

CI876/RBG/20250096

24th July 2025

PROJECT REF: Land at Barnhill Street/Raby Street Moss Side, Manchester

BLUE & GREEN INFRASTRUCTURE STATEMENT

I. INTRODUCTION

- 1.1. Shepherd Gilmour Infrastructure Ltd (SGi) has been engaged by Caddick Construction/Mosscare St Vincent's Housing Group Limited to prepare a Blue & Green Infrastructure Statement in support of a Full Planning Application submission for Land at Barnhill Street/Raby Street Moss Side, Manchester.
- 1.2. The Blue and Green Infrastructure Statement outlines how the proposal aligns with the National and Local Policies regarding sustainable urban development, specifically the enhancement and integration of blue and green infrastructure, as required by the Manchester Core Strategy (Policy EN9 & EN14), NPPF and best practice in sustainable urban drainage and climate resilience.
- 1.3. The development seeks to deliver an integrated drainage strategy and multifunctional green infrastructure that enhances the biodiversity, manages surface water and supports the city's resilience to climate change.

2. EXISTING & PROPOSED SITE DESCRIPTION

- 2.1. The proposed development site is located just off Moss Lane East, Manchester, and area characterised by urban development with limited existing green infrastructure. Currently the site consists of grass field covering the central and northern part of the site. However, the historical maps show the site being previously developed with residential and commercial buildings. Therefore, the site is classed as Brownfield. The southeast parcel of the site being built over with the residential houses with associated footpaths and garden areas.
- 2.2. The client's proposals are for residential apartments with associated infrastructure and soft landscaping. The six residential blocks vary from 10 to 6 storeys and townhouses (Block F) are proposed to be 2 to 3 storeys.

3. PLANNING POLICY CONTEXT

- 3.1. The development proposal responds to the following key planning and policy drivers:
- Manchester Core Strategy (Policy EN9 Green Infrastructure, Policy EN14 Flood Risk and SuDS)
 - Greater Manchester Spatial Framework and GM Green Infrastructure Framework
 - Manchester surface Water Management Plan,
 - DEFRA Non-Statutory SuDS Technical Standards

4. BLUE & GREEN INFRASTRUCTURE OBJECTIVES

- 4.1. The proposed development aims to:
- Integrate the Sustainable Urban Drainage (SuDS) solutions to manage surface water and reduce the flood risk;
 - Enhance biodiversity and urban greening through native planting, green roofs and tree planting;
 - Improve microclimate and urban resilience through shade and green cover;
 - Provide accessible and attractive outdoor space where appropriate for community and ecological benefit.

5. DRAINAGE STRATEGY OVERVIEW

- 5.1. The Drainage Strategy design is based on SuDS principles to manage surface water at source, mimic natural drainage process and provide co-benefits to biodiversity and amenity.
- 5.2. Key features:
- Surface Water Attenuation: designed to ensure agreed post-development run-off rates are not exceeded, with appropriate climate change allowance of 45% and in 1 in 100 year storm even capacity.
 - Permeable Surfacing: Where appropriate (e.g. parking bays), to reduce runoff and promote infiltration.
 - Rain Gardens: for constrained urban conditions, providing water cleansing and improving biodiversity.

- Below Ground Attenuation Tanks: for constrained urban conditions, providing storage where surface solutions are limited.
- Flow Control Device: used to regulate discharge into the public sewer in accordance with United Utilities and LLFA requirements.

6. BLUE & GREEN INFRASTRUCTURE INTEGRATION

- 6.1. The drainage design is integrated with a broader Blue & Green Infrastructure strategy to create a multifunctional, climate-responsive environment:
 - Urban Greening and nesting features – integration of planters/green roofs using native and pollinator-friendly species
 - Tree Planting – root-friendly SuDS-compatible tree pits used to combine stormwater management with canopy cover
 - Public Realm Contribution – where applicable, design complements surrounding green infrastructure corridors and improve the pedestrian environment
- 6.2. These feature aim to contribute to local habitat connectivity within the area.

7. MANAGEMENT & MAINTENANCE

- 7.1. A Drainage Maintenance Plan will be implemented outlining responsibilities and frequencies for:
 - Debris clearance from SuDS features
 - Inspection and maintenance of flow controls
 - Roof vegetation upkeep
 - Annual checks and vegetation management of rain gardens and tree pits
 - Where feasible, SuDS features will be maintained by a management company or incorporated into a Building Management System with clear responsibilities defined.

8. CONCLUSIONS

- 8.1. The proposed development delivers a comprehensive drainage and Blue & Green Infrastructure strategy that:
 - Meets national and local drainage requirements
 - Provides climate resilience and contributes to flood risk reduction

- Enhances urban greening and biodiversity
- Supports Manchester's wider strategy for a greener more sustainable city centre
- This integrated approach ensures the site contributes positively to environmental quality and future proofed city living.



Drainage notes

1. This drainage drawing is to be read in conjunction with all relevant Architect's, Engineer's drawings and specifications.

2. Do not scale this drawing. Any ambiguities, omissions and errors on the drawings shall be brought to the Engineer's attention immediately. All dimensions must be checked and verified on-site before construction commences.

3. All external underground drainage works are to be constructed in accordance with the Civil Engineering Specification for the Water Industry 7th Edition (CEWI), Sewers for Adoption 7th Edition (SFA) and any site-specific details provided on the contract drawings.

