



LIMEGROVE HOUSE
CAXTON ROAD
BEDFORD
MK41 0QQ

ISO:45001:2018
ISO 14001:2015
ISO 9001: 2015

RAMS

OFFSITE DRAINAGE WORKS

PROJECT:	Project Birchwood, Land North of Melbourn Science Park
ADDRESS:	Cambridge Rd, Melbourn, Royston SG8 6EE
CLIENT:	Melbourn Science Park Limited
REFERENCE:	B1910 – TF – REP - 020

INTRODUCTION

This Principal Contractor's Method Statement is intended to detail the scope of work and the methodology for the installation of the offsite foul water drainage for Project Birchwood. It outlines the sequence of operations, programme of works and risk mitigation principles. SDC intend to undertake these works in Autumn 2021, subject to authorisation by Anglian Water and the Lead Local Drainage Authority.

This operation is challenging because it involves the installation of a foul water drainage pipe through a recreation ground which is used by multiple sports teams and is open to unhindered access by the public. This increases the risk of nuisance to these users and more importantly a potential safety hazard for users / trespassers into these work areas.

The first step of risk mitigation is to design out as much of the hazard as possible. Following numerous risk mitigation workshops, TTP have instructed SDC to proceed based on a shallower pumped drainage solution. This has three key benefits:

1. Much shallower drainage pipework, not reliant on gravity, meaning the installation process is quicker and safer to execute.
2. Drainage pipework can be laid more flexibly, meaning the encroachment on the existing football pitch is minimised.
3. The installation of a pumping chamber within the curtilage of the Birchwood site means that the capacity of the chamber can be utilised for construction-phase effluent management, meaning there is less pressure on the installation programme.

This method statement sets out the intended process for safely installing the drainage pipework through the Parish Council's property.

1. DESCRIPTION OF WORKS

Installation of foul water drainage pipework from the Project Birchwood outfall position to an existing Anglian Water pipe within the Parish Council Recreation Ground. **Access to the location will be via the Birchwood construction site, not The Moor.**

