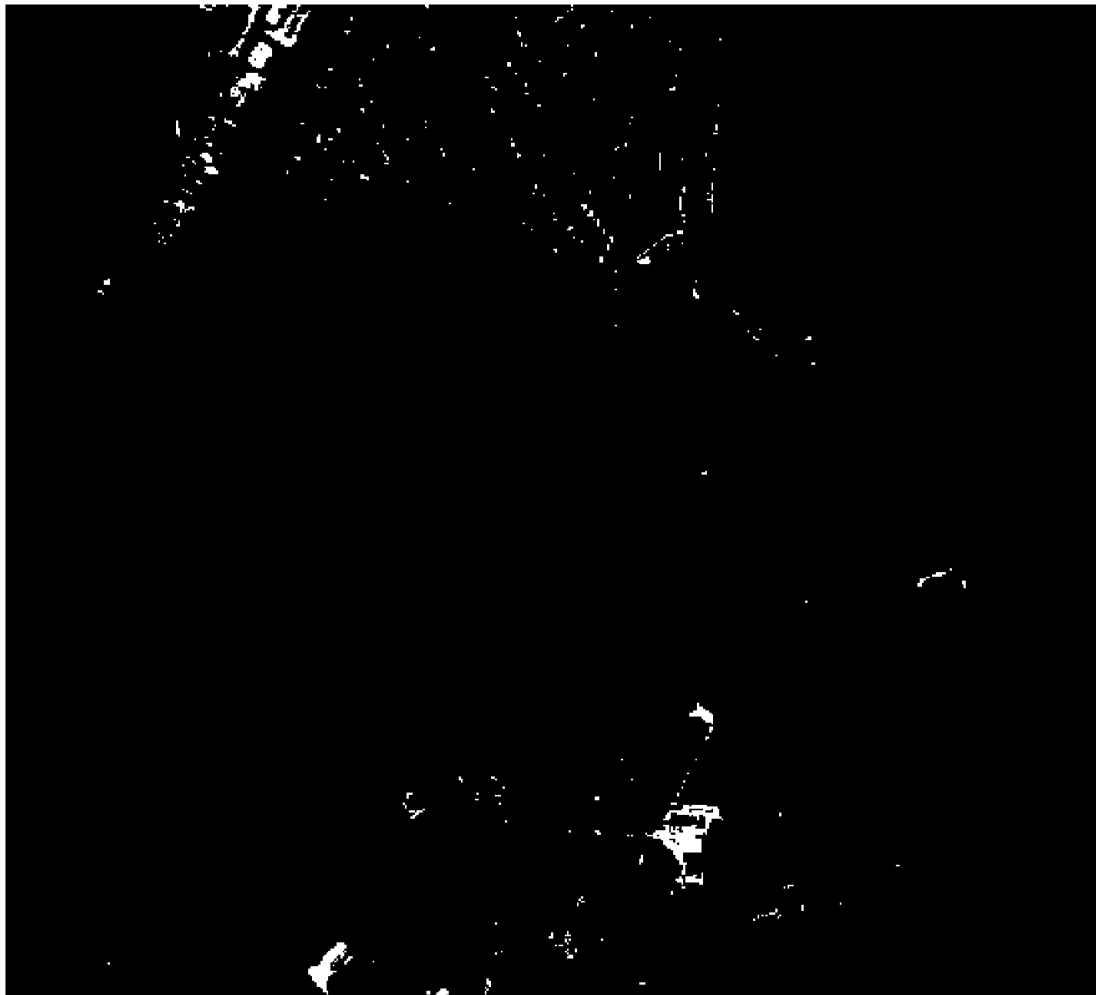

Job No: 6196/R3

**Phase 3
Alston Grange
Preston Road
Longridge**

**Management and Maintenance Plan for
SUDS Attenuation Basins**

January 2024



REPORT DETAILS

Site Name: Phase 3, Alston Grange, Preston Road, Longridge

Report Title: Management and Maintenance Plan for SUDS
Attenuation Basins

Report Number: 6196/R3

Revision	Date	Status
-	January 2024	To Discharge Planning Condition 11 App. No. 3/2023/0100

Client: Tilia Homes Ltd

Client Contact: [REDACTED]

Prepared By: [REDACTED] B.Sc., C.Eng., M.I.C.E., M.C.I.W.E.M.

