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Site:	Land to the east of Tilletts Lane, Warnham
Prepared by:	Chris Gray
Approved by:	Jason Morgans
Date:	8 October 2025

1.0 Introduction

1.1 This Technical Note has been prepared by Motion on behalf of our client, Broadbridge Heath Trust. It is intended to resolve the Lead Local Flood Authority (LLFA) Objection to Horsham District Council Planning Application Number DC/25/1155, which is for 59 residential units. The full LLFA Consultation Letter Referenced DC/25/1155 and dated 11 September 2025 is included in **Appendix A**.

2.0 Resolving LLFA Objection to Horsham District Council Planning Application Number DC/25/1155

1) The exceedance routes appear to affect both existing properties and areas outside the red line boundary (in particular Robinsgreen and surrounding land south of the access road) and potentially plots 47 and 50. Please can the exceedance routes be checked and clarification provided for these areas in particular. It may be of benefit to overlay the exceedance plan over topographic data to demonstrate the exceedance flows will not impact these area.

2.1 **Appendix B** contains Existing Topographical Information and the Proposed Levels Design.

2.2 **Figures 2.1** and **2.2** show Robinsgreen and the surrounding land south of the access road; Existing Topographical Information; and the Proposed Levels Design converted to 0.02m and 0.10m contours and arrows. The existing overall slope is towards the south southeast, with the existing gravel driveway sloping both towards the southwest and east northeast. The proposed access road crossfall slopes towards the southeast. The arrows in **Figures 2.1** and **2.2** indicate that exceedance from the existing gravel driveway and upgradient land will flow towards Robinsgreen and the surrounding land south of the access road, whereas exceedance from the proposed access road and upgradient land will be contained by the 125mm access road kerb and routed towards the southeast where double gullies are proposed at the proposed site access. With reference to the Drainage Strategy submitted as part of the planning application, the double gullies will drain to Basin 3 via Proposed Manhole S47.

2.3 **Figure 2.3** shows Plots 47 to 50; Existing Topographical Information; and the Proposed Levels Design converted to 0.02m and 0.10m contours and arrows. The proposed road crossfalls are towards the south southwest, south and south southeast. The Existing Topographical Information indicates the existing slope is similar. The arrows indicate that runoff from the proposed road will be contained by the 125mm access road kerb. The arrows also indicate the 150mm upstand around the proposed Plots 47 to 50 buildings complies with building regulations and diverts water away from the buildings (as stated in Section 10.1 of the FRA and Drainage Strategy Report submitted for the planning application). With reference to Drainage Strategy submitted as part of the planning application, the proposed road will also be constructed as a pervious pavement.

Figure 2.1 - Robinsgreen and surrounding land south of the access road and Existing Topographical Information converted to 0.02m and 0.10m contours and arrows

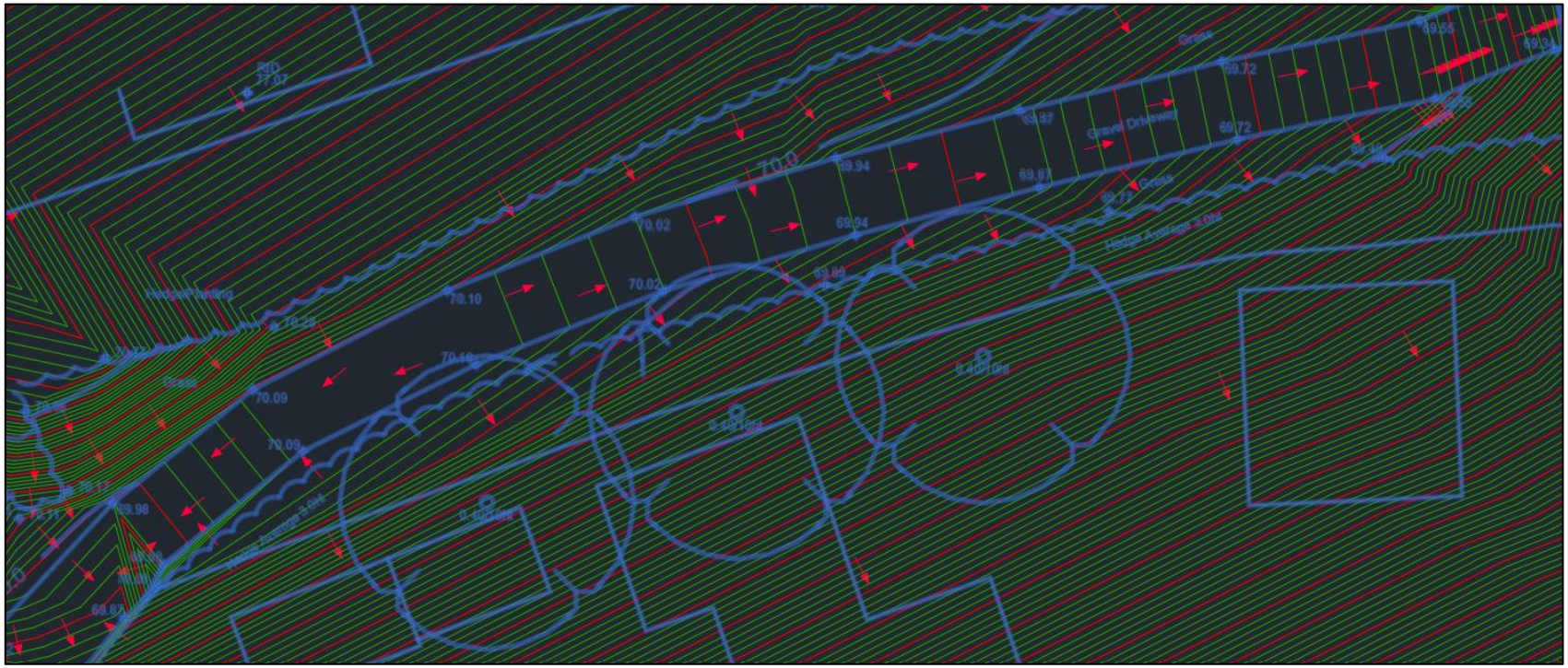


Figure 2.2 - Robinsgreen and surrounding land south of the access road, Existing Topographical Information and the Proposed Levels Design converted to 0.02m and 0.10m contours and arrows

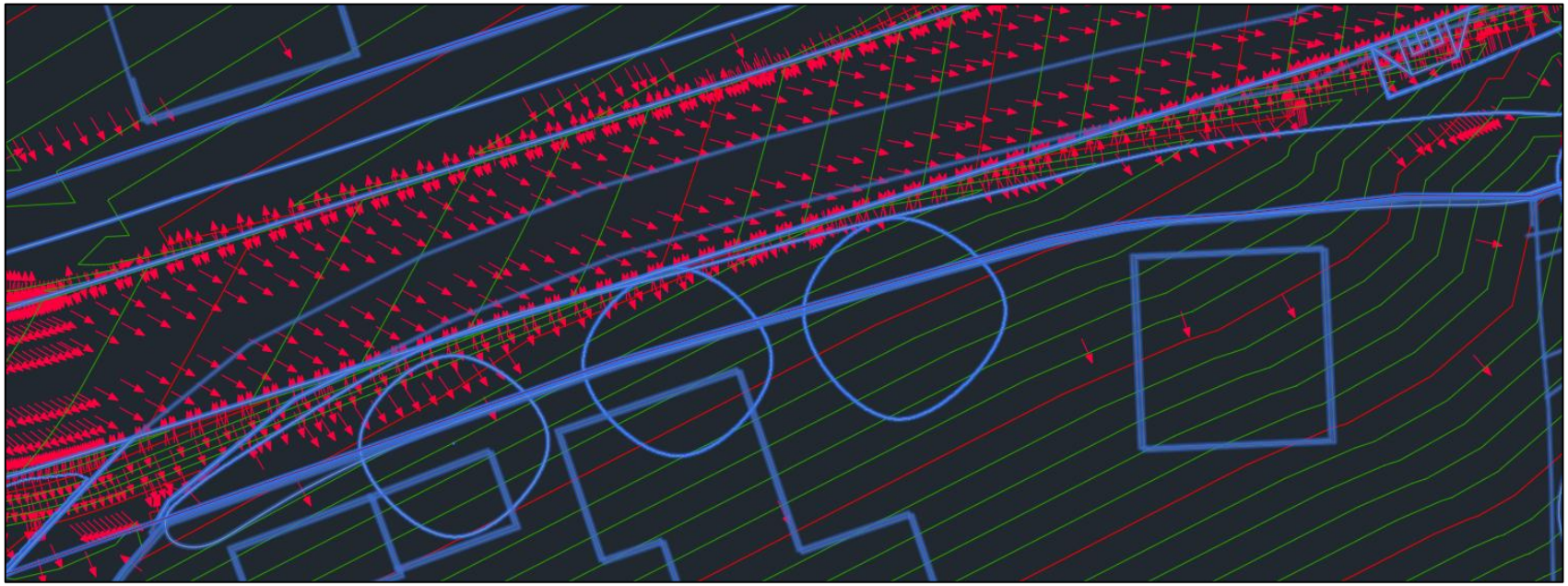
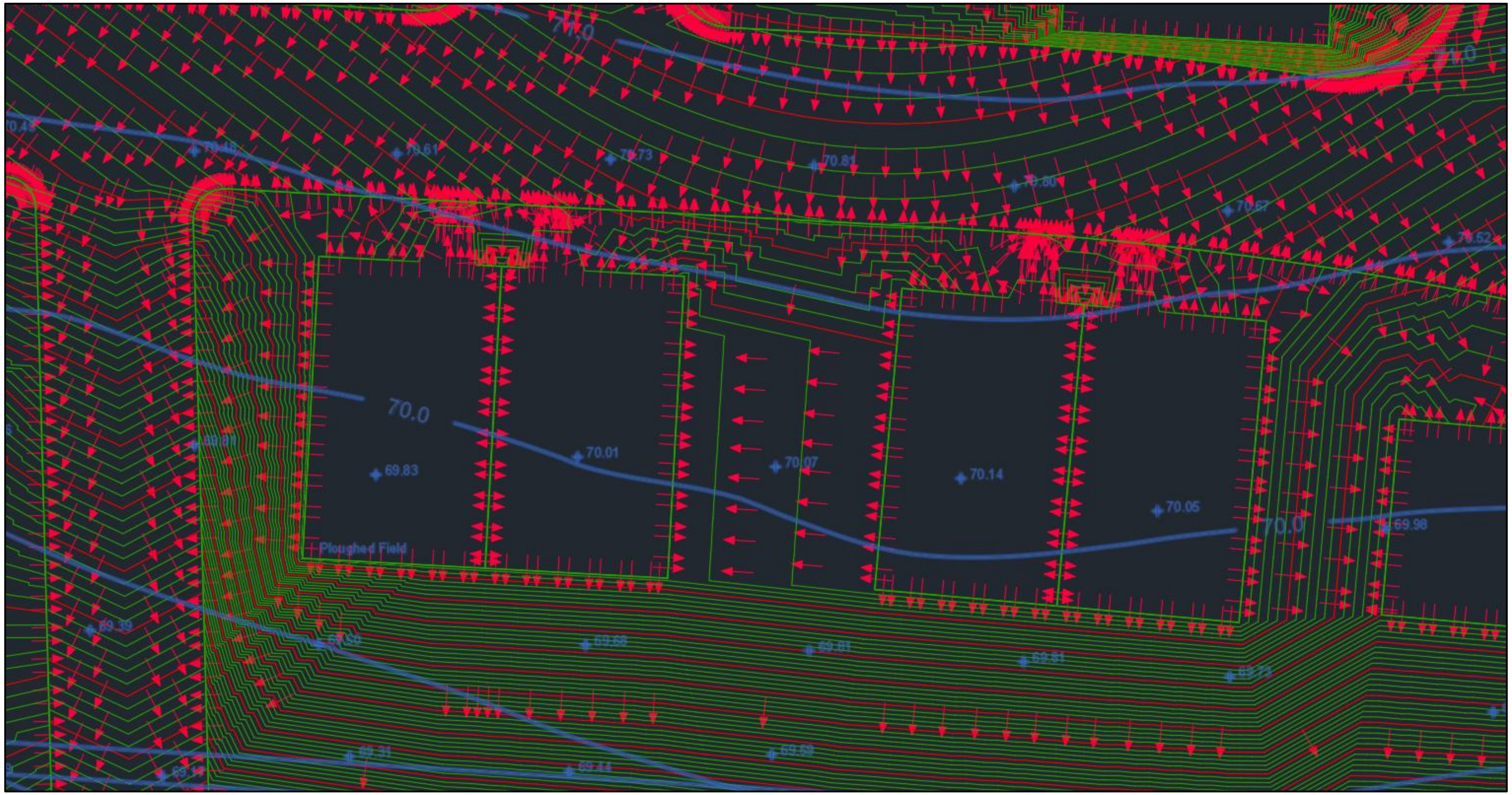


Figure 2.3 - Plots 47 to 50, Existing Topographical Information and the Proposed Levels Design converted to 0.02m and 0.10m contours and arrows



2) We will require further information regarding the ordinary watercourses on site, as their onward connectivity is not clear. Please can the Applicant provide updated drawings showing the precise locations of each watercourse with hard bed and bank levels. It is important for us to understand how they connect to the wider network, and any existing structures (culverts, outfalls etc) should also be marked with their invert levels and pipe diameters where applicable. We will need to see how the surface water discharge could affect flood risk offsite as we are aware of known flood concerns in the area. A CCTV survey of the wider system may be required to demonstrate this.