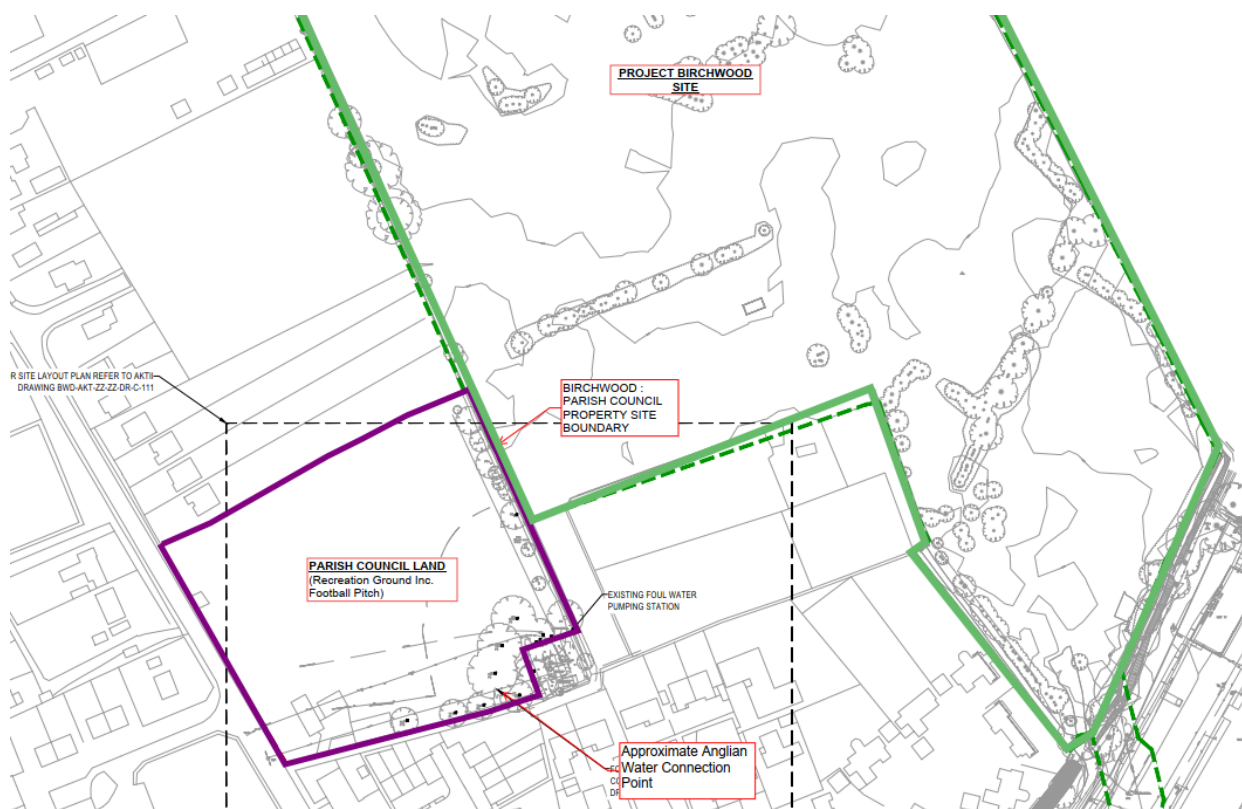


Figure 1 - Overview of Properties and Connection Point

The works are to be carried out by SDC's subcontractor, Oliver Connell & Son who will adhere to the contents of this works methodology when producing detailed works proposals.

The pipe will be brought under the existing swale at the Western extent of the Birchwood site and diverted across the recreation ground before entering a receiving chamber and dropping in to the Anglian Water primary main.

2. RELEVANT DRAWINGS / DESIGN

The detailed design is currently under development and is subject to approval by Anglian Water. SDC's engineer, Scott, White & Hookins, are developing the design based on the appended information as follows:

BWD-SWH-ZZ-XX-DR-D-0532 (P02) – Off-Site Drainage Scheme: Pumped Solution

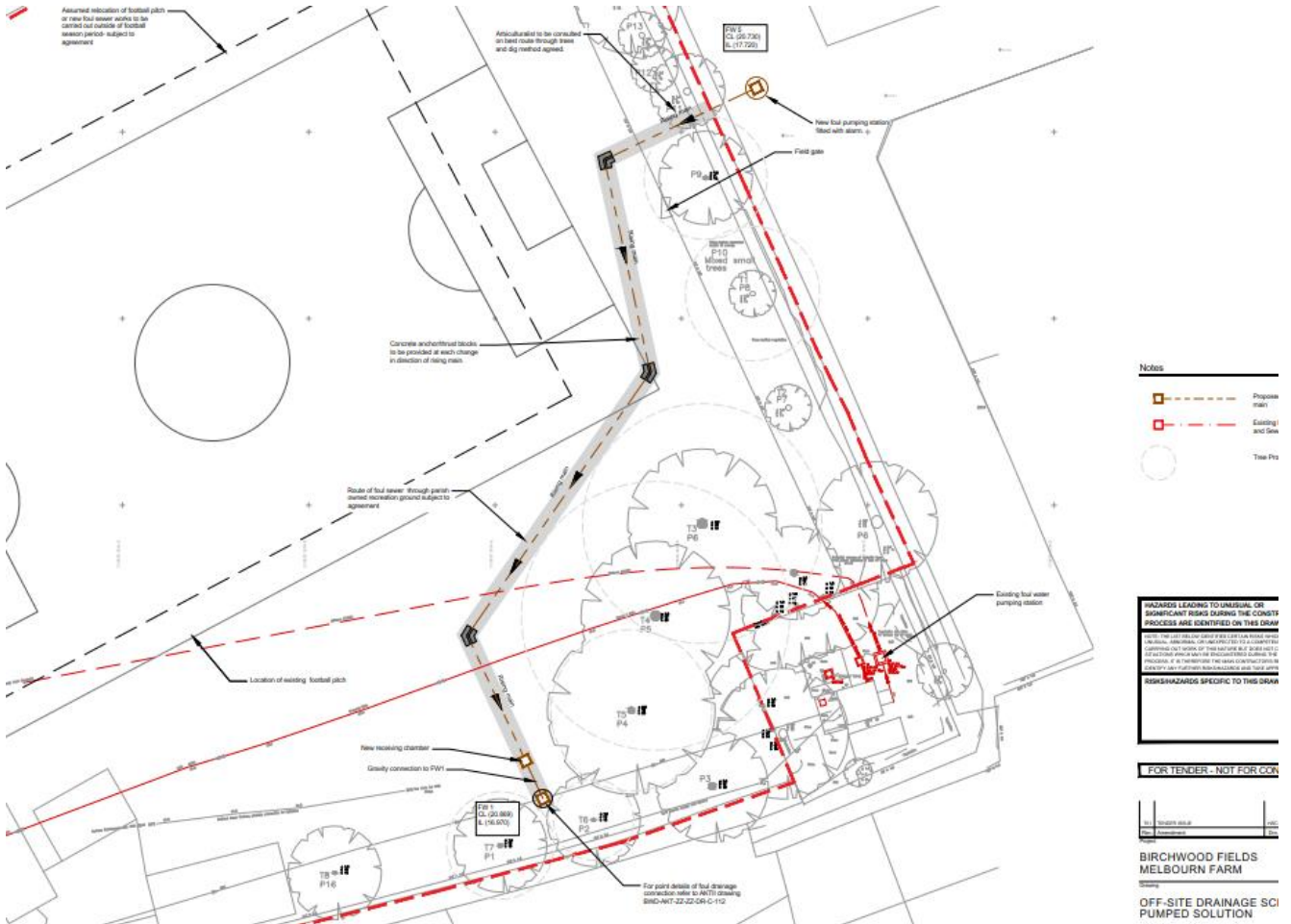
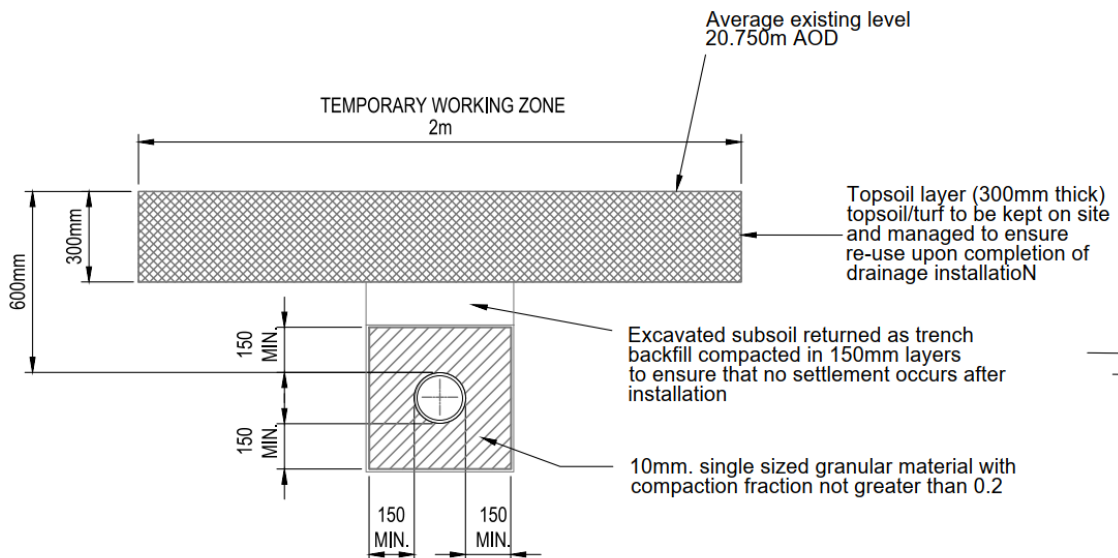


