WILLOWGARTH BALANCING POND

BALANCING POND AND ASSOCIATED DRAINAGE SYSTEM

DESCRIPTION OF THE DEVELOPMENT AT WILLOWGARTH

The construction of 97 dwellings with associated access, parking and landscaping.

BARNSLEY MBC PLANNING REFERENCE: - 2015/1134

DATE APPROVED: - 11/04/2017

CONTEXT

This Management Plan has been prepared by Saul Construction Ltd (T/A Saul Homes) and Higham Property Management Ltd. in response to Condition 10 included in the Planning Approval referred to above which stated:-

In connection with condition 15 of Outline Planning Permission 2012/0537 a long term management plan for the proposed balancing pond and drainage system, management responsibilities and maintenance schedule should be submitted to and approved by the Local Planning Authority prior to the occupation of any of the houses in the development.
***Reason: -** To ensure proper drainage of the area in accordance with CSP40*

MANAGEMENT PLAN

Responsibility

The management of the Balancing Pond is the responsibility of Higham Property Management Ltd (Company Reg. No 05635113) who are also responsible for the management of all communal areas covered by the Maintenance Charge levied on each property owner.

A service level agreement between Saul Construction Ltd and Higham Property Management will establish the standard of the work required and will include any timescales, although the intention is to be based more on observation at regular intervals than a set maintenance schedule. However, an emergency repair procedure will be included.

Objectives

1. Utilise landscape features to retain the surface water for a 1 in 100 year event plus the impact of climate change within the development area
2. The prevention of pollution and contamination, especially by intercepting silt and cleaning runoff from hard surfaces
3. Provide an amenity for the local community

4. Encourage wildlife - the intention is to consult with BMBC with regard to any measures that may encourage wildlife e.g. postponing or reducing the frequency of grass cutting

Specifically re Willowgarth

1. An attractive balancing pond will be constructed – the location as shown on the attached plan
2. The balancing pond is constructed of 150mm topsoil over 500mm puddle clay.
3. It is not a complicated construction consisting of a chamber, manhole cover, feed in pipework with soakaways.
4. One of the principles adopted for the pond is easy maintenance
5. The Willowgarth Balancing Pond will be unlined and will have banks of a varying profile. It is not designed to hold water permanently and will be dry some of the time.
6. A location plan of the Balancing Pond is attached, showing available access

The Maintenance will comprise of:-

1. **Regular Care** – This is , litter collection (Monthly), grass cutting (Monthly in growing season) sweeping permeable areas (Monthly) and the checking/monitoring of inlets and outlets to the pond to ensure there are no blockages (Monthly)
2. **Occasional Tasks** – The control of pond vegetation (Annually) and the removal of any silt build up (Quarterly)
3. **Repair/Remedial Work** – Where and when necessary due to "slumping" in the ponds sides, erosion, accidental damage, vandalism, and silt build-up
4. **Planned Maintenance**

Planned Maintenance

1. The SuDS principles will be followed
2. Specification – Per the Maintenance Plan
3. Schedule of Work – Per the Maintenance Plan

The Maintenance Plan Principle

The purpose of the Maintenance Plan is to ensure all those involved in the maintenance and ongoing operation of the SuDS system understand its functionality and maintenance requirements in terms of supporting long-term performance subject to the design criteria incorporated in its design.

The main sewers will be the responsibility of Yorkshire Water Authority (YWA) after a 12 month maintenance period and are the subject of a Section 104 Agreement.

Until adoption by YWA the sewers will be maintained by Saul Construction Ltd through Higham Property Management Ltd

The Maintenance Plan for the Willowgarth Balancing Pond follows recommended practice by YWA and will be facilitated by Higham Property Management Ltd. :-