2.4 Updated Motion drawing number 2404044-0500-P07 [Drainage Strategy] in **Appendix C** shows the locations of each watercourse with bed and bank levels, including invert levels and pipe diameters where applicable.

2.5 Site visits undertaken on the 17th April 2024 and the 24th September 2025, and a cctv survey undertaken on the 2nd October 2025, confirm that the offsite outfall from existing highway ordinary watercourse along the western boundary of the site is blocked by road construction aggregate or similar approximately 6.5m downstream of the watercourse (**Figure 2.4**).

Figure 2.4 – Offsite outfall from existing ordinary watercourse along the western boundary of the site is blocked by road construction aggregate or similar approximately 6.5m downstream of the watercourse

2.6 The existing ordinary watercourse that flows north to south in the eastern half of the site connects to the offsite existing playing field ordinary watercourse via an existing 225mm diameter pipe. With reference to Updated Motion drawing number 2404044-0500-P07 [Drainage Strategy] in **Appendix C**, the development also proposes to discharge to the offsite existing playing field ordinary watercourse further downstream via an existing 150mm diameter pipe.

2.7 Please see updated Motion drawing number 2404044-0500-P07 [Drainage Strategy] in **Appendix C** for details on how the offsite existing playing field ordinary watercourse connects to the 450mm diameter Public Sewer flowing north northeast under Church Street.

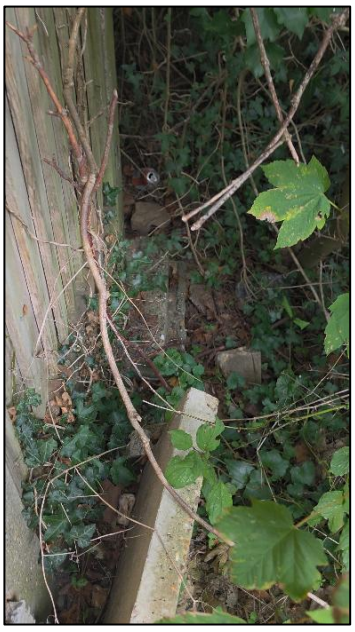
2.8 Motion drawing number 2404044-0500-P07 [Drainage Strategy] shows the approximate route of an Existing Ordinary Watercourse understood to be maintained by the Parish Council. The watercourse appears to be blocked by the Electrical Sub Station and an informal footpath to The Sussex Oak Public House Car Park (**Figures 2.5** and **2.6**). If it is not possible to reinstate the Ordinary Watercourse in this location due to the presence of the Electrical Sub Station and informal footpath, the open section of the Watercourse upstream of the Electrical Sub Station can be connected to the open section of the Watercourse downstream of the Electrical Sub Station via a connecting pipe; or the open section of the Watercourse upstream of the Electrical Sub Station can be connected to the adjacent existing 225mm diameter pipe (on the basis the Watercourse

has been proven to connect to this pipe downstream of the Electrical Sub Station). The adjacent existing 225mm diameter pipe is currently interpreted to be the Surface Water Public Sewer from Southern Water Public Sewer Manhole 7751.

2.9 On the basis it appears the introduction of the Electrical Sub Station and informal footpath to The Sussex Oak Public House Car Park has blocked the Existing Ordinary Watercourse; and two solutions exist to reinstate the Existing Ordinary Watercourse with reference to Section 2.8 above; it is considered the LLFA can ensure this work is undertaken with the Parish Council as part of a land drainage consent application as appropriate, and, if required, the completion of this work can be part of a pre commencement planning application condition.

Figure 2.5 – Existing Ordinary Watercourse appears to be blocked by the Electrical Sub Station and an informal footpath to The Sussex Oak Public House Car Park (Upstream)

Figure 2.6 – Existing Ordinary Watercourse appears to be blocked by the Electrical Sub Station and an informal footpath to The Sussex Oak Public House Car Park (Downstream)



3) To allow us to check the calculation parameters, send the FEH 2022 point data file for the site to the Flood Risk Management Team. This data will be dealt with in accordance with 5.1.7 of the FEH Web Service terms of use. Please send it to FRM@westsussex.gov.uk, not the case officer, as this information must remain confidential to follow the terms of use. Please title this email: "DC/25/1155 FEH Point File".

2.10 Motion sent the FEH 2022 catchment data file used in the hydraulic model for DC/25/1155 to FRM@westsussex.gov.uk on Monday 22/09/2025.

4) It is noted that there is only one discharge point within the site, however the evidence provided shows there is more than one catchment within the site. The surface water drainage system will need to mimic the natural drainage of the site, for example it is unclear why there is not a direct outfall from basin 1 to the adjacent watercourse. This could increase flood risk elsewhere as the distribution of surface water runoff will not be as existing, rather concentrated in one location. Please can this be reviewed and clarified.

2.11 With reference to the Drainage Strategy submitted as part of the planning application, it is assumed the watercourse adjacent to basin 1 referred to above is the existing highway ordinary watercourse along the western site boundary.

2.12 **Figures 2.7** to **2.9** shows the Existing Topographical Information converted to 0.02m and 0.10m contours and arrows close to the western boundary of the site. The existing overall slope is towards the south to an existing ordinary watercourse that flows east at the southwest corner of the site, rather than the existing ordinary watercourse along the western site boundary of the site. Please see updated Motion drawing number 2404044-0500-P07 [Drainage Strategy] in **Appendix C** that shows the bed and bank levels for both watercourses.

2.13 Please also see Sections 2.4 to 2.7 above that describe how the offsite outfall from existing highway ordinary watercourse along the western boundary of the site is blocked by road construction aggregate or similar approximately 6.5m downstream of the watercourse (**Figure 2.4**); the existing ordinary watercourse that flows north to south in the eastern half of the site connects to the offsite existing playing field ordinary watercourse via an existing 225mm diameter pipe; and, the development also proposes to discharge to the offsite existing playing field ordinary watercourse further downstream via an existing 150mm diameter pipe.

2.14 Therefore, as the existing site drains to the playing field ordinary watercourse, and the proposed development site drains to the playing field ordinary watercourse, it is concluded the proposed discharge point from the site is appropriate.

2.15 However, it was also recognised at an early stage that a lot of care needed to be taken with regards to managing surface water runoff from the site post development.

2.16 An additional 150mm freeboard has been provided in Basin 1 to account for runoff from upgradient undeveloped land close to the western boundary of the site.

2.17 Rainwater from the proposed dwelling roofs will be collected by rainwater harvesting systems and utilised in the dwellings for flushing toilets etc - providing a total storage volume of around 146,900 litres (146.9 m^3).

2.18 Extensive areas of pervious pavement have been proposed that will provide long term storage of surface water runoff from the development, most of which has not been included in the hydraulic model at the drainage strategy stage. As stated in Section 7.40 of the FRA and Drainage Strategy Report submitted for the planning application, 'the Interpave document Guide to the Design, Construction and Maintenance of

Concrete Block Permeable Pavements edition 6 states 'permeable pavements reduce the volume of rainfall that flows out from them significantly and the time it takes for the water to flow out is much longer than for conventional drainage systems. Studies reported in CIRIA report C 582 (CIRIA, 2001) have shown that some 11% to 45% of rainfall flows out from the pavement during a rainfall event. Subsequently over the 2 to 4 days after an event, more water flows out to give a total outfall of between 55% and 100%'. On this basis, it is concluded that the long-term storage volumes provided by the widespread extent of Pervious Pavements proposed as part of the development are likely to be more than what is indicated by the half drain times in the hydraulic calculations'.

2.19 Lastly, a **1 in 2 year** discharge rate of 8.6 l/s is proposed for the **100 year + 45% climate change critical rainfall event** from the proposed discharge point from the site; a runoff coefficient (CV) value of 1.0 has been used to size the Sustainable Drainage System (SuDS) in the hydraulic modelling despite the extensive areas of pervious pavement proposed; and a 10% allowance for Urban Creep has been applied for the property curtilages.

Figure 2.7 - Existing Topographical Information converted to 0.02m and 0.10m contours and arrows that show the existing overall slope is not towards the existing ordinary watercourse along the western site boundary of the site

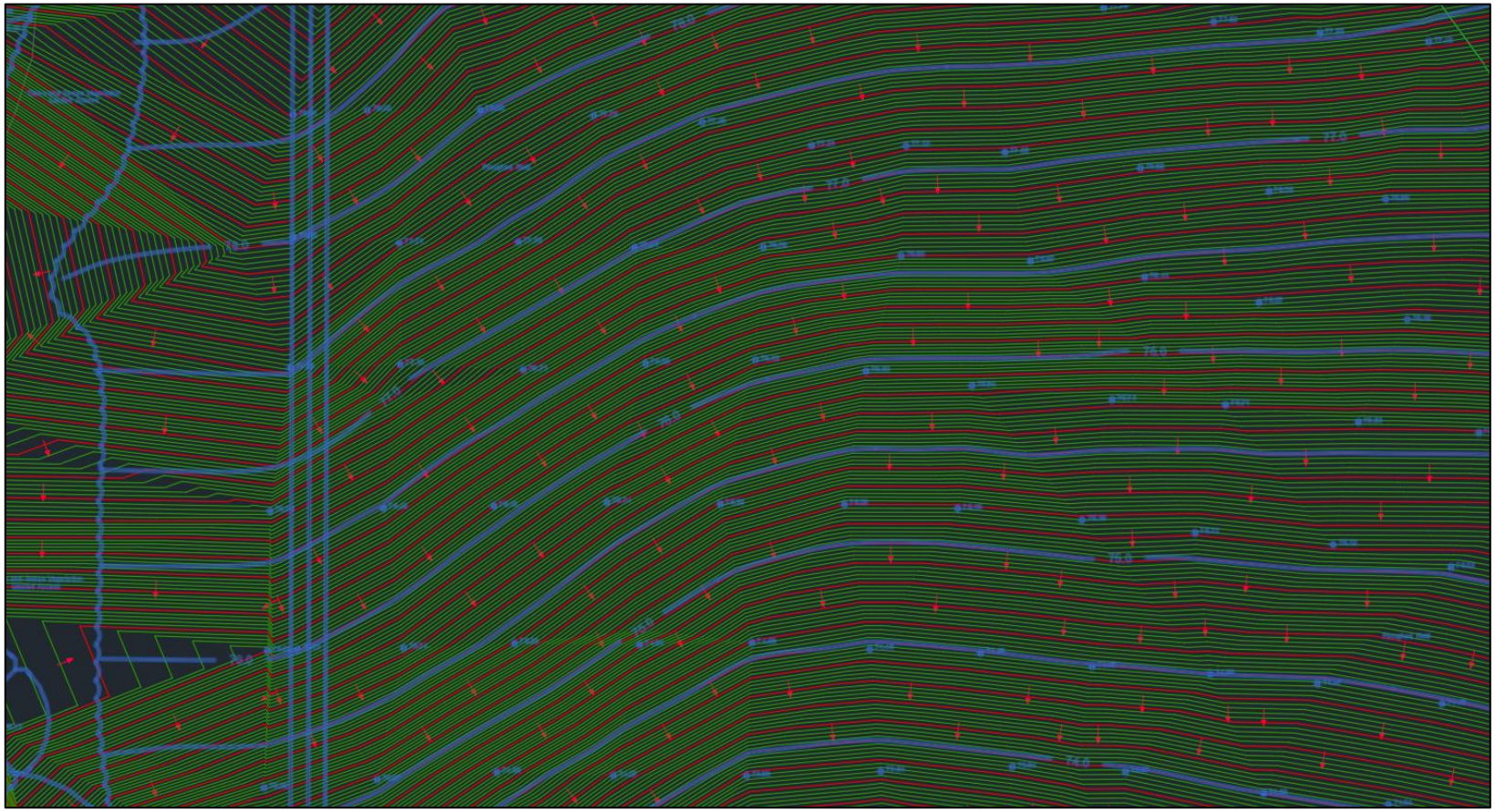


Figure 2.8 - Existing Topographical Information converted to 0.02m and 0.10m contours and arrows that show the existing overall slope is not towards the existing ordinary watercourse along the western site boundary of the site