Figure 2 - Extract from plan drawing showing worst-case impingement on to the football pitch.

The design attempts to install the pipe with the minimum encroachment on the football pitch position.

The following section detail demonstrates that the crown of the pipe will be 600mm below the pitch surface. Previously this was more than 3M below the surface. This helps us to reduce the width of the working area and therefore the consequential damage to turf and improve the programme period:



The chosen sequence (see below section) minimises the nuisance period near the football pitch and would hopefully mean not having to move the pitch at all following further clarification with the parish council.

3. TRAFFIC MANAGEMENT PLAN & LOGISTICS ARRANGEMENTS

The following key principles for accessing the works and moving materials will be followed.

- **All access, deliveries, plant and personnel movements will be strictly from the Birchwood site via a culvert over the existing swale. No access will be required from The Moor, with the exception being during the overpumping period during the final week of access (see below phasing plan)**
- The site working hours as outlined within the planning permission (ie 0800-1800 mon-fri) will strictly be followed. No Saturday working will be implemented if this clashes with the football season/fixtures.
- A temporary culvert will be installed over the existing swale at the boundary, consisting of a 300mm concrete pipe backfilled with engineered stone installed on a geotextile membrane to permit crossing of the swale for pedestrians and vehicles. A temporary culvert license / permit will be obtained from the lead local drainage authority for this.



Fencing:

The following two fencing types will be used – these are shown on the phasing plans in section 4.

1 – Heras Fencing

This fencing will be used during temporary applications and is used for the boundary of the Birchwood Project Site. This is noted in blue on the sequence plans:



2 – Water-Filled Barriers with Mesh Fence Panel

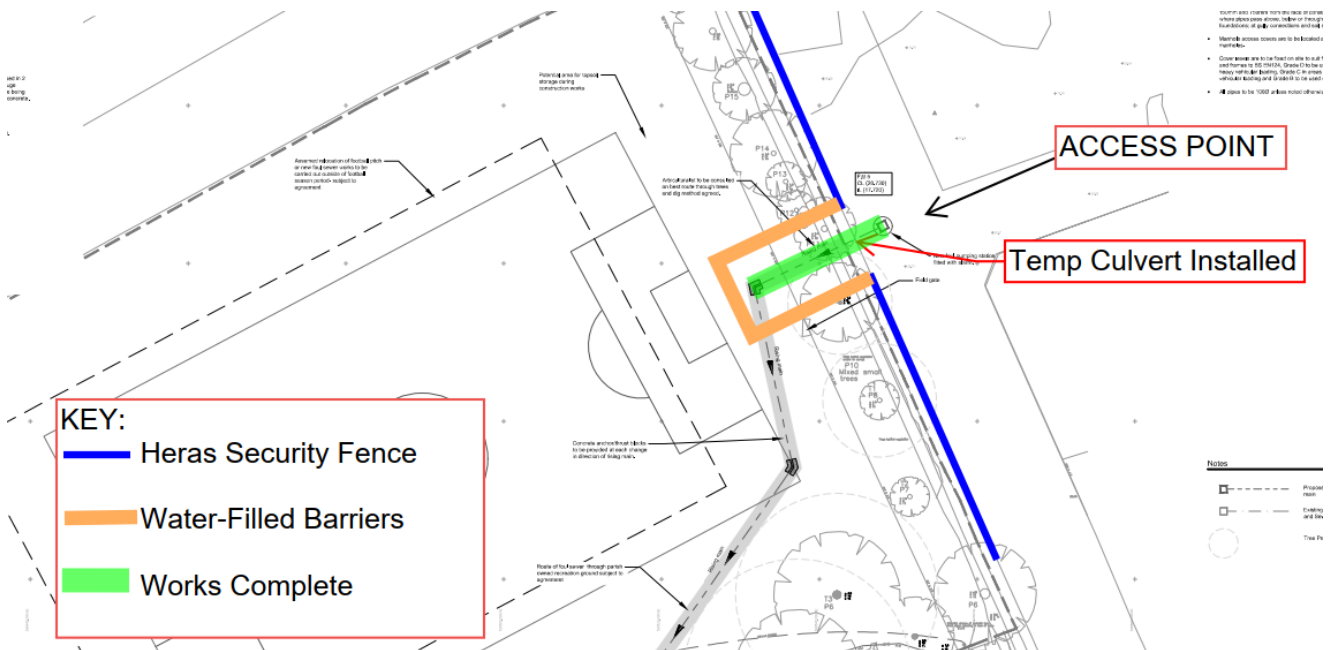


4. SEQUENCE OF WORKS / PHASING PLANS

The following week-by-week sequence outlines the intended process for the installation of the foul water pipe.

WEEK 1 – Offsite Establishment and Crossing

- Undertake condition survey of the works footprint, swale and the trees at the boundary and submit to TTP and Parish Council for record purposes.
- Establishment of the culvert crossing over the swale and installation of a haul road to the crossing point.
- Vacuum excavation of the pipe crossing point around the existing trees to prevent disturbance to the existing tree roots
- Inspection of the tree roots with SDC arboriculturist to agree the precise location to take the pipe across. Provide evidence of this to the Parish Council for record purposes.
- Survey the position of the football pitch and review the precise line of the drainage pipe to remove it from the football pitch if possible.



WEEK 2 – Continuation of Drainage Installation – Optional adjustment of football pitch position

- **Relocation of the football pitch to the hatched position is not required.**
- Careful removal of existing turf to enable quick reinstatement.
- Installation an adequate amount of drainage pipework and thrust blocks to permit full reinstatement of the turf by the end of the week and pull the barriers back away from the football pitch before the weekend.
- Relocation of the fencing off the football pitch if needed, depending on the outcome of engagement with the Parish Council.
- **IMPORTANT:** We intend to reduce the working area where it crosses the football pitch down to 1.2m width and we intend to replace the turf removed within 36 hours and re-roller to prevent damage to the football pitch. A specific detail is shown below the plan.

