drawing title
Location Plan

drawing status
Planning

scale	date
1:1250 @ A3	September 2020

project number	drawing number	revision
2570	AL0101	P01

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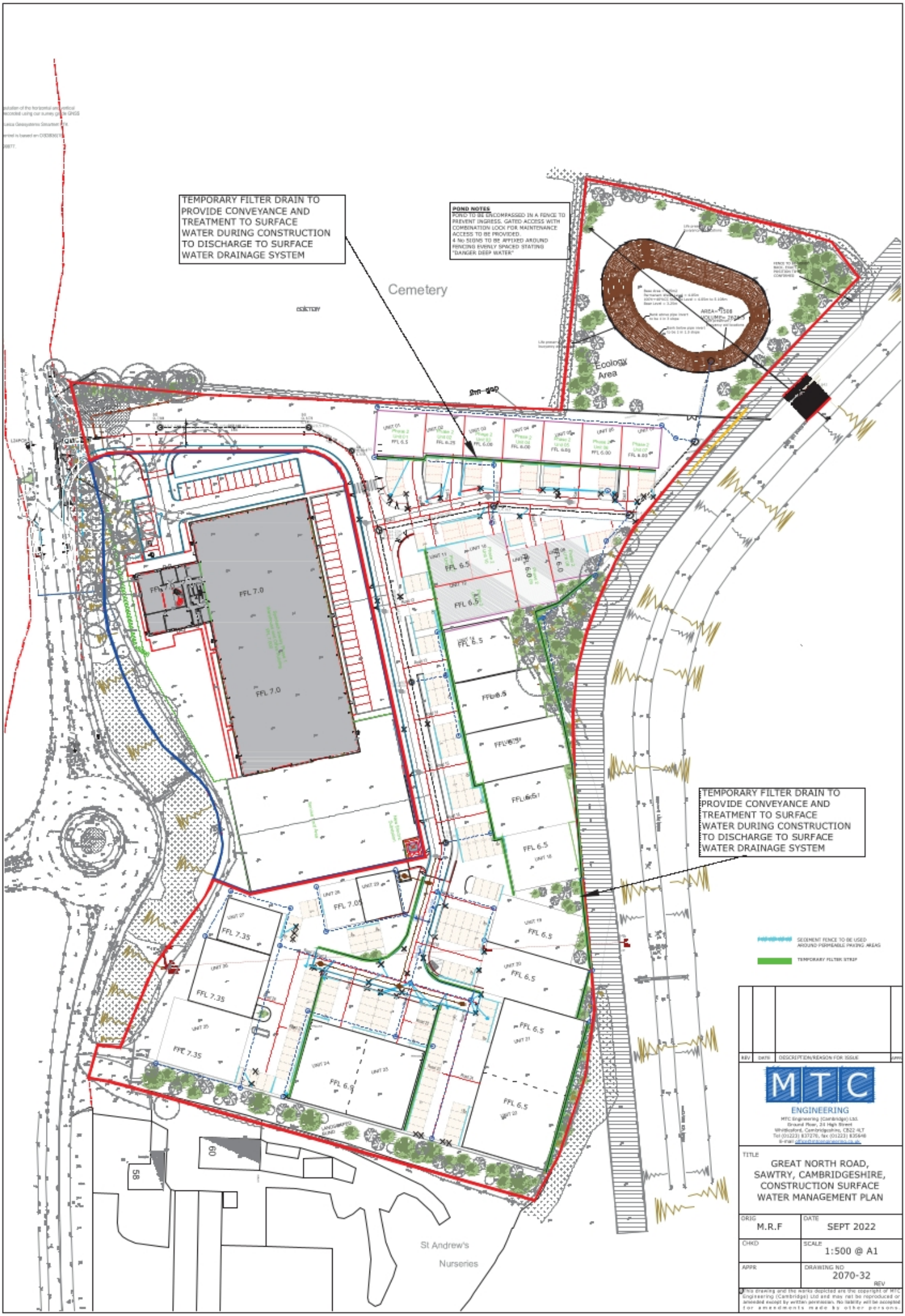
APPENDIX 2

MATERIAL/PLANT AREA PLAN


TEMPORARY FILTER DRAIN TO PROVIDE CONVEYANCE AND TREATMENT TO SURFACE WATER DURING CONSTRUCTION TO DISCHARGE TO SURFACE WATER DRAINAGE SYSTEM
POND NOTES
POND TO BE ENCOMPASSED IN A FENCE TO PREVENT INGRESS. GATED ACCESS WITH COMBINATION LOCK FOR MAINTENANCE ACCESS TO BE PROVIDED.
4 No SIGNS TO BE APPIXED AROUND FENCING EVENLY SPACED STATING "DANGER DEEP WATER"
Cemetery
Ecology Area
FFL 7.0
FFL 6.5
FFL 7.35
FFL 6.0
TEMPORARY FILTER DRAIN TO PROVIDE CONVEYANCE AND TREATMENT TO SURFACE WATER DURING CONSTRUCTION TO DISCHARGE TO SURFACE WATER DRAINAGE SYSTEM
SEDIMENT FENCE TO BE USED AROUND PERMEABLE PAVING AREAS
TEMPORARY FILTER STRIP
60
58
St Andrew's Nurseries
REV
DATE
DESCRIPTION/REASON FOR ISSUE
APPR
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TITLE
GREAT NORTH ROAD, SAWTRY, CAMBRIDGESHIRE, CONSTRUCTION SURFACE WATER MANAGEMENT PLAN
ORIG
M.R.F
DATE
SEPT 2022
CHKD
SCALE
1:500 @ A1
APPR
DRAWING NO
2070-32
REV
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