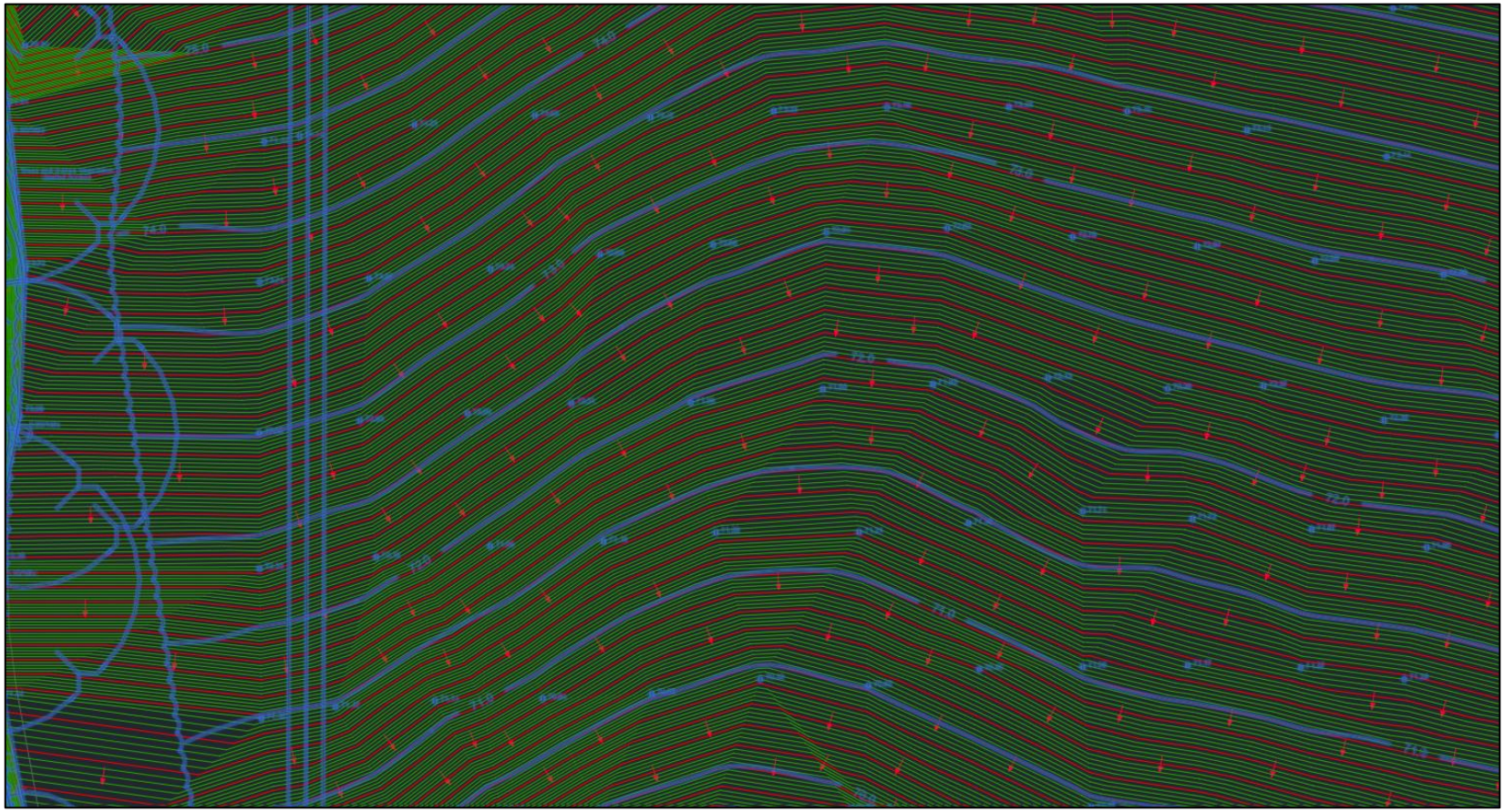
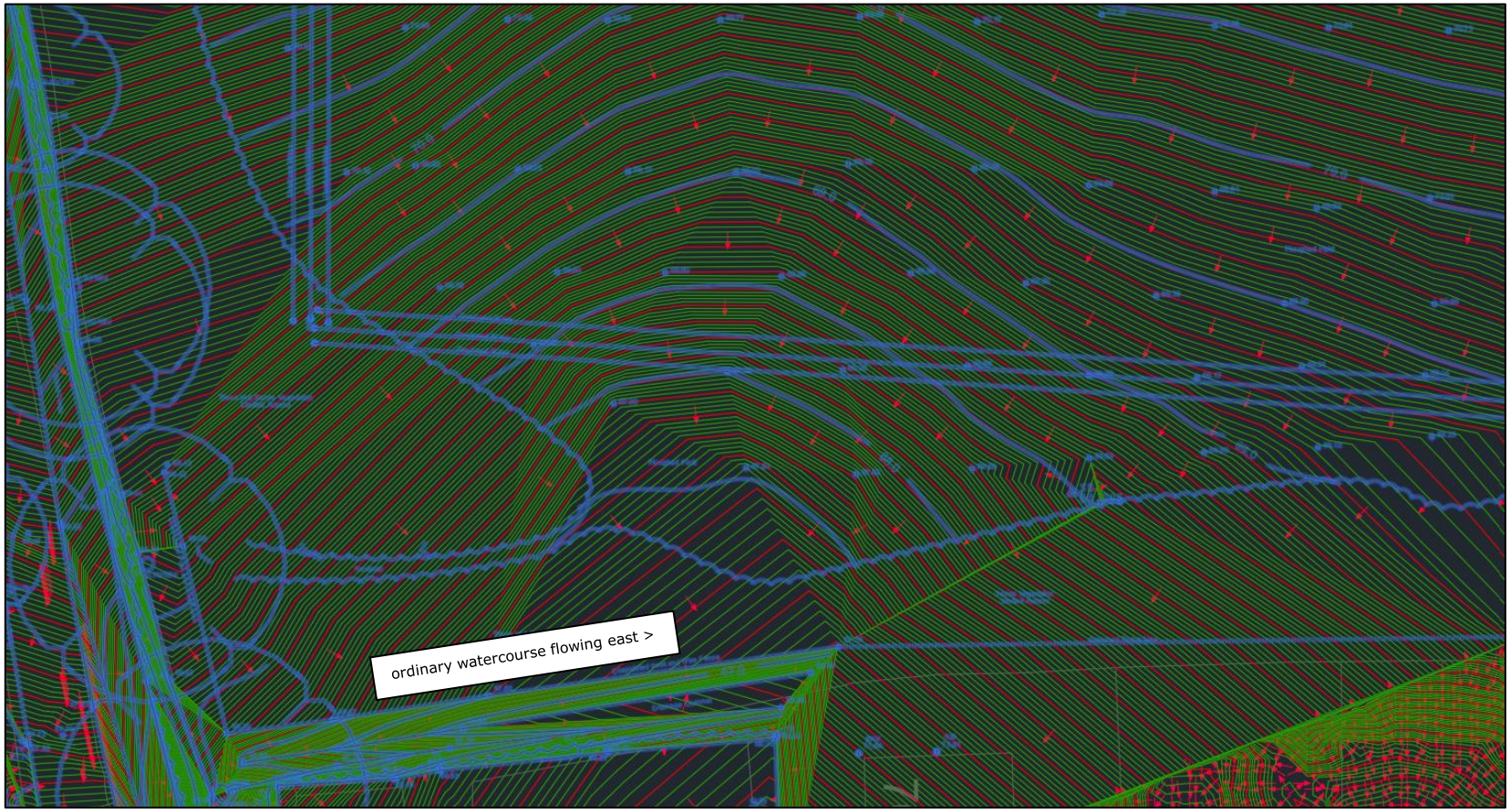


Figure 2.9 - Existing Topographical Information converted to 0.02m and 0.10m contours and arrows that show the existing overall slope is not towards the existing ordinary watercourse along the western site boundary of the site



5) Please revise calculations utilising a surcharged outfall to the top of bank level.

2.20 Updated hydraulic calculations utilising a surcharged outfall to the top of bank level are included in **Appendix D**. We've also taken the opportunity to change:

- the depths of Basins 2 and 3 in the model from 1.21m with 10mm freeboard to 1.20m;
- the diameter of the Basin 2 orifice outlet in the model from 0.068mm to 0.069mm;
- the outfall from the development has been changed slightly to the Existing Surface Water Manhole that connects to the to the offsite existing playing field ordinary watercourse via an existing 150mm diameter pipe.

6) The drainage plan needs to evidence a 3m easement buffer (from top of bank) for all SuDS basins and watercourses to allow for maintenance access.

2.21 A 3m easement buffer (from top of bank) for all SuDS basins and watercourses has been added to the updated Motion drawing number 2404044-0500-P07 [Drainage Strategy] in **Appendix C** to allow for maintenance access. However, there is a location adjacent to Basin 1 where less than 3m can be provided due to the proposed hedge required for Biodiversity Net Gain; and a location adjacent to Basin 2 where less than 3m can be provided to avoid impeding on a wildlife corridor. These locations have been added to the updated Motion drawing number 2404044-0500-P07 [Drainage Strategy] in **Appendix C**, and the updated Drainage Management and Maintenance Plan in **Appendix D**.

7) We would recommend Southern Water are consulted regarding the foul pumping station to ensure the appropriate standoff distances/easement buffers have been included in the layout, if not already established.

2.22 Table D 1 of SSG Appendix C - Design and Construction Guidance v2-1 indicates the Minimum Distance of Wet Well from Habitable Buildings should be 15m. The Required Minimum Distance of Wet Well from Habitable Buildings of 15m is shown on updated Motion drawing number 2404044-0500-P07 [Drainage Strategy] in **Appendix C**.

8) As an advisory, as with previous applications we would flag that the policy referred to at 7.10 is no longer valid and not in effect. The latest National Standards for SuDS (July 2025) should be followed.

2.23 Noted. With reference to the latest National Standards for SuDS (July 2025), and Section 7.12 of the FRA and Drainage Strategy Report submitted for the planning application, a 10% increase to the calculated areas of the impermeable areas within the property curtilages has been provided.

3.0 Conclusions

3.1 In conclusion, Motion has worked through LLFA Specific Comments and provided the information required to overturn the LLFA objection. As such, flood risk and surface water management should not form an impediment to the progress of the planning application for this development.

Appendix A

LLFA Consultation Letter Referenced DC/25/1155 and Dated 11 September 2025 for Horsham District Council Planning Application Number DC/25/1155

Ground Floor
Northleigh
County Hall
Chichester
West Sussex
PO19 1RH

Lead Local Flood Authority

Nicola Pettifer
Development Control
Albery House
Springfield Road
Horsham
RH12 2GB

Date 11th September 2025

Dear Nicola,

RE: DC/25/1155 Land East of Tilletts Lane Warnham

Thank you for your consultation on the above site, received on 19th August 2025. We have reviewed the application as submitted and wish to make the following comments.

This is a full application for the erection of 59 dwellings with associated open space, landscaping, parking, access, and drainage infrastructure

At present we **object** to the application as further information is required. Please could the Applicant assist with the below:

1) The exceedance routes appear to affect both existing properties and areas outside the red line boundary (in particular Robinsgreen and surrounding land south of the access road) and potentially plots 47 and 50. Please can the exceedance routes be checked and clarification provided for these areas in particular. It may be of benefit to overlay the exceedance plan over topographic data to demonstrate the exceedance flows will not impact these area.

2) We will require further information regarding the ordinary watercourses on site, as their onward connectivity is not clear. Please can the Applicant provide updated drawings showing the precise locations of each watercourse with hard bed and bank levels. It is important for us to understand how they connect to the wider network, and any existing structures (culverts, outfalls etc) should also be marked with their invert levels and pipe diameters where applicable. We will need to see how the surface water discharge could affect flood risk offsite as we are aware of known flood concerns in the area. A CCTV survey of the wider system may be required to demonstrate this.

3) To allow us to check the calculation parameters, send the FEH 2022 point data file for the site to the Flood Risk Management Team. This data will be dealt with in accordance with 5.1.7 of the FEH Web Service terms of use. Please send it to FRM@westsussex.gov.uk, **not** the case officer, as this information must remain confidential to follow the terms of use. Please title this email: "**DC/25/1155 FEH Point File"**

4) It is noted that there is only one discharge point within the site, however the evidence provided shows there is more than one catchment within the site. The surface water drainage system will need to mimic the natural drainage of the site, for example it is unclear why there is not a direct outfall from basin 1 to the adjacent watercourse. This could increase flood risk elsewhere as the distribution of surface water runoff will not be as existing, rather concentrated in one location. Please can this be reviewed and clarified.

5) Please revise calculations utilising a surcharged outfall to the top of bank level.

6) The drainage plan needs to evidence a 3m easement buffer (from top of bank) for all SuDS basins and watercourses to allow for maintenance access.