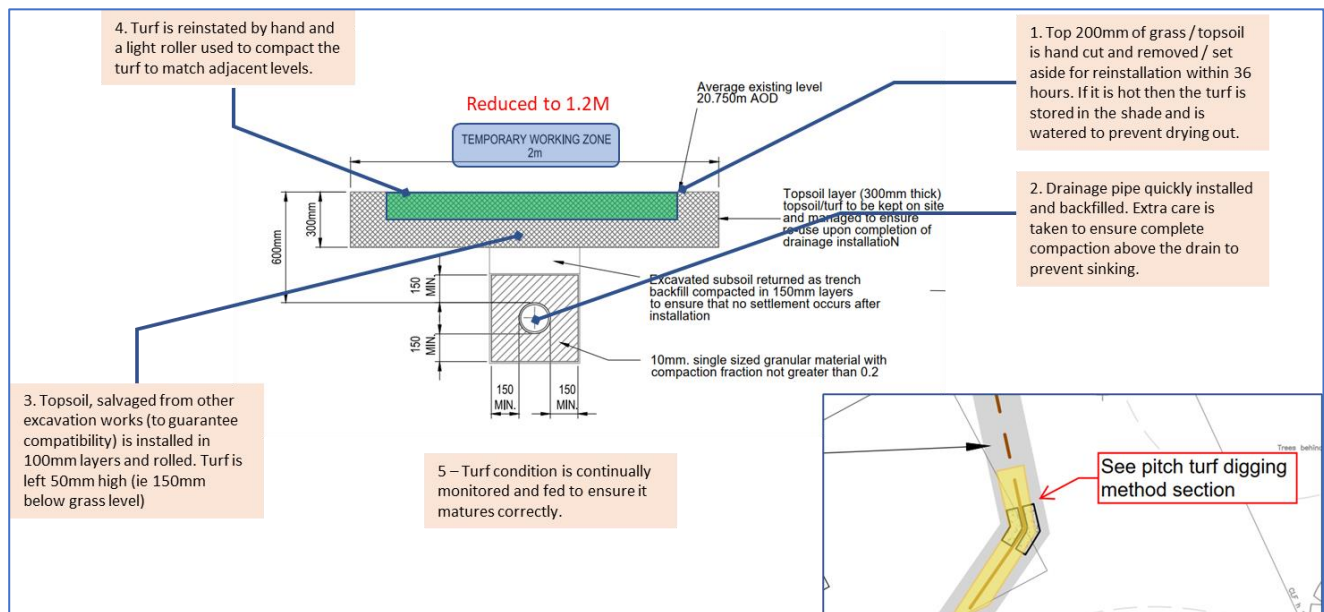
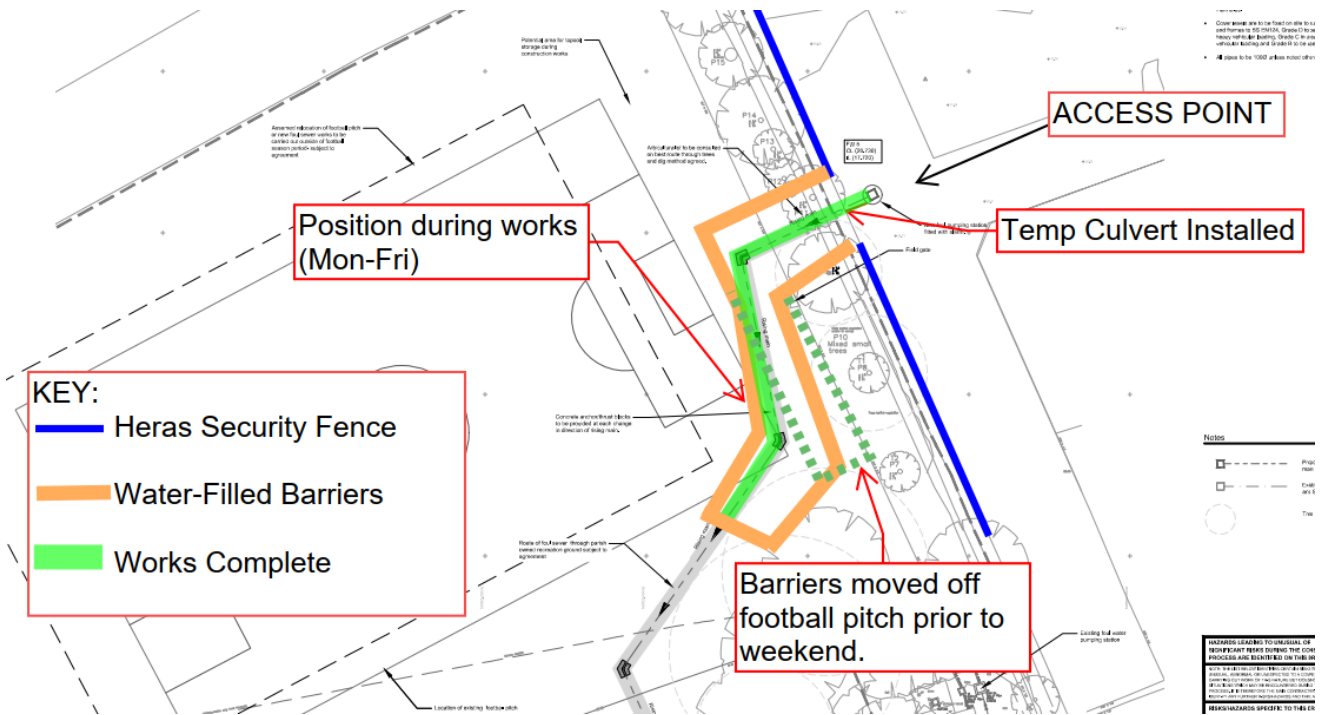
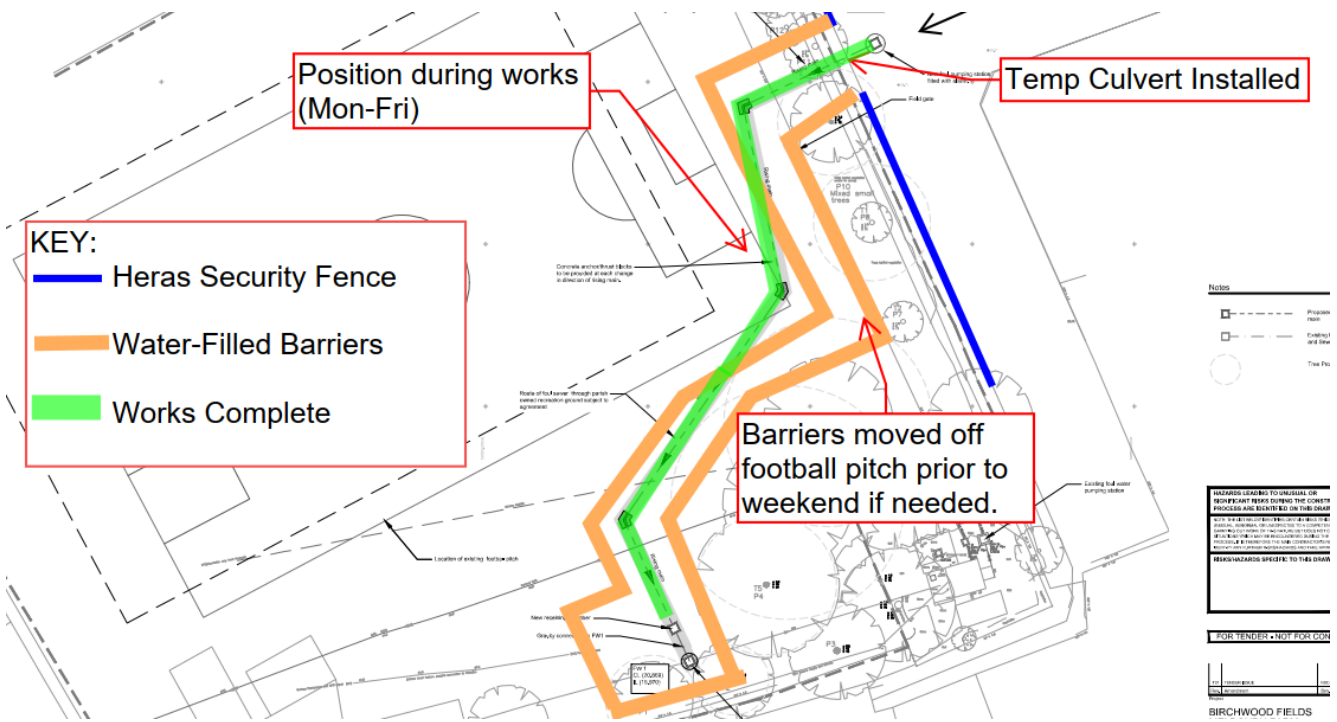