4. All internal underground drainage works are to be constructed in accordance with the Building Regulations Approved Document H (2015 Edition) and any site-specific details provided on the contract drawings.

5. The contractor must survey any retained drainage on-site and report the line, level and condition of the existing drainage to the engineer. We would recommend that the existing drainage is cleaned before any surveying and that these works are undertaken before the contractor commences on-site.

6. Any redundant manholes are to be broken out to at least 600mm below formation level and backfilled with an approved compacted granular material.

7. Any redundant pipes up to and including 300mm diameter are to be filled with a 10:1 PFA/cement mix or broken out and backfilled with an approved compacted granular material. Any redundant pipes over 300mm diameter are to be broken out and backfilled with an approved compacted granular material.

8. Adoptable Drainage Pipes: All foul and surface water pipes up to and including 300mm diameter are to be Verified Clay in accordance with BS EN 295-1. All pipes greater than 300mm diameter are to be Concrete Class 120 in accordance with BS EN 1516:2002.

9. Private Drainage Pipes: All foul and surface water pipes up to and including 100mm diameter are to be Verified Clay in accordance with BS EN 295-1 or Solid Walled PVC-U in accordance with BS EN 1401. All foul and surface water pipes greater than 100mm diameter are to be Verified Clay in accordance with BS EN 295-1. Concrete Class 120 in accordance with BS EN 1516:2002 or Structural Walled PVC-U in accordance with BS 435-01 and BS EN 13476.

10. All concrete manholes are to be in accordance with BS EN 1917. All plastic inspection chambers are to be in accordance with BS EN 1598.

11. All pipes laid within vehicle trafficked areas with less than 800mm of cover shall be surrounded in Class 2 bedding. All pipes less than 300mm below the underside of a ground floor slab shall be surrounded in Class 2 bedding. Where Class 2 bedding is used as a surround a compressible material must be placed at every pipe joint to provide flexibility. All other pipes are to be laid in a Class 3 bedding.

12. All underground drainage must be protected during the construction phase where intermediate cover is less than 300mm.

13. Where foul and surface drains and/or sewers cross within 100mm of each other then concrete protection (Class 2 bedding) may be required to prevent any potential cross-contamination.

14. All cover levels shown are approximate only. All manhole covers are to be set at the proposed finished pavement or floor level provided by the Architect.

15. For typical manhole construction details, pipe bedding/trench details and typical drainage details refer to SGI typical details drawings.

16. The internal foul and surface water pop-up positions and sizes shown are indicative only. The internal pop-up positions and pop-up sizes are to be confirmed by the architect/M&E consultant and cross referenced by the contractor before the works commence. Any errors are to be reported to the Engineer as soon as possible.

17. The external gully connections and channel drain connections are to be 150mm diameter unless otherwise stated. All gully and channel drain outlets to be trapped and roddable. All internal gullies and channel drains to be specified by others.

18. Channel drains to have a 100mm minimum concrete bed and haunch and be fitted with a steel guard cast iron grating. Gratings to be to load Class D400 specification unless otherwise agreed.

19. All foul water stacks and PPIC's to have low level rodding access plates unless an alternative means of access or maintenance is agreed. The access plate size must be in accordance with Document H and sized above any connected ground floor appliance spill level.

20. All drainage connections passing through foundation bases and/or edge beams to be located within sealed sleeves. With the approval of the Engineer, drainage connections may be cast-in with flexible joints either side. Flexible joints to be no greater than 150mm from face of the concrete.

21. All manhole covers located within the road and car parking areas shall be Class D400. Covers within hard and soft landscaped areas with pedestrian traffic only shall be Class G225. Covers located within block/paved areas are to be recessed to suit the proposed paving and of the appropriate grade. All internal covers are to be recessed, double sealed bolt down type such as those from S500 series or similar approved.

22. Channels within Type 1 & 2 manholes must use pre-formed using clayware sections for pipes up to and including 300mm diameter. All manhole channels to be set at the appropriate level for the incoming and outgoing pipe gradients.

23. All manhole connections to be formed at soffits to soffits unless otherwise stated. All internal branch connections to be made with swept bends in the direction of flow in the main pipe.

KEYS:

PROPOSED SURFACE WATER PIPE/ MANHOLE

PROPOSED FOUL WATER PIPE/ MANHOLE

EXISTING COMBINED WATER DRAIN

PROPOSED FOUL SEWER PPIC MANHOLE

PROPOSED SURFACE WATER PPIC MANHOLE

PROPOSED SURFACE WATER ATTENUATION

PROPOSED GREEN/ BLUE ROOF

PROPOSED PERMEABLE BLOCK PAVEMENT

PROPOSED RAIN GARDENS

P02

UPDATED DRAINAGE TO SUIT NEW LAYOUT

PMB

21-07-2025

Rev.

Description

By

Date

SGI

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Client

CADDICK CONSTRUCTION / MOSSCARE
ST VINCENT'S HOUSING GROUP LTD

Project

LAND AT BARNHILL STREET/ RABY STREET MOSS SIDE, MANCHESTER

Title

PROPOSED LOCATIONS OF BLUE & GREEN INFRASTRUCTURE

Date

20-03-2025

Drawn By

PMB

Size

A1

Checked By

RBG

Scale

1:250

Approved By

EAJ

SGI Proj No.

C1876

Status Code

01

Issue Status

PRELIMINARY

Dwg No.

C1876-006

Ref.

P02