7) We would recommend Southern Water are consulted regarding the foul pumping station to ensure the appropriate standoff distances/easement buffers have been included in the layout, if not already established.

8) As an advisory, as with previous applications we would flag that the policy referred to at 7.10 is no longer valid and not in effect. The latest National Standards for SuDS (July 2025) should be followed.

Upon receipt of the above we will be in a position to comment further.

Yours sincerely,

Natalie Biddulph
Flood Risk Management Team

Annex:
Documents considered as part of this response:

- Flood Risk Assessment and Drainage Strategy 9 May 2025 1lbwar/ 2404044

Appendix B

Existing Topographical Information and Proposed Levels Design

A1

Do Not Scale

NOTES

1. The Grid and Levels are orientated to OS Active Grid using OSTN 15.
2. Please request any survey control information if required.
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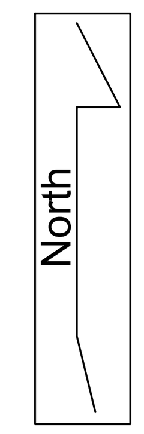
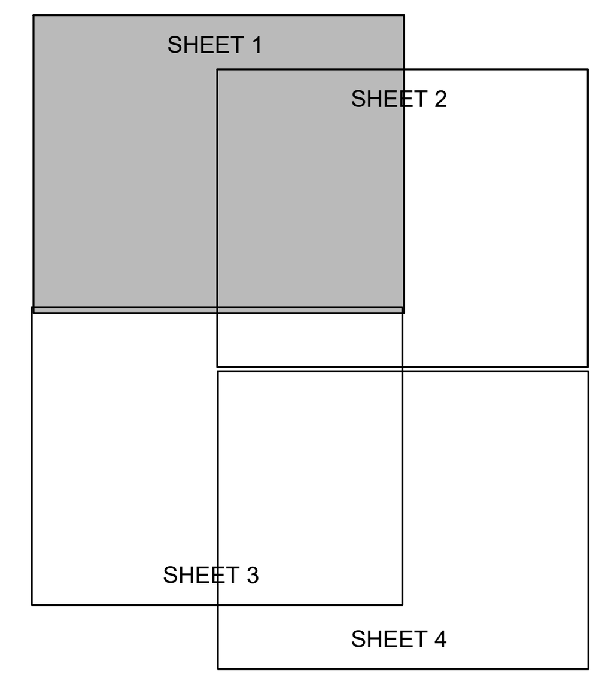
10. All pipe diameters and levels are assumed to be correct, however due to non entry to inspection chambers, these should be verified before any works commence.
11. External eaves levels are surveyed to lowest tile position.



LEGEND
B - Bollard
CL - Cover Level
EAV - Eaves Level
FH - Fire Hydrant
FPO - Fence Post
GV - Gas Valve
IC - Inspection Cover
IL - Invert Level
LP - Lamp Post
MT - Multi Trunk
RID - Ridge Level
RS - Road Sign
SC - Stop Cock
SV - Sluice Valve
TK - Top of Kerb
TW - Top of Wall
WM - Water Meter
WO - Wash Out

KEYPLAN



Rev	Revised By	Date	Revision

Project
LAND OFF TILLETTS LANE
WARNHAM, HORSHAM
WEST SUSSEX

Drawing Title
TOPOGRAPHIC SURVEY

16 Allcard Close
Horsham
RH12 5AJ
Tel No: 07867411903

www.incosurveys.co.uk

InCo Surveys

Surveyed: M.Jones May 2024
Drawn: M.Jones May 2024

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S24852	INFORMATION	1:500

TOPOGRAPHIC SURVEY
Sheet 1 of 4

A1

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North

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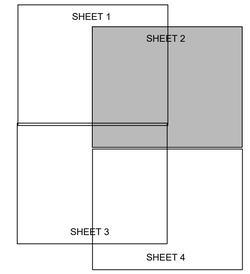

Threadile Lane

71.5m

Oakridge

Lowood

64.9m

Robinsgreen

Hawthorns

Rev	Revised By	Date	Revision

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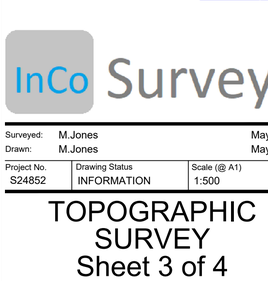

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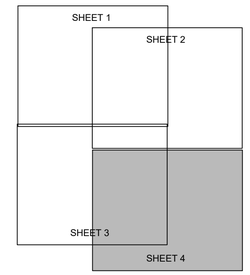
FPO - Fence Post
GV - Gas Valve
IC - Inspection Cover
IL - Invert Level
LP - Lamp Post
MT - Multi Trunk
RID - Ridge Level
RS - Road Sign
SC - Stop Cock
SV - Sluice Valve
TK - Top of Kerb
TW - Top of Wall
WM - Water Meter
WO - Wash Out

KEYPLAN



Rev	Revised By	Date	Revision

Project
LAND OFF TILLETTS LANE
WARNHAM, HORSHAM
WEST SUSSEX

Drawing Title
TOPOGRAPHIC SURVEY

16 Allcard Close
Horsham
RH12 5AJ
Tel No: 07867411903

www.incosurveys.co.uk

InCo Surveys

Surveyed:	M.Jones	May 2024
Drawn:	M.Jones	May 2024

Project No.	Drawing Status	Scale (@ A1)
S24852	INFORMATION	1:500

TOPOGRAPHIC SURVEY
Sheet 4 of 4

north

Inset

10m buffer

LAP

LEAP

Pumping Station

Parking for Football Pitches

Orchard

67.400m

66.400m

64.500m

0 10 20 30 40m

SCALE IN METRES
1:500

Notes

1. All levels and dimensions are to be checked on site before any work commences. All dimensions are in metres unless stated otherwise.
2. This drawing has been based upon survey information supplied by InCo Surveys and Motion cannot guarantee the accuracy of the data provided.
3. This drawing should be read in conjunction with all other relevant architect and engineering details, drawings and specification.

Legend

- Site Boundary
- Ancient Woodland Easement
- Tree Root Protection Zone
- Proposed Major Contours
- Proposed Minor Contours
- 0.000m — Existing Spot Levels
- 1:40 — Proposed Gradients

Rev.	Description	Drn	Chk	App	Date
P02	Minor changes following feedback from urban designer	CC	JM	JM	28/03/2025
P01	First Issue	CC	JM	JM	18/03/2025

Drawing Status:

FOR PLANNING
NOT FOR CONSTRUCTION

motion

Guildford - Reading - London
www.motion.co.uk

Client:
The Lucas Broadbridge Heath Trust

Project:
Land to the east of Tilletts Lane, Warnham

Title:
Levels Design

Scale: 1:500 (@ A1)

Drawing: 2404044-0310

Revision: P02

C:\Users\catbazzaio\Motion\Staff\Site - 10bar 2404044\Drawings\2404044-0310-P01 [Levels Design].dwg

Appendix C

Updated Motion drawing number 2404044-0500-P07 [Drainage Strategy]

north

Existing Ordinary Watercourse
Bank Levels: 80.79 / 80.28 m AOD
Bed Level: 79.99 m AOD

Existing Ordinary Watercourse
Bank Level: 78.55 m AOD
Bed Level: 68.30 m AOD

(10m buffer)

Inset 1

Lowood

CUTLINE

Refer to Main Drawing

CUTLINE

Existing Ordinary Watercourse maintained by Broadbridge Heath Trust
Bank Levels: 70.06 / 69.97 m AOD
Bed Level: 69.17 m AOD

Topographical survey indicates ordinary watercourse flows from the north through upgradient foliage.

Assumed Route of Existing Ordinary Watercourse maintained by Broadbridge Heath Trust
Bank Levels: 69.69 / 69.64 m AOD
Bed Level: 69.09 m AOD

CUTLINE

Refer to Inset 1

CUTLINE

Hawthorns

Pumping Station

Parking for Football Pitches

Attenuation basin

Basin 3
Cut: 598m³
Fill: 43m³
Volume: 802m³
Invert: 64.50m
Depth: 1.2m

Flow Control Chamber [Hydrobrake]
Design Flow: 8.5 l/s
Design Head: 1.2m

CCTV survey undertaken on the 02/10/25 shows rounded single sized gravel at inlet

Ex SW Manhole - Replace with 1500Ø MH
CL: 63.96
IL: 62.06

Orchard

LAP

Flow Control Chamber [Orifice]
Design Flow: 8.1 l/s
Orifice Size: Ø50mm

Basin 1
Cut: 432m³
Fill: 3m³
Volume: 360m³
Invert: 67.40m
Depth: 1.2m

Attenuation basin

Existing Ordinary Watercourse
Bank Level: 69.40 m AOD
Bed Level: 69.06 m AOD

Easement buffer from top of bank less than 3m in this location to avoid impeding on the proposed hedge required for Biodiversity Net Gain

Existing Ordinary Watercourse
Bank Level: 67.78 m AOD
Bed Level: 66.80 m AOD
Pipe Outlet Invert Level 66.80 m AOD

Existing Ordinary Watercourse maintained by Broadbridge Heath Trust
Bank Levels: 68.07 / 67.76 m AOD
Bed Level: 67.47 m AOD

CCTV survey undertaken on the 02/10/25 shows 225Ø outlet pipe blocked at 6.51m

Existing Ordinary Watercourse maintained by Broadbridge Heath Trust
Bank Levels: 67.19 / 66.62 m AOD
Bed Level: 66.54 m AOD

Easement buffer from top of bank less than 3m in this location to avoid impeding on the wildlife corridor

Existing Ordinary Watercourse
Bank Levels: 64.89 / 64.78 m AOD
Bed Level: 64.56 m AOD

CCTV survey undertaken on the 02/10/25 shows 100Ø inlet pipe with four inlets from the north along the 47.28m length surveyed

Existing Ordinary Watercourse
Bank Levels: 63.72 / 63.70 m AOD
Bed Level: 63.46 m AOD

Connects to Existing Downstream Surface Water Manhole via Weir Inlet

Existing Ordinary Watercourse maintained by Broadbridge Heath Trust
Bank Levels: 68.79 / 68.12 m AOD
Bed Level: 67.29 m AOD

Trees and Dense Vegetation Limited Access Downstream During Survey, however, topographical survey indicates ordinary watercourse continues to flow to the south through downgradient foliage.

No changes proposed to ordinary watercourse other than culvert where road proposed.

Playing Field

Existing Surface Water Manhole maintained by Broadbridge Heath Trust
Cover Level: 63.86 m AOD
Invert Level: 62.96 m AOD

CCTV survey undertaken on the 02/10/25 shows 100Ø outlet pipe to 46.01m length surveyed and Buried Manhole located 7.67m from outfall to Existing Ordinary Watercourse. Interpreted that 100Ø outlet pipe connects to Buried Manhole.

Approximate Location of 225Ø Pipe Inlet from Northwest to Existing Ordinary Watercourse

Approximate Route of Existing Ordinary Watercourse

Existing Ordinary Watercourse maintained by Broadbridge Heath Trust
Bank Levels: 60.71 / 60.59 m AOD
Bed Level: 60.26 m AOD
2 no. Pipe Inlet Invert Levels 60.37 / 60.29 m AOD

Existing Ordinary Watercourse maintained by Broadbridge Heath Trust
Bank Levels: 60.00 / 59.56 m AOD
Bed Level: 59.81 m AOD

Existing Ordinary Watercourse maintained by Broadbridge Heath Trust
Bank Levels: 59.77 / 59.40 m AOD
Bed Level: 59.28 m AOD

Inset 2

CUTLINE

Refer to Main drawing

CUTLINE

Existing Ordinary Watercourse
Bank Level: 59.39 m AOD
Bed Level: 58.90 m AOD

Existing Ordinary Watercourse maintained by the Parish Council from this point
Bank Level: 58.40 m AOD
Bed Level: 58.01 m AOD

Approximate route of an Existing Ordinary Watercourse understood to be maintained by the Parish Council. The watercourse appears to be blocked by the Electrical Sub Station and an informal footpath to The Sussex Oak Public House Car Park. If it is not possible to reinstate the Ordinary Watercourse in this location due to the presence of the Electrical Sub Station and informal footpath, the open section of the Watercourse upstream of the Electrical Sub Station can be connected to the open section of the Watercourse downstream of the Electrical Sub Station via a connecting pipe; or the open section of the Watercourse upstream of the Electrical Sub Station can be connected to the adjacent existing 225Ø pipe (on the basis the Watercourse has been proven to connect to this pipe downstream of the Electrical Sub Station). The adjacent existing 225Ø pipe is currently interpreted to be the Surface Water Public Sewer from Southern Water Public Sewer Manhole 7751.