Figure 3 - Detail for where the pipe crosses the football pitch.

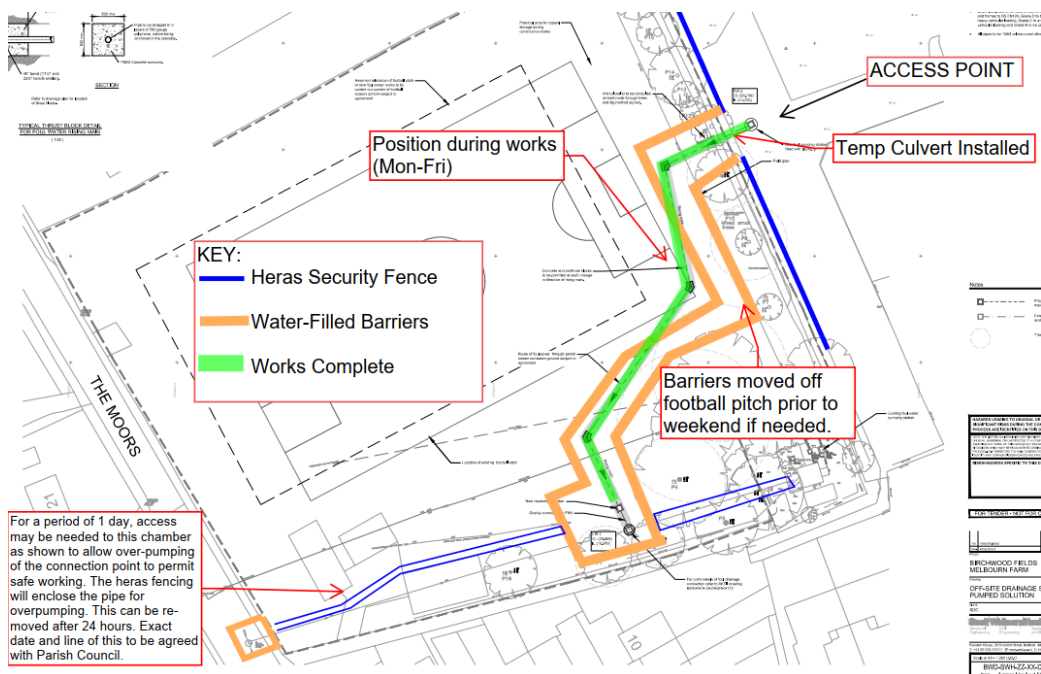
WEEK 3 – Completion of Primary Drainage Runs and Establishment of Chamber / Connection Site

