

Project Details

The site is located on North Selby Mine, new Road Deighton, York. The postcode of the site is YO19 6EZ and the approximate center of the site at National Grid Reference SE 64804 44263. The site size is 9.6 ha and all the site areas are located in Flood Zone 1. The site is currently developed area. The proposed development includes the redevelopment of the former North Selby Mine site to a holiday leisure development comprising of a range of touring caravans and static caravans with associated facilities. Most of the site areas are paved with Concrete.

- Impermeable Area (Caravan + Access Road) : 8937 square meters
- Permeable Parking : 2100 square meters
- Total Impermeable area : 3000 square meters

Drainage and SUDS Strategy

As stated in CIRIA SUDS Manual 2015 the objective of sustainable drainage systems is to maximize the benefits and minimize the negative impacts of surface water runoff from developed areas. By applying SUDS methodology, storm runoff from the site is controlled to ensure that flow rates in downstream watercourses are not increased and the water is appropriately treated to remove any contaminants, thus ensuring the quality of the water in the natural environment downstream.

Drainage Hierarchy

Drainage Hierarchy	Y/N	Comment
1. Infiltration to maximum extent	Y	Soakaways is proposed for the existing buildings and proposed caravans and access road drainage into the French drains then infiltrating into the ground.
2. Discharge to Surface Waters	Y	Existing drainage system at the existing parking area and access road discharged into the brook.
3. Discharge to Surface Water Sewer	N	None available
4. Discharge to Combined Sewer	N	None available

Storm Water

- Key aspects proposed:
 - (i) In the existing storm drainage system, some of the information are missing according to the CCTV Records information and so all those depths of manholes and pipe sizes are assumed.
 - (ii) The sizes of PN-28-S and PN-25-S are assumed 225mm diameter verified clay pipes.
 - (iii) The depths of MH-61-S, MH-62-S, MH-63-S, MH-81-S, MH-83-S and MH-86-S are assumed.
- The new connection pipes are proposed to connect with the proposed soakaway system.
- It is proposed to drain into the gravel strip from each caravan.

- The Water from the Access Road shall also be discharged into the gravel strip in each side of the road.
- Runoff of the Existing Buildings shall be collected from the existing rainwater pipes and discharged into the proposed soakaway systems.
- The existing drainage system around the existing car park area and main access road would also be reused and then discharge into the brook at the western boundary of the site.
- Attenuation storage tanks are provided as marked on plan to reduce flooding.
- A Hydrobrake will control to 237.50 I/s at MH-95-S.
- A Weir is provided at MH-59-S to reduce flooding.
- Apart from the existing drainage around the existing buildings, main access road and car parking, all the existing drainage system shall be removed.
- Proposed private parking spaces shall be surfaced in permeable block work filtering runoff and receiving flows from driveway.
- Type 3 Sub-base attenuation, shall be used to receive runoff for all storms up to 1 in 100-year +40% Climate Change.

Storm drainage system performance:

Attenuation Volume Provided	295.80m ³ (50%)
181.58m ³ (Soakaway) + 200m ³ (Proposed storage tank) + 209m ³ (Existing Tank)	
Attenuation Volume used in 1 in 30 yrs storm event	:395.19m ³ (67%)
Attenuation Volume used in 1 in 100yrs storm event	:584.47m ³ (99%)