The Sussex Oak (PH)

El Sub Sta

CARYLL PLACE

Existing Ordinary Watercourse
Bank Level: 58.54 m AOD
Bed Level: 58.07 m AOD

Southern Water Surface Water Public Sewer Manhole 7751
CL: 58.35 m AOD
IL: 57.46 m AOD

Existing Surface Water Manhole maintained by Southern Water
Cover Level: 55.23 m AOD
Invert Level: 54.78 m AOD

CCTV survey undertaken on the 02/10/25 shows 225Ø inlet pipe to the Existing Surface Water Manhole with one inlet from the Existing Ordinary Watercourse along the 31.45m length surveyed. The 225Ø pipe is interpreted to be from Southern Water Surface Water Public Sewer Manhole 7751.

Could not survey outfall due to the presence of the Gully in the road. Based on Southern Water Sewer Map, Gully interpreted to discharge to 450Ø Public Sewer flowing north northeast under Church Street.

Survey undertaken on the 02/10/25 shows gully inlet and possible soffit of Manhole outlet

Tilletts Lane

Warnham C of E Primary School

No Evidence of Ordinary Watercourse

CUTLINE

Refer to Inset 2

CUTLINE

0 10 20 30 40m

SCALE IN METRES
1:500

Notes

1. All levels and dimensions are to be checked on site before any work commences. All dimensions are in metres unless stated otherwise.
2. This drawing has been based upon survey information supplied by InCO Surveys and Motion cannot guarantee the accuracy of the data provided.
3. Any discrepancies should be reported to the architect and/or engineer immediately, so that clarification can be sought prior to the commencement of works.
4. This drawing should be read in conjunction with all other relevant architect and engineering details, drawings and specification.
5. All works to be carried out in accordance with the Sewerage Sector Guidance Appendix C. All works to private drainage systems are to be in accordance with the Building Regulations Approved Document Part "H" 2015 edition.
6. 350mm minimum cover is to be provided for private pipes laid in soft/paved areas, with 900mm minimum cover to be provided for private pipes laid beneath roads / driveways unless not practicable. Where unachievable, shallow pipe drains may require protection using concrete surround or paving slabs bridging the trench, subject to the NHBC Inspector's requirements.
7. Manholes situated within areas accessible to motor vehicles are to be fitted with suitable strength covers and frames.

Legend

- Site Boundary
- Proportion of Type C No Infiltration Pervious Pavement Included in InfoDrainage Model (See Landscape Masterplan for all Pervious Pavement Locations)
- Surface Water Attenuation Basin
- Surface Water Gravity Pipe
- Foul Water Gravity Pipe
- Surface Water Manhole
- Surface Water Flow Control Chamber
- Proposed Headwall
- Foul Water Manhole
- Proposed Culvert
- Ordinary Watercourse
- Assumed Ordinary Watercourse Due to Trees and Dense Vegetation Resulting in Limited Access During Survey
- Indicative Surface Water Gully Location
- Exceedance Flow Route
- 3m Easement Buffer From Top of Bank Unless Otherwise Stated Within Site Boundary
- Required Minimum Distance of Wet Well from Habitable Buildings of 15m
- Existing Surface Water Gravity Pipe
- Existing Surface Water Manhole
- Existing Gully

Rev.	Description	Drn	Chk	App	Date
P07	Seventh Issue	ST	CG	JM	08/10/2025
P06	Sixth Issue	ST	CG	JM	08/10/2025
P05	Fifth Issue	ST	CG	JM	07/10/2025
P04	Fourth Issue	ST	CG	JM	30/09/2025
P03	Third Issue	ST	CG	JM	29/09/2025
P02	Second Issue	ST	CG	JM	09/05/2025
P01	First Issue	CC	CG	JM	18/04/2025

Drawing Status:

FOR PLANNING
NOT FOR CONSTRUCTION

motion
Guildford - Reading - London
www.motion.co.uk

Client:
Broadbridge Heath Trust

Project:
Land to the east of Tilletts Lane, Warnham

Title:
Drainage Strategy

Scale: 1:500 (@ A1)

Drawing: 2404044-0550

Revision: P07

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Appendix D

Updated Drainage Management and Maintenance Plan

Land to the east of Tilletts Lane,
Warnham

Drainage Management & Maintenance Plan

For

Broadbridge Heath Trust

motion

Document Control Sheet

Land to the east of Tilletts Lane,
Warnham

Broadbridge Heath Trust

This document has been issued and amended as follows:

Date	Issue	Prepared by	Approved by
08/05/2025	Final	Chris Gray	Jason Morgans
07/10/2025	Final B	Chris Gray	Jason Morgans

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Contents

1.0 Introduction

1.1 This document sets out the principles for the long-term management and maintenance of the proposed surface water drainage system at the Land east of Tilletts Lane, Warnham development.

1.2 The purpose of this document is to ensure that the site management company or their agents have a robust inspection and maintenance plan going forwards. This ensures the optimum operation of the surface water drainage system and that it will be continually maintained for the lifetime of the development. This will contribute to reducing the risk of surface water flooding both on- and off-site.

1.3 All those responsible for maintenance should follow relevant health and safety legislation for all activities listed within this report (including lone working, if relevant). Method statements and risk assessments should always be undertaken and made available, if requested.

1.4 This document has been produced by Motion on behalf of their client, Broadbridge Heath Trust. This document describes the typical management and maintenance tasks that are known at the outline design stage (maintenance frequencies and typical tasks, for example). These have been drawn from industry guidance such as CIRIA C753 - The SuDS Manual – and manufacturer's own guidance.

1.5 Maintenance is considered as a construction activity under the CDM Regulations 2015. Under the CDM Regulations, it is a requirement that a competent person be appointed to carry out a required role. CDM defines a competent person as an individual with sufficient knowledge of the specific tasks to be undertaken, as well as sufficient experience and ability to carry out their duties in relation to the task in a way that secures health and safety on site.

1.6 In recognition of the requirements of the CDM Regulations 2015, this surface water management and maintenance plan expects that the maintenance work will be carried out by a competent person who must have prior knowledge of the drainage components and SuDS systems on site.

1.7 There are limitations on what this document can prescribe at this time. At this stage this document cannot name the specific individuals who will carry out the maintenance and what equipment is to be used. Related to this, this document is unable to provide method statements for exactly how maintenance practices will be carried out. These can only be determined at the time of the maintenance being carried out and the exact maintenance need. Therefore, this is to be the responsibility of the site management company and/or the individuals carrying out the work. We urge those who are carrying out the maintenance to record this information and make it available to the Local Planning Authority (LPA), if required to do so. This drainage management and maintenance plan needs to be a living document that is owned and maintained by the adopting site management company. The intention of the report is to set out the principles for the long-term management and maintenance of the proposed surface water drainage system at the Land east of Tilletts Lane, Warnham development.

2.0 Maintenance Categories

2.1 There are three categories of maintenance activities referred to in this report. These are:

Regular maintenance (including inspections and monitoring)

- Regular maintenance consists of basic tasks done on a frequent and predictable schedule, including inspections, vegetation management, and litter, silt and debris removal.

Occasional maintenance

- Occasional maintenance comprises tasks that are likely to be required periodically, but on a much less frequent and predictable basis than the routine tasks (sediment removal is an example).

Remedial maintenance

- Remedial maintenance comprises of intermittent tasks that may be required to rectify faults associated with the system. The likelihood of faults can be minimised by correct installation, regular inspection and timely maintenance. Where remedial work is found to be necessary, it is likely to be due to site-specific characteristics or unforeseen events and, as such, timings are difficult to predict.
- This document should be read in conjunction with the design drawings of the drainage system, so that the location and type of each feature can be recognised and understood.

3.0 The Surface Water Drainage System

3.1 The proposed surface water drainage system is made up of a number of components. These include:

- Pervious Pavements/Filter Drains
- Attenuation Basins
- Catchpit Manholes/Silt Traps (Including filter drains)
- Hydrobrake/Flow Controls
- Manholes
- Pipes (Including filter drains and proposed culverts).

3.2 All components should be installed in accordance with the manufacturer's instructions and to the levels/arrangement as defined on the designer's drawings. Not doing so will invalidate any warranty provided by the manufacturer.

3.3 All maintenance and cleaning must be carried out in accordance with manufacturer's recommendations and by competent and suitably qualified staff, as defined in the CDM regulations 2015.

4.0 General Maintenance Principles

4.1 All surface water drainage systems, whether piped gravity systems, Sustainable Drainage Systems (SuDS), or flow control devices and pumps, require regular maintenance to keep them working at optimum efficiency and capacity. The maintenance of the surface water drainage system on the development should be carried out alongside other regular maintenance tasks on site.

4.2 Timely and adequate maintenance will increase the lifespan of all the drainage components. Inadequate maintenance will do the reverse. Therefore, the projected lifespan and anticipated replacement date of each drainage component cannot be forecast at the time of this document being produced.

4.3 The site management company and/or their agents are responsible for the maintenance of the surface water drainage system.

4.4 Construction activities can create and discharge significant quantities of sediment that will quickly clog the surface water drainage system. Therefore, construction-stage sediment removal is required immediately post-construction. This may require several cleans of the system during the first year after installation. The construction site manager should assess this and carry out cleaning as necessary.

4.5 Catchpit manholes/silt traps will be specified upstream of the SuDS. They will remove gross solids and the majority of silts. It is important that any debris build-up in the catchpit manholes/silt traps is removed at regular intervals. This will reduce the risk of the pervious pavements becoming silted up. It will maintain its design capacity and function.

4.6 Cleaning should also take place after large storms when there have been increased surface water flows and visible entrainment and deposition of debris.

4.7 An increased frequency of inspection and maintenance should be programmed into the autumn and winter months in acknowledgement that:

- Leaf fall from deciduous trees in autumn will result in an increased amount of leaf litter and an elevated blockage risk of drainage infrastructure.
- Increased rainfall during winter months will result in greater quantities of water moving through the drainage system and a greater input of silt and other debris.

4.8 Table 4.1, below, gives an overview of typical maintenance tasks and the frequency with which they need to be undertaken. Section 5 – Inspection and Maintenance Frequency of Components – will assign typical maintenance frequencies and tasks to the specific components used within the surface water drainage system used on the development.

Table 4.1: Typical maintenance tasks and frequencies

Activity	Indicative Frequency	Typical Tasks
Routine/regular maintenance	Monthly to annually	▸ Litter picking ▸ Silt removal ▸ Inspection of all inlets, outlets and control structures ▸ Weed removal and invasive plant control
Occasional maintenance	Annually up to 25 years	▸ Silt control around components ▸ Vegetation management around components ▸ Sweeping of pavement areas to remove surface silt ▸ Silt removal from catchpits, cellular storage structures
Remedial maintenance	As required	▸ Inlet/outlet repairs ▸ Erosion repairs ▸ Reinstatement of edgings ▸ Reinstatement following pollution ▸ Removal of silt build-up and leaf litter after storms ▸ Repair of vandalism ▸ Replacement of any blocked filter ▸ membranes/materials

5.0 Inspection and Maintenance Frequency of Components

5.1 Table 5.1 below lists each of the components used within the site's surface water drainage system. It suggests an indicative maintenance frequency for each component and ascribes typical maintenance tasks to them.

5.2 This list is not exhaustive, nor is it prescriptive. As mentioned in Section 3, additional, unscheduled maintenance may be required following adverse weather conditions or after autumn leaf falls. Additional maintenance tasks may be required to adequately clean and maintain individual components.

5.3 The list of components should be cross-referenced with the designer's drawings so that the location of each component can be identified.

5.4 It is the responsibility of the site management company and/or their agents to ensure that all necessary maintenance activities are carried out in a timely manner and that the design performance of each drainage component is preserved.

5.5 If there is any uncertainty regarding the correct and safe methods of cleaning, or what equipment should be used, the manufacturer should be consulted.

5.6 Upon completion of maintenance activities, a record should be kept of the work carried out. This should be retained and an annual maintenance report should be compiled, which should include the following:

- Observations resulting from inspections
- Maintenance and operation activities undertaken during the year
- Recommendations for inspections and maintenance programmes for the following year

5.7 On the last page is a table with suggested information should be recorded and included with the maintenance plan. As mentioned in the introduction to this document, this should be a living document and regularly updated, as required.

5.8 The Local Planning Authority Horsham District Council (HDC) may request to check and sign off any maintenance activities. Therefore, it is recommended that the LPA is contacted prior to any scheduled routine maintenance. Also, with reference to Table 5.1, the annual maintenance report, including a completed version of the table on the last page, should be offered to the LPA for their records and approval.