- Most of the drainage installation will be concluded this week and a small satellite site will be established around the connection point and manhole as shown.



WEEK 4 – Connection to the Anglian Water Network

- The connection process is subject to Anglian Water's approval and so the precise programme for this phase cannot be guaranteed, however the construction of the two manholes will be undertaken during week 4 and an over-pumping arrangement, approved by Anglian Water and agreed logistically with the Parish Council will need to be implemented for a period of 5 days during the break-in to the Anglian Water pipe. SDC propose that these works are undertaken during the half-term at Melbourn Village College to minimise disruption. SDC's traffic management plan for The Moors will be submitted to the Parish Council prior to implementation to obtain comment.



WEEK 5 – Demobilisation

- Removal of all fencing and re-statement of topsoil and turf, returned to the condition found and recorded within the condition survey.
- CCTV survey of the installed mains and approval from Anglian Water that works have been completed.

5. REINSTATEMENT CONDITION

SDC are very aware of the importance of retaining the integrity of the existing turf / surfacing. We will salvage all of the topsoil during the works and reinstate to ensure compatibility. New turf will be laid wherever required (no seeding). Should turf need establishment time, following demobilisation, stake and mesh fencing will be installed around these areas and they will be watered and maintained by SDC while the turf is established. We will reinstate this to the satisfaction of the parish council.

6. SUPERVISION

These works will be supervised by:

- Philip Moore – Site Manager - Contact Number: 07500 840958
- Tom Fenner – Project Manager – Contact Number: 07831 165880

Our subcontractor, Oliver Connell & Son will have a competent site team, however Phil and Tom are the primary points of contact for the works.

7. MONITORING ARRANGEMENTS

SDC will issue a weekly situation report to Councillor Steve Kilmurray and Claire Littlewood via email during the works to provide an update on progress.

8. PLANT & EQUIPMENT

Due to the shallow nature of the excavation, we will be using small excavators to undertake these works. They will be accompanied by a dumper and a roller to ensure adequate compaction of the subsoil prior to reinstatement of the surfacing.

9. SAFETY OF THIRD PARTIES

Safety of third parties is the principal objective here. We believe we have designed out a significant portion of the risk by reducing the duration and extent of the works. Notwithstanding this we have produced the following summary risk assessment to confirm how this plan addresses the safety of third parties:

Hazard Description	Potential Consequence	Mitigation Measure
<u>Persons injured trying to access the work area to retrieve footballs etc.</u>	Falling from height or cuts and abrasions caused by stepping on hazards with inappropriate footwear.	Fencing to be water-filled (immovable) fence with mesh panel over. This creates a vision line over the fence to aid hazard perception. SDC have considered putting mesh over the site when not in operation however this may encourage dangerous climbing. Plant and equipment to be brought back into the main site area out-of-hours.
<u>Turf reinstated incorrectly, causing musculoskeletal injuries when playing sports.</u>	Sports Injuries	Turf to be reinstated to the satisfaction of the parish council. The reinstatement time and permitted re-use is dependent on the season and the constraints of the fixtures etc and needs to be considered with the Parish Council.
<u>Damage to trees</u>	Trees dying or becoming unstable.	The drainage run avoids the root protection areas for the trees. SDC will engage the

		services of an arboriculturist to verify our intended drainage route on site prior to commencement.
<u>Traffic nuisance when accessing manhole on The Moor</u>	Traffic Accident	Agree the principles of accessing this chamber with Anglian Water and install Chapter 8 compliant barriers and signage in accordance with the National Road and Streetworks Act.
<u>Fencing is insecure and blows over in the wind</u>	Unauthorised access into a dangerous environment.	Water-filled barriers selected because they are immovable.
<u>Collision with fencing during football game</u>	Personal injuries	Water-filled barriers are selected because they are safer than Heras fencing if collided with and less likely to cause abrasions and personal injury. We will keep the barriers as far away as possible from the perimeter of the pitch.