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APPENDICES

APPENDIX 1 SITE LOCATION PLAN

APPENDIX 2 DRAINAGE PROPOSALS

Drg. No. 6196/01-07 Rev L

1.0 INTRODUCTION

- 1.1 Lees Roxburgh have been instructed by Tilia Homes to prepare a Management and Maintenance Plan for the two SUDS Attenuation Basins which have been designed and constructed as part of the earlier phases of the development and which will serve the two separate areas which comprise Phase 3 of the development of land at Alston Grange, Preston Road, Longridge.
- 1.2 This plan has been prepared to discharge Condition 11 of Planning Consent Ref 3/2023/0100.

2.0 **SITE DETAILS**

2.1 The overall site is centred on National Grid references SD59913, 35938 and comprises a total area of 18.84ha.

2.2 The site is situated to the southern outskirts of Longridge some 8km to the north east of Preston city centre.

2.3 The overall site is bounded by residential development within Longridge to the north, including a recent Miller Homes development, and fronts onto the B6243 Preston Road to the east, from which access to the development is achieved, with open countryside beyond.

To the south and west is open countryside which continues around Longridge to the north.

2.4 The overall site formerly comprised six open fields which, with the exception of the two areas now designated as Phase 3, have now been substantially developed.

2.5 Ground levels across the overall site are uniform, falling generally in a south/south westerly direction.

2.6 Reference should be made to the topographical survey but overall levels can be summarised as follows;

- North east boundary with Preston Road ... 83m AOD
- North west boundary... 85m AOD
- South west boundary... 77m AOD
- South east boundary adjacent to Preston Road... 78.5m AOD

2.7 Slopes in a north east to south westerly direction average at about 1 in 85.

2.8 Numerous minor watercourse systems are recorded in the area, including within the overall site, and these have substantially been retained within the main development as has a surface water outfall from the development to the north.

The nearest main river system is Savick Brook located just beyond a dismantled railway to the north west.

The systems within the site generally flow in a south/south westerly direction through Tippings Farm and Dam House Farm before turning westerly towards Savick Brook.

Drainage to the opposite side of Preston Road generally falls in a southerly direction towards Turn Brook.

3.0 **SURFACE WATER DRAINAGE PROPOSALS**

3.1 The main surface water and foul drainage systems for the overall development, including those which will serve the two areas now designated as Phase 3, have been designed, approved and constructed to adoptable standards and are being adopted by United Utilities.

3.2 These proposals generally comprise 2 No. drainage networks outfalling to separate basins from which flows restricted to predevelopment discharge rates prior to outfall to the watercourse network all in accordance with the approved drainage strategy.

With the exception of within the areas now proposed for Phase 3, these systems have now been substantially constructed.

3.3 More specifically, these systems comprise the following four elements;

- Private drainage serving the individual dwellings
- 2 No. main drainage systems picking up connections from the private drainage outfalling to the respective basins.
- 2 No. attenuation basins receiving flows from the main drainage systems.
- Basin headwalls, surface water flow control structures, and outfall pipes connecting to the watercourse network.

The proposals are incorporated on the attached layout (**Appendix 2**).

The design methodology and status are described below.

3.4 **Private drainage** – this element of the drainage scheme has been designed to comply with current Building Regulations and is being approved by the NHBC as the Building Control Authority.

3.5 **Main drainage systems** – the two main surface water systems within the roads and associated easements outfall to the attenuation basins and have been designed to adoptable standards and are being incorporated into the adoption agreements with United Utilities for the development.

3.6 **Attenuation basins** – the attenuation basins are to accommodate flows from the full development area with flows limited to the greenfield runoff rates approved by Preston City Council as the LLFA to ensure that flows up to the 1 in 100 year event plus allowance for 30% climate change are contained within the development.

3.7 **Basin headwalls, surface water flow control structures and outfalls to the watercourse network** – these components have also been designed to adoptable standards.

4.0 MANAGEMENT AND MAINTENANCE RESPONSIBILITIES

- 4.1 Responsibility for management and maintenance of the private pipe drainage systems will lie with the individual house owners.

Responsibility for management and maintenance of the adoptable pipe systems including the outfalls from the basins to the watercourse network is being placed with United Utilities as an integral element of the adoption agreement.

Responsibility for management and maintenance of the attenuation basins will become that of the management company as part of their general POS obligations.

- 4.2 This document therefore covers maintenance of the attenuation basins whilst noting that in practice there needs to be a shared responsibility between the management company and United Utilities for the inlet and outlet headwalls at the basins.