The Maintenance Plan:-

- The maintenance regime will be relaxed with emphasis being on regular observation with work being done as and when necessary rather than to a set timetable. Experience shows that this reduces maintenance costs and performance is not compromised with no increase in failures.
- The Willowgarth Balancing Pond will be unlined and will have banks of a varying profile. It is not designed to hold water permanently and will be dry some of the time.
- The Maintenance Plan is to ensure the drainage system works in practice and does what it is supposed to achieve. This will include verifying flow as confirmed by the engineer, along with sub-catchments, SuDS components, flow control features and outfall arrangements and the visual and biodiversity aspects of a scheme as these can easily be compromised by inappropriate maintenance.
- The side component of the system, to be maintained by Higham Property Management Ltd., consists of the balancing pond, the inlet structure and the overflow correction pipe to the adopted sewer system
- A list of work to be undertaken will comprise mainly of regular care, occasional tasks and remedial work. Details of the maintenance requirements for each SuDS element are provided in the SuDS Manual. Maintenance requirements for proprietary systems are as per the manufacturer or supplier recommendation.
- The maintenance specification dictates to Higham Property Management Ltd. how the work should be carried out, the materials to be used and the standard of work required.
- The maintenance schedule of work is –

Monthly – Litter Collection, Grass Cutting (March – October). The grass in the dry basin will be at about 4" high (this should serve as a deterrent to children playing in the dry basin and act as natural filtration to prevent the silting of downstream watercourse), Sweeping Permeable Areas. Monitoring Inspections

Quarterly – Removal of silt build up (The design incorporates a dispersion of the silt rather than it being concentrated in one area) this is a preventative

measure and significant build-up of silt is not anticipated. "Before and After" photographs are to be taken.

Annually – Control of pond vegetation, the dry pond to be inspected to identify any "slumping" in the ponds sides

The schedule will change as inspections advice of changes to the maintenance requirements also:-

- Contact sheet and any additional guidance notes – e.g. The Health & Safety File will be in the site compound but once the site is complete reference will be to a contact number 01226 707090..
- Photographic records of the inspections. Photographs will be taken quarterly; which will highlight long-term changes that might not be apparent on a single visit, especially where inspections are carried out by different members of the maintenance team.

Maintenance Inspection Checklists

The attached inspection schedule is for the Willowgarth site and is subject to review by Higham Property Management Ltd.in the light of practical experience.

The inspections will be undertaken by appropriately qualified and competent staff

The objective of this checklist is to:-

- Confirm that appropriate routine maintenance of the system is being undertaken
- Confirm that the system is continuing to operate effectively
- Identify any remedial works required
- Provide a consistent record of the condition and performance of the system.
- Identify potential problems

It is not a checklist of maintenance items but it is a checklist to facilitate the consistent inspection of the condition of the system and is intended to be used by Higham Property Management Ltd or by a sub-contracted organisation for the long-term maintenance of the SuDS system as a recording process.

It is anticipated that a more detailed schedule will be developed as more experience of the site is gained

Topographical Survey

A Topographical Survey will be undertaken on completion of the pond construction to confirm that it has been constructed to the designed levels and sufficient volume is provided. This is to ensure water enters the basin and does not flood elsewhere

Landscape & Ecology Management

This Management Plan is prepared to complement all other landscape and ecological plans for the whole development with the objective of proving coordinated benefit.