Table 5.1: Maintenance Frequency and Task for Drainage Components

Activity	Indicative Frequency	Anticipated Tasks
Pipes (filter drains and proposed culverts)	As required	▸ Identify any pipes that may not be operating properly and employ a competent, qualified contractor to inspect using CCTV. ▸ If the pipe is blocked with silt or debris, the pipe should be jetted clean from an upstream access point. All silt and debris should be captured and removed at a downstream access point. ▸ Clear perforated pipework of blockages ▸ Inspect once clean. ▸ If any other defects are encountered (cracks, displaced joints, root ingress), appropriate solutions should be discussed with a competent and qualified contractor. These

		services are usually provided by the same companies that offer CCTV surveys and pipe jetting services. ▸ The proposed culvert under the access should be desilted and cleared of leaf litter and other debris after storms; monthly in the autumn and winter; and quarterly during the rest of the year.
Manholes	Annually	▸ Inspect/identify any damage or areas that are not operating correctly ▸ Remove silt, litter, leaves and other detritus. ▸ Inspect once clean.
Catchpit Manholes/Silt Traps (Including filter drains)	Twice a year, before and after autumn/winter	▸ Inspect/identify any damage or areas that are not operating correctly ▸ Remove silt, litter, leaves and other detritus. ▸ Inspect once clean.
Attenuation Basin - **A 3m easement buffer (from top of bank) for all SuDS basins and watercourses has been added to Motion drawing number 2404044-0500-P05 [Drainage Strategy] to allow for maintenance access. However, there is a location adjacent to Basin 1 where less than 3m can be provided due to the proposed hedge required for Biodiversity Net Gain; and a location adjacent to Basin 2 where less than 3m can be provided to avoid impeding on a wildlife corridor. These locations have been added to the updated Motion drawing number 2404044-0500-P05 [Drainage Strategy]. Please refer to Section 6.0 of the Landscape and Ecology Management Plan for maintenance requirements relating to soft landscaping.**	Monthly in Summer, as required in Winter	▸ Responsibility should be with landscape contractors. ▸ Maintenance tasks are not that different from standard public open space. ▸ Adequate access needs to be provided to the area. ▸ Regular mowing should take place across maintenance access routes, amenity areas, across embankments and the main storage area. Remaining areas can remain as 'meadow'. Mowed grass lengths of 75 – 100mm are appropriate. ▸ Grass clippings should be disposed of off-site. ▸ Any dead growth should be cleared before the start of the growing season. ▸ Any permanently wet areas with emergent aquatic vegetation should be managed as ponds or wetlands. ▸ Remove any sediment build-up as required. ▸ Check any inlets and outlets for blockages and clear as required. ▸ Check any flow control devices, if present.
HydroBrake/Flow Control chamber	Every three months for the first year, then annually thereafter	▸ Contact manufacturer for instruction on approved and safe inspection and maintenance practices.

		▸ Inspect and check functionality. Remove any detritus as required. ▸ Inspect once clean.
Pervious Pavements/Filter Drains	Once a year after autumn leaf fall, or reduced frequency as required, based on site-specific observations of clogging or manufacturer's recommendations.	▸ Remove litter including leaf litter and debris from surface and agitate surface to ensure no vegetation or moss is allowed to establish and grow. ▸ Locally refill with the correct aggregate once a year or as appropriate ▸ Remove weeds from the surface through the application of glyphosate-based weed killers ▸ Stabilise and mow contributing and adjacent areas. ▸ Inspect once clean. ▸ See Table 20.15 of CIRIA C753 for more information. ▸ Major oil spills have the potential to contaminate the surface and the underlying crushed stone. In the event of a major oil spill, the area of crushed stone that is affected should be removed, cleaned and reinstalled.

Date	Component requiring maintenance	Issues prompting maintenance	Scheduled maintenance (Y/N)	Maintenance carried out	Additional works required (Y/N). If yes, please detail	Next scheduled date of inspection and maintenance

Appendix E

Updated Hydraulic Calculations Utilising a Surcharged Outfall to the Top of Bank Level

Land to the east of Tilletts Lane, Warnham:	Date: 07/10/2025		
	Designed by: CC	Checked by: CG	Approved By: JM
Report Details: Type: Junctions Storm Phase: Surface Network 1	Motion: 84 North Street Guildford GU1 4AU		

Name	Junction Type	Easting (m)	Northing (m)	Cover Level (m)	Depth (m)	Invert Level (m)	Chamber Shape	Diameter (m)	Lock
S1	Manhole	515436.868	133946.794	77.425	1.350	76.075	Circular	1.500	None
S2	Manhole	515469.582	133943.549	76.428	1.350	75.078	Circular	1.500	None
S3	Manhole	515472.726	133910.292	73.577	1.350	72.227	Circular	1.500	None
S4	Manhole	515475.414	133874.383	70.521	1.350	69.171	Circular	1.500	None
S7	Manhole	515475.373	133871.173	70.443	3.152	67.291	Circular	1.200	None
S8	Manhole	515538.047	133866.734	70.782	3.930	66.852	Circular	1.200	None
S9	Manhole	515575.793	133861.502	69.939	3.353	66.586	Circular	1.200	None
S10	Manhole	515587.547	133862.038	69.670	3.166	66.504	Circular	1.200	None
S13	Manhole	515619.612	133886.395	69.534	3.421	66.113	Circular	1.200	None
S14	Manhole	515629.585	133902.913	69.726	3.742	65.984	Circular	1.200	None
S15	Manhole	515636.932	133904.426	69.639	3.705	65.934	Circular	1.200	None
S16	Manhole	515663.843	133897.596	68.641	2.912	65.729	Circular	1.200	None
S17	Manhole	515700.532	133897.478	67.070	1.566	65.504	Circular	1.200	All
S19	Manhole	515507.156	133869.712	70.980	3.911	67.069	Circular	1.200	None
S20	Manhole	515565.472	133931.596	74.063	1.350	72.713	Circular	1.500	None
S21	Manhole	515583.304	133928.886	73.176	1.350	71.826	Circular	1.500	None
S22	Manhole	515576.857	133887.564	71.057	1.350	69.707	Circular	1.500	None
S23	Manhole	515507.441	133937.866	75.795	1.350	74.445	Circular	1.500	None
S24	Manhole	515504.694	133910.127	73.760	1.350	72.410	Circular	1.500	None
S25	Manhole	515507.685	133885.603	71.951	1.350	70.601	Circular	1.500	None
S26	Manhole	515543.189	133927.752	74.483	1.350	73.133	Circular	1.500	None
S27	Manhole	515526.418	133934.778	75.354	1.350	74.004	Circular	1.500	None
S28	Manhole	515540.713	133916.058	74.123	1.550	72.573	Circular	1.500	None
S29	Manhole	515538.677	133878.937	71.524	1.350	70.174	Circular	1.500	None
S30	Manhole	515597.474	133928.160	72.478	1.350	71.128	Circular	1.500	None
S31	Manhole	515611.438	133926.652	71.683	1.447	70.236	Circular	1.500	None
S32	Manhole	515621.490	133919.523	70.803	1.350	69.453	Circular	1.500	None
S33	Manhole	515507.144	133872.502	71.047	1.350	69.697	Circular	1.500	None
S35	Manhole	515756.055	133866.867	63.960	1.000	62.960	Circular	1.500	All
S36	Manhole	515683.443	133896.171	67.711	2.093	65.618	Circular	1.200	None
S37	Manhole	515493.600	133843.884	69.453	1.350	68.103	Circular	1.500	None
S38	Manhole	515475.416	133843.418	69.616	1.829	67.788	Circular	1.200	None
S39	Manhole	515683.374	133880.656	67.001	1.054	65.947	Circular	1.500	None
S44	Manhole	515737.506	133910.162	67.243	1.425	65.818	Circular	1.200	All
S43	Manhole	515746.222	133928.343	68.205	1.665	66.540	Circular	1.200	All
S41	Manhole	515737.749	133951.346	70.109	3.406	66.703	Circular	1.200	All
S40	Manhole	515739.468	133964.779	70.800	4.006	66.794	Circular	1.200	All
S45	Manhole	515750.907	133972.798	71.065	4.178	66.887	Circular	1.200	All
S46	Manhole	515777.018	133969.151	70.524	3.461	67.063	Circular	1.200	All
S47	Manhole	515826.686	133984.925	68.535	1.125	67.410	Circular	1.200	All

Land to the east of Tilletts Lane, Warnham:	Date: 07/10/2025		
	Designed by: CC	Checked by: CG	Approved By: JM
Report Details: Type: Junctions Storm Phase: Surface Network 1	Motion: 84 North Street Guildford GU1 4AU		

Inlets

Junction	Inlet Name	Incoming Item(s)	Bypass Destination	Capacity Type
S1	Inlet	76.39m - 1.000 50.66m - 1.000 138.58m - 1.000 260.34m - 1.000	(None)	No Restriction
S2	Inlet	S1-S2 50.66m - 1.001 55.60m - 1.001 48.15m - 1.001 203.74m - 1.001 75.47m - 1.001	(None)	No Restriction
S3	Inlet	48.15m - 1.002 48.15m - 1.002 57.96m - 1.002 50.66m - 1.002 227.27m - 1.002 S2-S3	(None)	No Restriction
S4	Inlet	S3-S4	(None)	No Restriction
	Inlet (1)	S33-S4 PP1 Outlet	(None)	No Restriction
S7	Inlet	S6-S7	(None)	No Restriction

Junction	Inlet Name	Incoming Item(s)	Bypass Destination	Capacity Type
S8	Inlet	57.96m - 1.007 48.15m - 1.007 54.14m - 1.007 62.17m - 1.007 56.23m - 1.007 S19-S8 S29-S8 81.15m - 4.003	(None)	No Restriction
S9	Inlet	S8-S9 S22-S9 58.13m - 1.008 24.96m - 1.008	(None)	No Restriction
S10	Inlet	S9-S10 55.60m - 1.009 50.66m - 1.009 PP11 Oulet	(None)	No Restriction
S13	Inlet	48.15m - 1.011 S12-S13 48.15m - 1.010 187.59m - 1.010	(None)	No Restriction
	Inlet (1)	PP2 Outlet	(None)	No Restriction
	Inlet (2)	152.27m - 1.011	(None)	No Restriction
S14	Inlet	S32-S14 PP10 Outlet 67.51m - 1.012	(None)	No Restriction
	Inlet (1)	S13-S14	(None)	No Restriction

Junction	Inlet Name	Incoming Item(s)	Bypass Destination	Capacity Type
S15	Inlet	S14-S15 57.96m - 1.013 77.20m - 1.013 54.14m - 1.013	(None)	No Restriction
S16	Inlet	S15-S16 48.15m - 1.013 48.15m - 1.014 79.93m - 1.015 PP4 Outlet 54.14m - 1.014 PP3 Outlet	(None)	No Restriction
	Inlet (1)	203.16m - 1.013	(None)	No Restriction
S17	Inlet	220.69m - 1.016 S36-S17 54.14m - 1.016 74.55m - 1.015 75.60m - 1.015 54.14m - 1.014 57.96m - 1.014 74.05m - 1.016 273.47m - 1.014	(None)	No Restriction
	Inlet (1)	123.57m - 1.016	(None)	No Restriction

Junction	Inlet Name	Incoming Item(s)	Bypass Destination	Capacity Type
S19	Inlet	S7-S19 56.44m - 1.006 56.44m - 1.006 56.44m - 1.006 45.71m - 1.006 91.82m - 1.006 47.41m - 1.005 56.44m - 1.005	(None)	No Restriction
S20	Inlet	57.96m - 5.000 54.14m - 5.000 48.15m - 5.000 367.70m - 5.000 54.14m - 5.000 84.88m - 5.000 55.29m - 5.000	(None)	No Restriction
S21	Inlet	206.67m - 5.001 63.02m - 5.001 63.04m - 5.001 54.15m - 5.001 54.15m - 5.001 154.34m - 5.001 27.89m - 5.001 46.19m - 5.001 27.52m - 5.001 S20-S21	(None)	No Restriction

Junction	Inlet Name	Incoming Item(s)	Bypass Destination	Capacity Type
S22	Inlet	S21-S22 115.47m - 5.002 147.87m - 5.002 24.60m - 5.002	(None)	No Restriction
S23	Inlet	65.46m - 2.000 48.15m - 2.000 48.15m - 2.000 73.53m - 2.000 81.23m - 2.000 54.14m - 2.000 26.55m - 2.000 102.48m - 2.000 40.71m - 2.000 120.48m - 2.000 133.57m - 2.000 26.22m - 2.000 207.20m - 2.000	(None)	No Restriction
S24	Inlet	54.14m - 2.001 40.24m - 2.001 S23-S24	(None)	No Restriction
	Inlet (1)	187.86m - 2.000	(None)	No Restriction
S25	Inlet	S24-S25 54.15m - 2.002 29.70m - 2.002	(None)	No Restriction