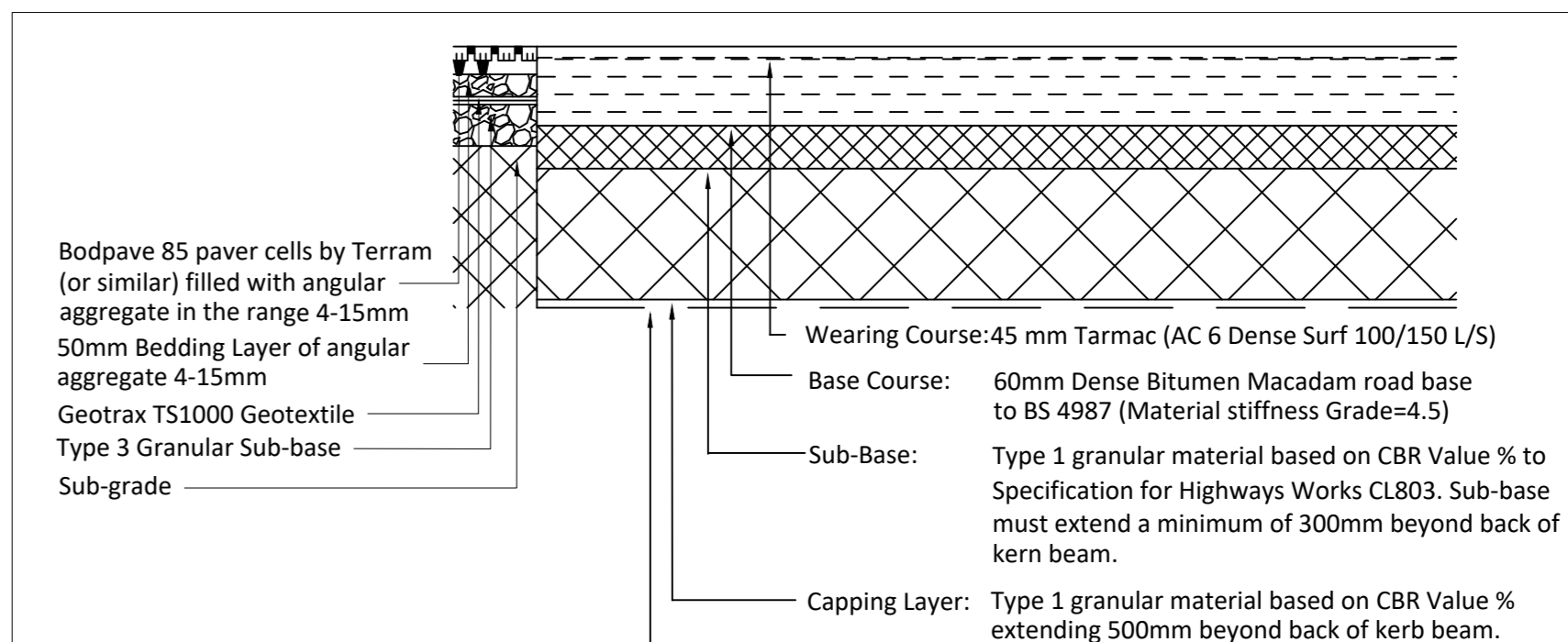
Management & Maintenance

The private drainage systems shall be managed by the Plot Owners for this development. The maintenance activities listed below are considered to be the basic tasks necessary to keep the site drainage systems working at optimum efficiency, which is necessary to ensure that they have capacity to deal with extreme / unusual events. Other activities, such as litter removal / repairs etc. will also be required.

Area	Maintenance Activity	Frequency	Responsibility
Hard-Surfacing & Drainage Building Roof Drainage	Inspection of manholes/Chambers Roof Gutters to be cleared debris CCTV/letting of Sewers Inspection and cleaning of flow control Cleaning of below ground pipe work Repair to Sewers	Recommended every 5 years Recommended every 2 years Recommended every 10 years Annually Recommended every 10 years As Required	Site Owner Site Owner Site Owner Site Owner Anglian Water Site Owner
Foul Drainage	CCTV/letting of Sewers Concrete paved areas to be swept and de-waxed Cleaning of Gullies Periodic sweeping to remove debris, leaves, etc	Recommended every 2 years As required during Spring and Summer months Recommended every 2 years Every 2-4 weeks during autumn	Site Owner Highway
Development Site Authority Access Road			

Key

- EF-EDGING OF FOOTPATH
- Proposed Permeable Paving
- Proposed Grass Area
- Proposed Gravel Strip Area
- Existing Tarmac Access Paving
- Proposed Tarmac Access Road
- Existing Private Storm Water Manhole
- Existing Private Surface Water Pipeline
- Proposed Soakaway System
- Proposed Private Surface Water Pipeline



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Notes

1. Do not scale this drawing.
2. All dimensions are in millimeters unless stated otherwise.
3. This drawing to be read in conjunction with all other relevant drawings and specifications.
4. All proprietary items to be installed in strict compliance with manufacturers instructions and recommendations.

STANDARD DRAINAGE NOTES:

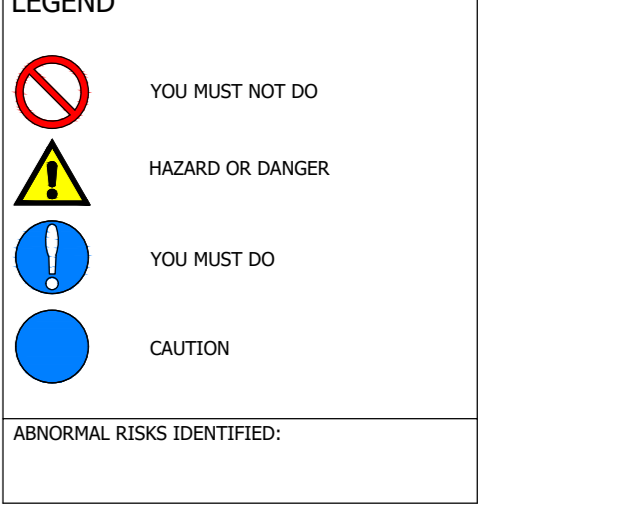
1. Except where specifically shown otherwise all below ground pipes / connections shall be 100mm dia PVC (to BS 4600) or VC (to BS 5481) with flexible joints and laid to minimum falls of 1 in 40, except where connected to WC when falls may be 1 in 80.
2. All gravity pipe runs to be tested to a standing head of 1500mm head of water above the invert at the head of the pipe run (but not exceeding 4000mm at the lower end).
3. For details of bed and surround requirements refer to long-sections and standard details. In all other situations provide 150mm of 10mm single-sized rounded gravel bedding and surround.
4. Except where specifically shown otherwise, pipes to be a minimum of 900mm below roads/driveways and 800mm below gardens/fields.
5. Ventilating pipes to be provided at the head of each drain and to any branch longer than 6m where a single appliance is connected, or 12m where a group of appliances is connected.
6. Step-ions shall not be fitted in any chambers unless specified otherwise.
7. Manhole/Gully covers shall be regulated to suit finished levels and crossfalls.
8. All proprietary items to be installed in strict compliance with manufacturers instructions and recommendations.
9. Drains passing beneath buildings to have minimum 100mm granular fill or flexible filling around pipe. Where the pipe crown is within 300mm of the underside of the slab, pipe shall be encased in concrete integral with the slab.
10. Drains passing through walls below ground level to have minimum 50mm clearance all round and opening in walls to be masked all round with rigid sheet material to prevent ingress of fill or vermin. Openings in walls for pipes shall have concrete lintels to support wall construction above.
11. Unless stated otherwise, pipes to be 100mm Diameter.

STANDARD ROADS / FOOTPATH NOTES:

1. Existing structures to be broken out to minimum 450mm below top of finished surface level. Existing footpaths to be broken out and rubble and existing subbase to be removed off-site.
2. Subgrade to be proof rolled with one pass of a smooth-wheeled roller having a mass per M-width of roll of not less than 2,100-kg or a Vibrating Roller having a mass per M-width of roll of not less than 700-kg or a Vibrating Plate Compactor having a mass per m² of not less than 1400-kg. Any soft spots shall be removed and replaced with Type 1 compacted in layers not exceeding 150mm thickness.
3. All formations are to be treated with an approved herbicide before placing sub-base material on a geotextile separation membrane (Terram 1000 or similar approved).
4. All sub-base material is to be non-frost-susceptible. All concrete to be sulphate resisting.

CONSTRUCTION DESIGN AND MANAGEMENT REGULATIONS 2015

THE CONTRACTOR'S ATTENTION IS DRAWN TO THE ABOVE REGULATIONS WHICH ARE ANNOTATED ON THE DRAWING AND EXPLAINED IN THE ASSOCIATED DESIGN RISK REGISTER.



PO3	Updated Site Layout Plan	EP	15.03.23
PO2	Amended Storm Water System	EP	23.01.23

Client: **Regent Parks**

Project: **Selby Park**

Storm Water Drainage Plan

Job No	22121
Drawing No	22121-012
Status	Preliminary
Scale	1:500@A0
Date	09-01-2023
Project Engineer	TBP
Checked By	TBP
Approved By	



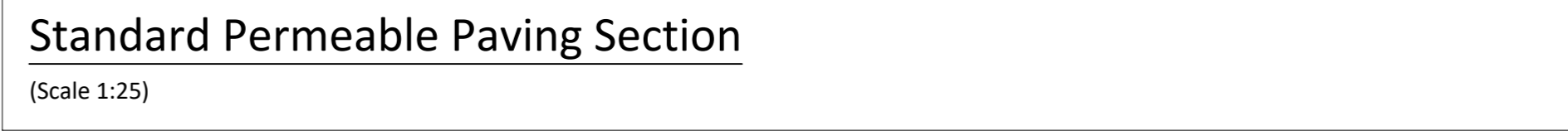
4 Angel House, Eastgate, Whittlesey Peterborough, PE7 1SE 07961 783825

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CBR of Subgrade to be tested in four locations across the site. Thickness of Sub-base and Capping Layer thickness shall be determined from table below. 6F2 or Type 3 granular material to Specification for Highway Works CL803 and compacted in accordance with Table 6/4. Sub-base must extend a minimum of 300mm beyond back of kerb beam.

CBR Value	Option 1: Sub-base only (No Capping)	Option 2: 100mm Sub-base plus Capping as below
15% and greater	150	-
10% to 14%	170	-
9%	180	-
8%	190	-
7%	200	-
6%	220	-
5%	250	250
4%	275	300
3%	-	400
less than 2%	-	600

Note: Subgrade to be proof rolled and any soft spots replaced with 6F2 material. Where sub-grade is frost susceptible as tested in accordance with Clause 602.19 SHW the Sub-base layer shall be increased to produce minimum total carriageway depth of 450mm. Sub-base and Capping Layer not to be laid in layers greater than 250mm thick. Where Geotextile is laid on Formation the Capping Layer thickness may be reduced by 100mm



Storm Water Drainage Plan

(Scale 1:500)