WILLOWGARTH BALANCING POND

BALANCING POND AND ASSOCIATED DRAINAGE SYSTEM

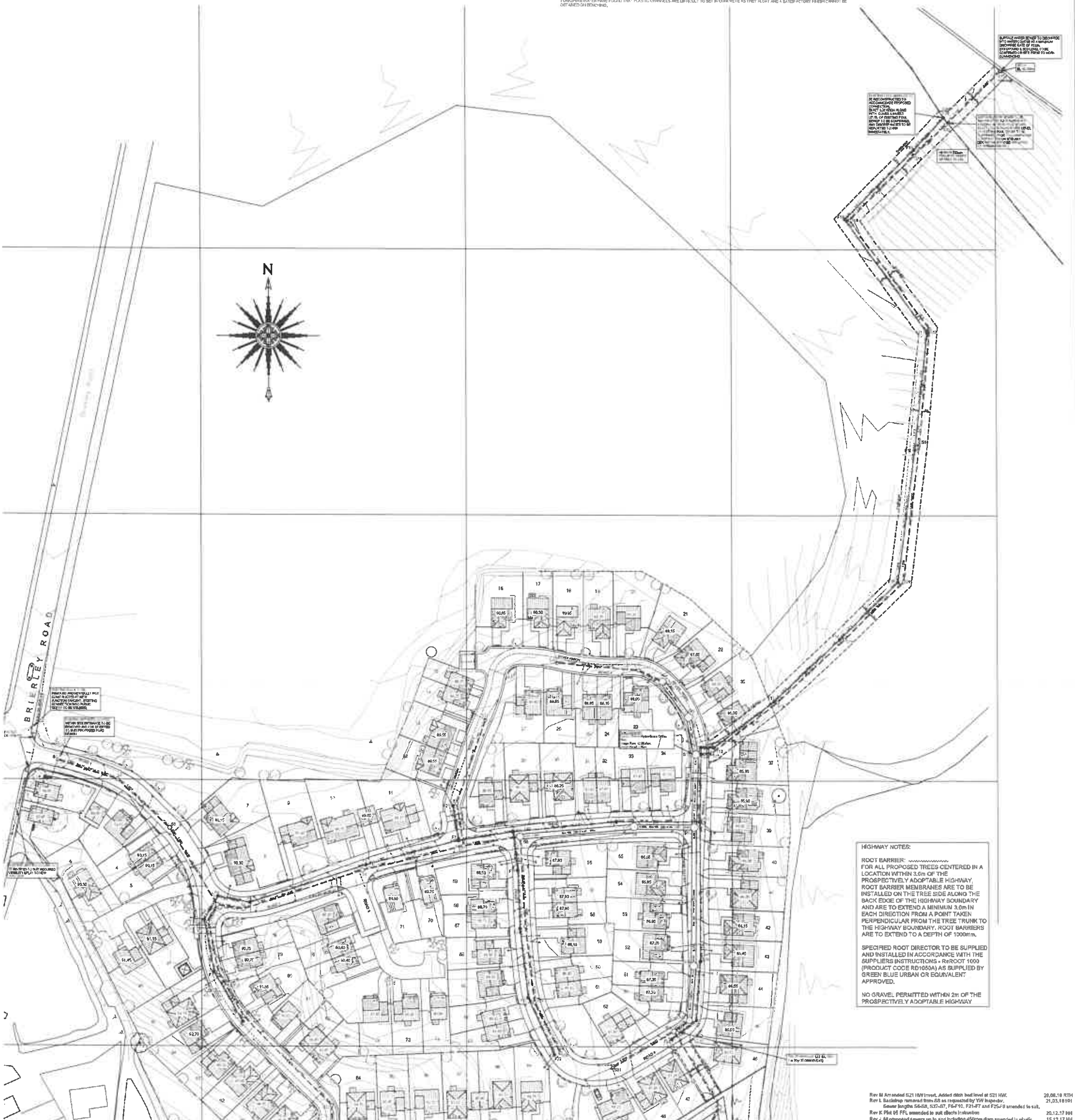
INSPECTION SCHEDULE

REF	ASPECT	POSSIBLE CAUSES	ACTION
BALANCING POND & ASSOCIATED AREA AND STRUCTURES Embankments, Crest , Base and lead up to the pond			
1	DISLODGED SURFACE PROTECTION	ACCIDENTAL DAMAGE VANDALISM EROSION OF BANKS ICE EROSION OF SUPPORTING MATERIAL ANIMAL S FLOOD	Inspection twice per year Repairs as necessary
2	SURFACE CRACKS	SETTLING OF FOUNDATION SUBSIDENCE LOSS OF VEGETATION PROTECTION FLOOD	Inspection twice per year Repairs as necessary
3	SURROUNDING WET AREAS	BANK EROSION DAMAGED PIPES LOW SEEPAGE FLOW	Repairs as necessary Sweeping once per month Inlets & Outlets checked quarterly Removal of silt quarterly

4	EXCESSIVE VEGETATION	POOR MAINTENANCE	Grass Cut once per month Monthly visual check of all vegetation Control of vegetation once per year Appropriate disposal of waste
Inlets, Outlet, Channels & Sediment bays			
5	CONTAMINATION	INTERCEPTORS BLOCKED	Clear interceptors out twice per year
6	EROSION TO CHANNELS & OVERFLOWS	BLOCKED PIPES & CHANNELS DAMAGED PIPES FROST DAMAGE SILTING SUBSIDENCE BREAKDOWN OF MATERIALS	Annual Inspection by Engineer Repair & Clean as necessary Consider camera check
7	SILT BUILD UP		Silt to be removed annually during the construction phase Once construction ended silt should be removed every two years
8	NO OUTFLOW	SILT/DEBRIS BUILD UP STRUCTURE FAILURE	Inspection twice per year to clear out debris from outlets Daily checks during exceptional wet weather to ensure oulet is not blocked
9	PONDING	NATURAL DEBRIS FLY TIPPING	Monthly Inspection to clear any blockages Daily checks during exceptional wet weather to ensure oulet is not blocked