Junction	Inlet Name	Incoming Item(s)	Bypass Destination	Capacity Type
S26	Inlet	S27-S26 57.96m - 4.001 189.19m - 4.001 PP9 Outlet	(None)	No Restriction
S27	Inlet	62.59m - 4.000 68.61m - 4.000 74.05m - 4.000 57.96m - 4.000 80.64m - 4.000 112.27m - 4.000	(None)	No Restriction
S28	Inlet	50.66m - 4.002 50.66m - 4.002 66.03m - 4.002 50.66m - 4.002 50.66m - 4.002 56.44m - 4.002 56.44m - 4.002 56.44m - 4.002 472.96m - 4.002 92.32m - 4.002 92.56m - 4.002 17.78m - 4.002 S26-S28	(None)	No Restriction
S29	Inlet	S28-S29 66.03m - 4.003 50.66m - 4.003	(None)	No Restriction

Junction	Inlet Name	Incoming Item(s)	Bypass Destination	Capacity Type
S30	Inlet	48.15m - 6.000 261.56m - 6.000 53.88m - 6.000 78.04m - 6.000 71.91m - 6.000	(None)	No Restriction
S31	Inlet	S30-S31 54.14m - 6.001 74.05m - 6.001	(None)	No Restriction
S32	Inlet	55.60m - 6.002 50.66m - 6.002 S31-S32 57.95m - 6.001	(None)	No Restriction
S33	Inlet	S25-S33 231.63m - 2.001	(None)	No Restriction
S35	Inlet	S34-S35	(None)	No Restriction
S36	Inlet	S39-S36 S16-S36 PP5 Outlet PP6 Outlet PP7 Outlet	(None)	No Restriction
S37	Inlet	PP8 Outlet	(None)	No Restriction
S38	Inlet	57.55m - 3.001 57.55m - 3.001 140m2 - 3.001 40m2 - 3.001 S37-S38 98.38m - 1.003	(None)	No Restriction
S39	Inlet	72.00m - 7.000 206.75m - 7.000	(None)	No Restriction

Land to the east of Tilletts Lane, Warnham:	Date: 07/10/2025		
	Designed by: CC	Checked by: CG	Approved By: JM
Report Details: Type: Junctions Storm Phase: Surface Network 1	Motion: 84 North Street Guildford GU1 4AU		

Junction	Inlet Name	Incoming Item(s)	Bypass Destination	Capacity Type
S44	Inlet	S43-S44 143.61m - 1.016 74.05m - 1.016	(None)	No Restriction
S43	Inlet	S41-S43	(None)	No Restriction
S41	Inlet	S40-S41	(None)	No Restriction
	Inlet (1)	426.77m - 1.016	(None)	No Restriction
S40	Inlet	S45-S40	(None)	No Restriction
S45	Inlet	S46-S45	(None)	No Restriction
	Inlet (1)	355.32m - 1.016	(None)	No Restriction
S46	Inlet	S47-S46	(None)	No Restriction
S47	Inlet	660m2 - 1.016	(None)	No Restriction

Land to the east of Tilletts Lane, Warnham:	Date: 07/10/2025		
	Designed by: CC	Checked by: CG	Approved By: JM
Report Details: Type: Junctions Storm Phase: Surface Network 1	Motion: 84 North Street Guildford GU1 4AU		

Outlets

Junction	Outlet Name	Outgoing Connection	Outlet Type
S1	Outlet	S1-S2	Free Discharge
S2	Outlet	S2-S3	Free Discharge
S3	Outlet	S3-S4	Free Discharge
S4	Outlet	S4-S6	Free Discharge
S7	Outlet	S7-S19	Orifice
	Diameter (m)	0.050	
	Coefficient of Discharge	0.600	
	Invert Level (m)	67.291	
S8	Outlet	S8-S9	Free Discharge
S9	Outlet	S9-S10	Free Discharge
S10	Outlet	S10-S12	Free Discharge
S13	Outlet	S13-S14	Free Discharge
S14	Outlet	S14-S15	Free Discharge
S15	Outlet	S15-S16	Free Discharge
S16	Outlet	S16-S36	Free Discharge
S17	Outlet	S17-S34	Free Discharge
S19	Outlet	S19-S8	Free Discharge
S20	Outlet	S20-S21	Free Discharge
S21	Outlet	S21-S22	Free Discharge
S22	Outlet	S22-S9	Free Discharge
S23	Outlet	S23-S24	Free Discharge
S24	Outlet	S24-S25	Free Discharge
S25	Outlet	S25-S33	Free Discharge
S26	Outlet	S26-S28	Free Discharge
S27	Outlet	S27-S26	Free Discharge
S28	Outlet	S28-S29	Free Discharge
S29	Outlet	S29-S8	Free Discharge
S30	Outlet	S30-S31	Free Discharge
S31	Outlet	S31-S32	Free Discharge
S32	Outlet	S32-S14	Free Discharge
S33	Outlet	S33-S4	Free Discharge
S36	Outlet	S36-S17	Free Discharge
S37	Outlet	S37-S38	Free Discharge
S38	Outlet	S38-S6	Free Discharge
S39	Outlet	S39-S36	Free Discharge
S44	Outlet	S44-S34	Free Discharge
S43	Outlet	S43-S44	Free Discharge
S41	Outlet	S41-S43	Free Discharge
S40	Outlet	S40-S41	Free Discharge
S45	Outlet	S45-S40	Free Discharge
S46	Outlet	S46-S45	Free Discharge
S47	Outlet	S47-S46	Free Discharge

Basin 2

Type : Pond

Dimensions

Exceedance Level (m)	67.600
Depth (m)	1.200
Base Level (m)	66.400
Freeboard (mm)	0
Initial Depth (m)	0.000
Porosity (%)	100
Average Slope (1:X)	3.60
Total Volume (m³)	423.873

Depth (m)	Area (m²)	Volume (m³)
0.000	217.89	0.000
0.100	238.13	22.794
0.200	259.34	47.660
0.300	281.12	74.676
0.400	303.46	103.898
0.500	326.37	135.382
0.600	349.84	169.185
0.700	373.88	205.365
0.800	398.48	243.976
0.900	423.65	285.076
1.000	449.38	328.721
1.100	475.68	374.968
1.200	502.54	423.873

Inlets

Inlet

Inlet Type	Point Inflow
Incoming Item(s)	S10-S12
Bypass Destination	(None)
Capacity Type	No Restriction

Outlets

Outlet

Outgoing Connection	S12-S13
Outlet Type	Orifice

Diameter (m)	0.069
Coefficient of Discharge	0.600
Invert Level (m)	66.400

Advanced

Perimeter	Circular
Length (m)	35.466
Friction Scheme	Manning's n
n	0.03

Basin 3

Type : Pond

Dimensions

Exceedance Level (m)	65.700
Depth (m)	1.200
Base Level (m)	64.500
Freeboard (mm)	0
Initial Depth (m)	0.000
Porosity (%)	100
Average Slope (1:X)	3.70
Total Volume (m³)	801.756

Depth (m)	Area (m²)	Volume (m³)
0.000	473.11	0.000
0.100	503.13	48.804
0.200	534.32	100.669
0.300	566.08	155.681
0.400	598.40	213.897
0.500	631.28	275.374
0.600	664.74	340.167
0.700	698.76	408.335
0.800	733.34	479.933
0.900	768.49	555.017
1.000	804.20	633.645
1.100	840.48	715.872
1.200	877.33	801.756

Inlets

Inlet

Inlet Type	Point Inflow
Incoming Item(s)	S17-S34
Bypass Destination	(None)
Capacity Type	No Restriction

Inlet (1)

Inlet Type	Point Inflow
Incoming Item(s)	S44-S34
Bypass Destination	(None)
Capacity Type	No Restriction

Land to the east of Tilletts Lane, Warnham:	Date: 07/10/2025		
	Designed by: CC	Checked by: CG	Approved By: JM
Report Details: Type: Stormwater Controls Storm Phase: Surface Network 1	Motion: 84 North Street Guildford GU1 4AU		

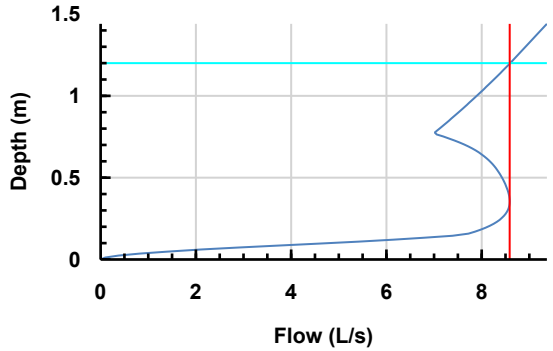
Outlets

Outlet

Outgoing Connection	S34-S35
Outlet Type	Hydro-Brake®

Invert Level (m)	64.500
Design Depth (m)	1.200
Design Flow (L/s)	8.6
Objective	Minimise Upstream Storage Requirements
Application	Surface Water Only
Sump Available	☑

Unit Reference	SHE-0133-8600-1200-8600



Advanced

Perimeter	Circular
Length (m)	49.294
Friction Scheme	Manning's n
n	0.03

Basin 1

Type : Pond

Dimensions

Exceedance Level (m)	68.600
Depth (m)	1.200
Base Level (m)	67.400
Freeboard (mm)	0
Initial Depth (m)	0.000
Porosity (%)	100
Average Slope (1:X)	3.083
Total Volume (m³)	360.314

Depth (m)	Area (m²)	Volume (m³)
0.000	194.277	0.000
0.100	209.703	20.194
0.200	226.004	41.974
0.300	242.870	65.413
0.400	260.301	90.567
0.500	278.298	117.491
0.600	296.860	146.244
0.700	315.987	176.882
0.800	335.680	209.460
0.900	355.937	244.036
1.000	376.761	280.666
1.100	398.149	319.407
1.200	420.103	360.314

Inlets

Inlet

Inlet Type	Point Inflow
Incoming Item(s)	S4-S6
Bypass Destination	(None)
Capacity Type	No Restriction

Inlet (1)

Inlet Type	Point Inflow
Incoming Item(s)	S38-S6
Bypass Destination	(None)
Capacity Type	No Restriction

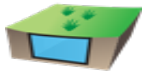
Outlets

Outlet

Outgoing Connection	S6-S7
Outlet Type	Free Discharge

Advanced

Perimeter	Circular
Length (m)	27.051
Friction Scheme	Manning's n
n	0.03



Porous Paving 4

Type : Tank

Dimensions

Exceedance Level (m)	68.641
Depth (m)	0.580
Base Level (m)	68.061
Freeboard (mm)	130
Initial Depth (m)	0.000
Porosity (%)	30
Average Slope (1:X)	0.00
Total Volume (m³)	5.140

Depth (m)	Area (m²)	Volume (m³)
0.000	38.075	0.000
0.450	38.075	5.140

Inlets

Inlet

Inlet Type	Lateral Inflow
Incoming Item(s)	94.53m - 1.013
Bypass Destination	(None)
Capacity Type	No Restriction

Outlets

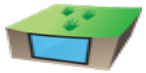
Outlet

Outgoing Connection	PP4 Outlet
Outlet Type	Orifice

Diameter (m)	0.050
Coefficient of Discharge	0.600
Invert Level (m)	68.061

Advanced

Perimeter	Rectangular
Length (m)	9.132
Friction Scheme	Manning's n
n	0.03



Porous Paving 5

Type : Tank

Dimensions

Exceedance Level (m)	67.711
Depth (m)	0.580
Base Level (m)	67.131
Freeboard (mm)	130
Initial Depth (m)	0.000
Porosity (%)	30
Average Slope (1:X)	0.00
Total Volume (m³)	5.059

Depth (m)	Area (m²)	Volume (m³)
0.000	37.473	0.000
0.450	37.473	5.059

Inlets

Outlets

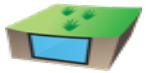
Outlet

Outgoing Connection	PP5 Outlet
Outlet Type	Orifice

Diameter (m)	0.050
Coefficient of Discharge	0.600
Invert Level (m)	67.131

Advanced

Perimeter	Circular
Length (m)	9.026



Porous Paving 6

Type : Tank

Dimensions

Exceedance Level (m)	67.711
Depth (m)	0.580
Base Level (m)	67.131
Freeboard (mm)	130
Initial Depth (m)	0.000
Porosity (%)	30
Average Slope (1:X)	0.00
Total Volume (m³)	5.064

Depth (m)	Area (m²)	Volume (m³)
0.000	37.514	0.000
0.450	37.514	5.064

Inlets

Inlet

Inlet Type	Lateral Inflow
Incoming Item(s)	92.82m - 7.000
Bypass Destination	(None)
Capacity Type	No Restriction

Outlets

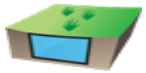
Outlet

Outgoing Connection	PP6 Outlet
Outlet Type	Orifice

Diameter (m)	0.050
Coefficient of Discharge	0.600
Invert Level (m)	67.131

Advanced

Perimeter	Rectangular
Length (m)	9.017
Friction Scheme	Manning's n
n	0.03



Porous Paving 7

Type : Tank

Dimensions

Exceedance Level (m)	67.711
Depth (m)	0.580
Base Level (m)	67.131
Freeboard (mm)	130
Initial Depth (m)	0.000
Porosity (%)	30
Average Slope (1:X)	0.00
Total Volume (m³)	6.763