5.0 **MANAGEMENT AND MAINTENANCE – ATTENUATION BASINS**

5.1 The basins are identified in **Appendix 2** and comprise the following components;

- 2 No. attenuation basins incorporating a total of 2 No. inlets and 2 No. outlet headwall

5.2 The proposed maintenance regime for these components is below;

Regular Maintenance	Frequency
Remove litter and debris	Monthly
Cut grass – for access routes	Monthly (during growing season), or as required
Cut grass – grass in and around basins	Half yearly (spring – before nesting season, and autumn)
Manage other vegetation and remove nuisance plants	At start, then as required
Inspect inlets and outlets for blockages and clear if required	Monthly
Inspect banksides and structures for evidence of physical damage	Monthly
Inspect inlets and surface areas for silt accumulation. Establish appropriate silt removal frequencies.	Monthly (for first year), then annually or as required
Remove sediment from inlets and outlets.	Annually (or as required)
Occasional Maintenance	
Reseed areas of poor vegetation growth.	As required
Remove sediment from inlets, outlets and basins when required	Every 5 years, or as required
Remedial Actions	
Repair erosion or other damage by reseedling or re-turfing	As required
Repair/rehabilitation of inlets and outlets	As required
Relevel uneven surfaces and reinstate design levels	As required

5.3 Access will be achieved via the adoptable roads network and open space areas.

Appendix 1: Site Location Plan



Notes	
	Land To Be Transferred
	Proposed Future Access
	Proposed Future Access To Retained Land
	Proposed Future Access Construction Traffic Route

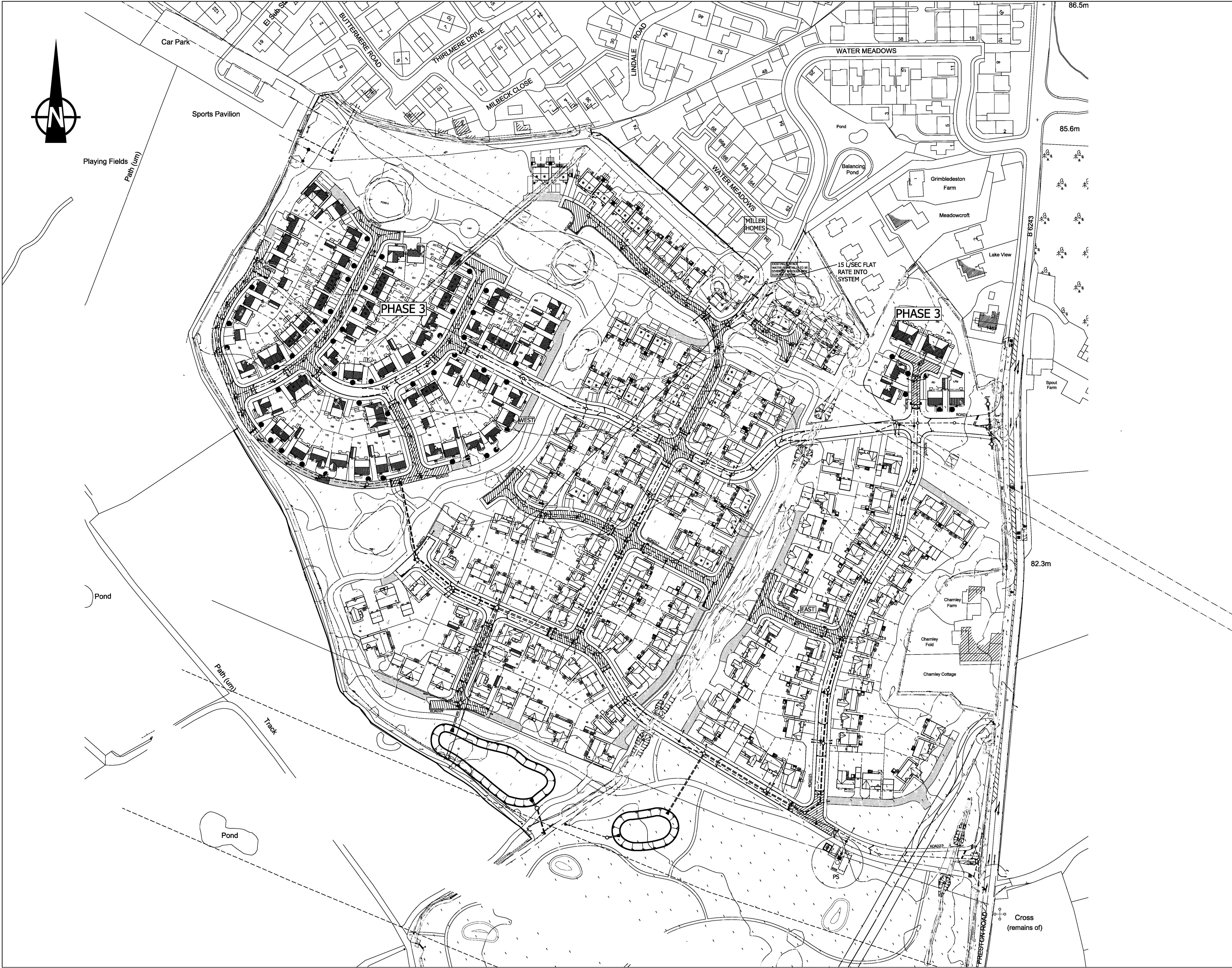
F	Red Line Boundary Amended	11.12.17	APT
E	Red Line Boundary Amended	30.11.17	APT
D	Topographic Information Removed	17.11.17	APT
C	Future Construction Access Route Added	08.09.17	APT
B	Future Access Amended	07.09.17	APT
A	Red Line Boundary Amended	10.07.17	APT
Rev	Details	Date	By