YW REF: H-3-263-820

ALL PIPEWORK 300mmØ OR LESS TO BE POLYPIPE PVC 'POLYSEWER'TO WIS 4-35-01. PIPEWORK TO BE LAID IN MAXIMUM 3m LENGTHS AND THEY MUST BE MARKED & STAMPED WITH 'POLYPIPE PVC 'POLYSEWER' TO WI 4-35-01'.
ALL PIPEWORK 375mm DIAM OR GREATER TO BE CONCRETE CLASS 120, 54kN/m MINIMUM CRUSHING STRENGTH.
ADOPTABLE SEWERS TO BE LAID IN CLASS 'S' GRANULAR BED & SURROUND.



HIGHWAY NOTES:

ROOT BARRIER:
FOR ALL PROPOSED TREES CENTERED IN A LOCATION WITHIN 3.0m OF THE PROSPECTIVELY ADOPTABLE HIGHWAY, ROOT BARRIER MEMBRANES ARE TO BE INSTALLED ON THE TREE SIDE ALONG THE BACK EDGE OF THE HIGHWAY BOUNDARY AND ARE TO EXTEND A MINIMUM 3.0m IN EACH DIRECTION FROM A POINT TAKEN PERPENDICULAR FROM THE TREE TRUNK TO THE HIGHWAY BOUNDARY. ROOT BARRIERS ARE TO EXTEND TO A DEPTH OF 1000mm.

SPECIFIED ROOT DIRECTOR TO BE SUPPLIED AND INSTALLED IN ACCORDANCE WITH THE SUPPLIERS INSTRUCTIONS - ReROOT 1000 (PRODUCT CODE RD1050A) AS SUPPLIED BY GREEN BLUE URBAN OR EQUIVALENT APPROVED.

NO GRAVEL PERMITTED WITHIN 2m OF THE PROSPECTIVELY ADOPTABLE HIGHWAY

Rev M Amended S21 HW Invert. Added ditch bed level at S21 HW. 20.06.18 RTH
Rev L Backdrop removed from S8 as requested by YW Inspector. Sewer lengths S6-S8, S27-S7, F6-F10, F21-F7 and F25-F8 amended to suit. 21.03.18 HH
Rev K Plot 95 FFL amended to suit clients instruction 20.12.17 HH
Rev J All proposed sewers up to and including 450mm diam amended to plastic to suit clients instruction 15.12.17 HH
Rev H Overflow to detention basin amended to suit YW comments. FFL to plot 81 amended to suit clients instruction. Ramp crossing details amended and highway tree root barriers shown where necessary to suit BMBC requirements. 11.12.17 HH
Rev G Sewers 300mm diam or less replaced with plastic to suit clients instruction. SWS outfall amended to suit YW comments 15.11.17 HH
Rev F Note added to site entrance works, tactile paved crossings added to on-site, footpath to all ramp crossings amended to suit BMBC comments. Plot levels amended to suit clients instruction. Drainage channels added to driveways. 06.11.17 HH
Rev E 1st Lateral Manholes and FFL's amended 26.10.17 HH
Rev D Pond levels and flow control device amended. 10.10.17 HH
Rev C updated to suit latest planning layout. Road and sewer design amended to suit BMBC Highways and Yorkshire Water comments. 05.10.17 HH
Rev B House types revised to suit client 05.05.17 MD
Rev A Road and sewer details added 11.04.17 MD

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Client
SAUL CONSTRUCTION

Project
WILLOWGARTH SCHOOL, GRIMETHORPE

Detail
MAIN ROAD AND SEWER PLAN

PRELIMINARY ISSUE

Dwn	Chkd	Date	Scale	Dwg No.
MD		Mar'17	1:500@A0	E14/5015/04M