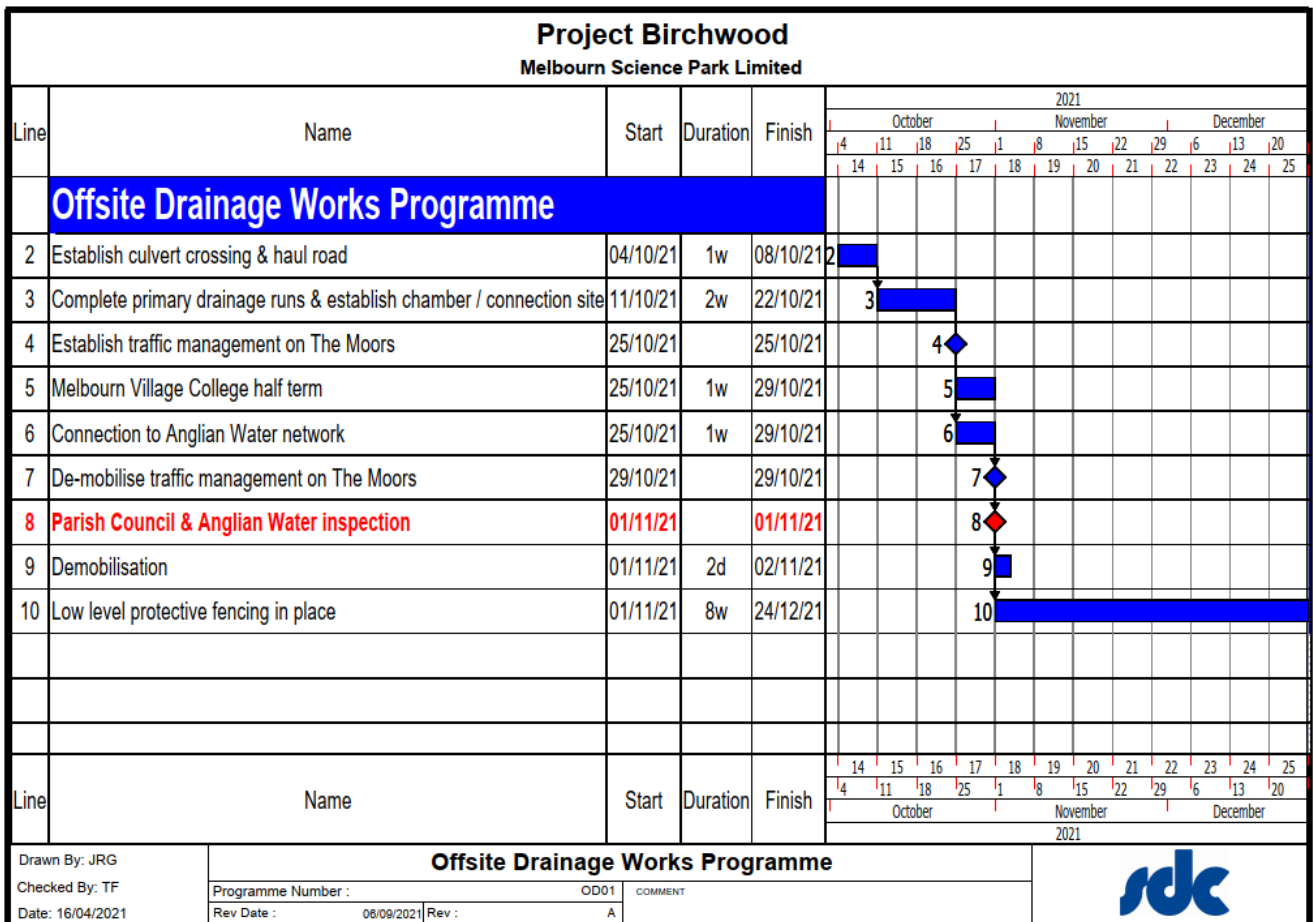
10. EMERGENCY PROCEDURES

In the event of an emergency only, SDC propose that the emergency services are directed to this work location via the exit from The Moors. Access to the field is via a padlocked gate and SDC will obtain a key for this gate, only to be used in the event of emergency.

11. PROGRAMME

The works duration is outlined in the above sequence of operations (section 4) which show a duration of 4-5 weeks for the works.

The timescales are not project-critical. That is because we can use the pumping station to facilitate the construction phase and hence, we can be flexible around the football season to minimise nuisance caused. We would welcome a programme discussion with the Football Club and Parish Council to finalise this. See below a suggestion of the proposed programme following approval of the RAMS.



Method Statement Written By: Tom Fenner

Date: 20th September 2021

Issued For: Use

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