Kier Living Limited The Genesis Centre Science Park South Birchwood Warrington WA3 7BH Tel: 01925 817 800	
Project:	Preston Road Longridge
Drawing:	Contract Plan
Drawing File Location:	
Drawn by: APT	Date: 11/05/17
Scale: 1:1250 @ A0	COINS code: -----
This drawing is © copyright protected. All dimensions to be checked on site. Any discrepancies to be reported to the Architect immediately. This drawing should not be scaled.	
Drawing no: NWL17012 - CP	Revision: F

Appendix 2: Adoptable Drainage Layout

Drg. No. 6196/01-07 Rev L



Notes

Surface Water

Developable Area = 11.554 Ha

Western side of development drainage to be restricted to Greenfield Rate + 15L/S for the Miller Homes site to be added to the system. Rates as follows:

Q_{max} 81.1 L/S
 Q_1 72.5L/S
 Q_{50} 127.4L/S
 Q_{100} 152.5L/S

Eastern side of development drainage to be restricted to Greenfield Rate. Rates as follows:

Q_{max} 27.6 L/S
 Q_1 24L/S
 Q_{50} 47L/S
 Q_{100} 57.5L/S

Flows up to 1 in 100 event + 30% allowance for CC to be contained on site.

Piped system to Sewers for Adoption 6th Edition.

Foul Water

Piped system to Sewers for Adoption 6th Edition.
Pumping Station to Sewers for Adoption 7th Edition.

Key

- PS S104 Foul Pumping Station
- Existing SW Sewer
- Existing UU Combined Sewer
- Proposed S104 SW Sewer
- Proposed Attenuation Basin (2 No.)
- Proposed S104 FW Sewer
- Proposed S104 Rising Main
- Existing Ditch
- Proposed Culvert

L	REVISED LAYOUT PL01 REV G INCORPORATED	AN	15.12.23
K	REVISED LAYOUT PL01 REV F INCORPORATED	AN	08.09.23
J	REVISED LAYOUT PL01 REV E INCORPORATED	AN	05.09.23
H	REVISED LAYOUT PL01 REV D INCORPORATED	AN	29.08.23
G	REVISED LAYOUT PL01 REV C INCORPORATED	AN	16.08.23
F	REVISED LAYOUT PL01 REV B INCORPORATED	AN	09.08.23
E	REVISED LAYOUT PL01 REV A INCORPORATED	RD	11.07.23
D	BOUNDARIES UPDATED	RD	20.12.22
C	ADDITIONAL PHASE 3 LAYOUT INCORPORATED	BP	15.12.22
B	CLIENT NAME CHANGED. NEW LAYOUT FOR PHASE 3 INCORPORATED.	RD	05.12.22
A	NEW LAYOUT ADDED FROM 26.01.18 AND DESIGN AMENDED TO SUIT.	DM	02.02.18

Rev	Revision	By	Date
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Alston Grange
Preston Road
Longridge

Drainage Proposals

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6196	01-07	L

Scale	1:1000@A1	Date	December 2017
Drawn By	Designed By	Checked By	
DM	DM	JEL	