Depth (m)	Area (m²)	Volume (m³)
0.000	50.099	0.000
0.450	50.099	6.763

Inlets

Inlet

Inlet Type	Lateral Inflow
Incoming Item(s)	51.58m - 7.000
Bypass Destination	(None)
Capacity Type	No Restriction

Outlets

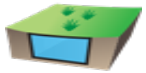
Outlet

Outgoing Connection	PP7 Outlet
Outlet Type	Orifice

Diameter (m)	0.050
Coefficient of Discharge	0.600
Invert Level (m)	67.131

Advanced

Perimeter	Rectangular
Length (m)	11.189
Friction Scheme	Manning's n
n	0.03



Porous Paving 1

Type : Tank

Dimensions

Exceedance Level (m)	70.521
Depth (m)	0.580
Base Level (m)	69.941
Freeboard (mm)	130
Initial Depth (m)	0.000
Porosity (%)	30
Average Slope (1:X)	0.00
Total Volume (m³)	41.036

Depth (m)	Area (m²)	Volume (m³)
0.000	303.972	0.000
0.450	303.972	41.036

Inlets

Inlet

Inlet Type	Lateral Inflow
Incoming Item(s)	267.49m - 2.003
Bypass Destination	(None)
Capacity Type	No Restriction

Outlets

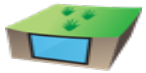
Outlet

Outgoing Connection	PP1 Outlet
Outlet Type	Orifice

Diameter (m)	0.050
Coefficient of Discharge	0.600
Invert Level (m)	69.941

Advanced

Perimeter	Rectangular
Length (m)	56.693
Friction Scheme	Manning's n
n	0.03



Porous Paving 8

Type : Tank

Dimensions

Exceedance Level (m)	69.453
Depth (m)	0.580
Base Level (m)	68.873
Freeboard (mm)	130
Initial Depth (m)	0.000
Porosity (%)	30
Average Slope (1:X)	0.00
Total Volume (m³)	35.311

Depth (m)	Area (m²)	Volume (m³)
0.000	261.562	0.000
0.450	261.562	35.311

Inlets

Inlet

Inlet Type	Lateral Inflow
Incoming Item(s)	128.25m - 3.000 128.31m - 3.000
Bypass Destination	(None)
Capacity Type	No Restriction

Outlets

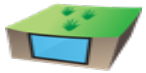
Outlet

Outgoing Connection	PP8 Outlet
Outlet Type	Orifice

Diameter (m)	0.050
Coefficient of Discharge	0.600
Invert Level (m)	68.873

Advanced

Perimeter	Rectangular
Length (m)	27.534
Friction Scheme	Manning's n
n	0.03



Porous Paving 9

Type : Tank

Dimensions

Exceedance Level (m)	74.483
Depth (m)	0.580
Base Level (m)	73.903
Freeboard (mm)	130
Initial Depth (m)	0.000
Porosity (%)	30
Average Slope (1:X)	0.00
Total Volume (m³)	58.520

Depth (m)	Area (m²)	Volume (m³)
0.000	433.485	0.000
0.450	433.485	58.520

Inlets

Inlet

Inlet Type	Lateral Inflow
Incoming Item(s)	174.04m - 4.000
Bypass Destination	(None)
Capacity Type	No Restriction

Outlets

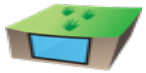
Outlet

Outgoing Connection	PP9 Outlet
Outlet Type	Orifice

Diameter (m)	0.050
Coefficient of Discharge	0.600
Invert Level (m)	73.903

Advanced

Perimeter	Rectangular
Length (m)	85.070
Friction Scheme	Manning's n
n	0.03



Porous Paving 10

Type : Tank

Dimensions

Exceedance Level (m)	69.726
Depth (m)	0.580
Base Level (m)	69.146
Freeboard (mm)	130
Initial Depth (m)	0.000
Porosity (%)	30
Average Slope (1:X)	0.00
Total Volume (m³)	10.858

Depth (m)	Area (m²)	Volume (m³)
0.000	80.431	0.000
0.450	80.431	10.858

Inlets

Inlet

Inlet Type	Lateral Inflow
Incoming Item(s)	122.37m - 6.002
Bypass Destination	(None)
Capacity Type	No Restriction

Outlets

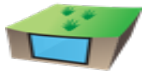
Outlet

Outgoing Connection	PP10 Outlet
Outlet Type	Orifice

Diameter (m)	0.050
Coefficient of Discharge	0.600
Invert Level (m)	69.146

Advanced

Perimeter	Rectangular
Length (m)	16.125
Friction Scheme	Manning's n
n	0.03



Porous Paving 11

Type : Tank

Dimensions

Exceedance Level (m)	69.670
Depth (m)	0.580
Base Level (m)	69.090
Freeboard (mm)	130
Initial Depth (m)	0.000
Porosity (%)	30
Average Slope (1:X)	0.00
Total Volume (m³)	46.833

Depth (m)	Area (m²)	Volume (m³)
0.000	346.912	0.000
0.450	346.912	46.833

Inlets

Inlet

Inlet Type	Lateral Inflow
Incoming Item(s)	130.76m - 1.006 239.52m - 1.007
Bypass Destination	(None)
Capacity Type	No Restriction

Outlets

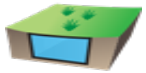
Outlet

Outgoing Connection	PP11 Oulet
Outlet Type	Orifice

Diameter (m)	0.050
Coefficient of Discharge	0.600
Invert Level (m)	69.090

Advanced

Perimeter	Rectangular
Length (m)	55.140
Friction Scheme	Manning's n
n	0.03



Porous Paving 2

Type : Tank

Dimensions

Exceedance Level (m)	69.534
Depth (m)	0.580
Base Level (m)	68.954
Freeboard (mm)	130
Initial Depth (m)	0.000
Porosity (%)	30
Average Slope (1:X)	0.00
Total Volume (m³)	15.833

Depth (m)	Area (m²)	Volume (m³)
0.000	117.284	0.000
0.450	117.284	15.833

Inlets

Inlet

Inlet Type	Lateral Inflow
Incoming Item(s)	276.92m - 1.009
Bypass Destination	(None)
Capacity Type	No Restriction

Outlets

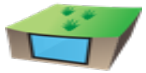
Outlet

Outgoing Connection	PP2 Outlet
Outlet Type	Orifice

Diameter (m)	0.050
Coefficient of Discharge	0.600
Invert Level (m)	68.954

Advanced

Perimeter	Rectangular
Length (m)	47.748
Friction Scheme	Manning's n
n	0.03



Porous Paving 3

Type : Tank

Dimensions

Exceedance Level (m)	68.641
Depth (m)	0.580
Base Level (m)	68.061
Freeboard (mm)	130
Initial Depth (m)	0.000
Porosity (%)	30
Average Slope (1:X)	0.00
Total Volume (m³)	5.123

Depth (m)	Area (m²)	Volume (m³)
0.000	37.949	0.000
0.450	37.949	5.123

Inlets

Outlets

Outlet

Outgoing Connection	PP3 Outlet
Outlet Type	Orifice

Diameter (m)	0.050
Coefficient of Discharge	0.600
Invert Level (m)	68.061

Advanced

Perimeter	Circular
Length (m)	9.105

Land to the east of Tilletts Lane, Warnham:	Date: 07/10/2025		
	Designed by: CC	Checked by: CG	Approved By: JM
Report Details: Type: Inflow Summary Storm Phase: Surface Network 1	Motion: 84 North Street Guildford GU1 4AU		

Inflow Label	Connected To	Flow (L/s)	Runoff Method	Area (ha)	Percentage Impervious (%)	Urban Creep (%)	Adjusted Percentage Impervious (%)	Area Analysed (ha)
17.78m - 4.002	S28		Time of Concentration	0.002	100	0	100	0.002
24.60m - 5.002	S22		Time of Concentration	0.003	100	0	100	0.003
24.96m - 1.008	S9		Time of Concentration	0.002	100	0	100	0.002
26.22m - 2.000	S23		Time of Concentration	0.003	100	0	100	0.003
26.55m - 2.000	S23		Time of Concentration	0.003	100	10	110	0.003
27.52m - 5.001	S21		Time of Concentration	0.003	100	0	100	0.003
27.89m - 5.001	S21		Time of Concentration	0.003	100	0	100	0.003
29.70m - 2.002	S25		Time of Concentration	0.002	100	0	100	0.002
40m2 - 3.001	S38		Time of Concentration	0.004	100	0	100	0.004
40.24m - 2.001	S24		Time of Concentration	0.004	100	0	100	0.004
40.71m - 2.000	S23		Time of Concentration	0.004	100	0	100	0.004
45.71m - 1.006	S19		Time of Concentration	0.005	100	0	100	0.005
46.19m - 5.001	S21		Time of Concentration	0.005	100	0	100	0.005
47.41m - 1.005	S19		Time of Concentration	0.005	100	0	100	0.005
48.15m - 1.001	S2		Time of Concentration	0.005	100	10	110	0.005
48.15m - 1.002	S3		Time of Concentration	0.005	100	10	110	0.005
48.15m - 1.002	S3		Time of Concentration	0.005	100	10	110	0.005
48.15m - 1.007	S8		Time of Concentration	0.005	100	10	110	0.005
48.15m - 1.010	S13		Time of Concentration	0.005	100	10	110	0.005
48.15m - 1.011	S13		Time of Concentration	0.005	100	10	110	0.005
48.15m - 1.013	S16		Time of Concentration	0.005	100	10	110	0.005
48.15m - 1.014	S16		Time of Concentration	0.005	100	10	110	0.005
48.15m - 2.000	S23		Time of Concentration	0.005	100	10	110	0.005
48.15m - 2.000	S23		Time of Concentration	0.005	100	10	110	0.005

48.15m - 5.000	S20		Time of Concentration	0.005	100	10	110	0.005
48.15m - 6.000	S30		Time of Concentration	0.005	100	10	110	0.005
50.66m - 1.000	S1		Time of Concentration	0.005	100	10	110	0.006
50.66m - 1.001	S2		Time of Concentration	0.005	100	10	110	0.006
50.66m - 1.002	S3		Time of Concentration	0.005	100	10	110	0.006
50.66m - 1.009	S10		Time of Concentration	0.005	100	10	110	0.006
50.66m - 4.002	S28		Time of Concentration	0.005	100	10	110	0.006
50.66m - 4.002	S28		Time of Concentration	0.005	100	10	110	0.006
50.66m - 4.002	S28		Time of Concentration	0.005	100	10	110	0.006
50.66m - 4.002	S28		Time of Concentration	0.005	100	10	110	0.006
50.66m - 4.003	S29		Time of Concentration	0.005	100	10	110	0.006
50.66m - 6.002	S32		Time of Concentration	0.005	100	10	110	0.006
51.58m - 7.000	Porous Paving 7		Time of Concentration	0.005	100	0	100	0.005
53.88m - 6.000	S30		Time of Concentration	0.005	100	10	110	0.006
54.14m - 1.007	S8		Time of Concentration	0.005	100	0	100	0.005
54.14m - 1.013	S15		Time of Concentration	0.005	100	10	110	0.006
54.14m - 1.014	S16		Time of Concentration	0.005	100	10	110	0.006
54.14m - 1.014	S17		Time of Concentration	0.005	100	10	110	0.006
54.14m - 1.016	S17		Time of Concentration	0.007	100	10	110	0.007
54.14m - 2.000	S23		Time of Concentration	0.005	100	10	110	0.006
54.14m - 2.001	S24		Time of Concentration	0.005	100	10	110	0.006
54.14m - 5.000	S20		Time of Concentration	0.005	100	0	100	0.005
54.14m - 5.000	S20		Time of Concentration	0.005	100	10	110	0.006
54.14m - 6.001	S31		Time of Concentration	0.005	100	10	110	0.006
54.15m - 2.002	S25		Time of Concentration	0.005	100	10	110	0.006

54.15m - 5.001	S21		Time of Concentration	0.005	100	10	110	0.006
54.15m - 5.001	S21		Time of Concentration	0.005	100	10	110	0.006
55.29m - 5.000	S20		Time of Concentration	0.006	100	0	100	0.006
55.60m - 1.001	S2		Time of Concentration	0.006	100	10	110	0.006
55.60m - 1.009	S10		Time of Concentration	0.006	100	10	110	0.006
55.60m - 6.002	S32		Time of Concentration	0.006	100	10	110	0.006
56.23m - 1.007	S8		Time of Concentration	0.006	100	0	100	0.006
56.44m - 1.005	S19		Time of Concentration	0.006	100	10	110	0.006
56.44m - 1.006	S19		Time of Concentration	0.006	100	10	110	0.006
56.44m - 1.006	S19		Time of Concentration	0.006	100	10	110	0.006
56.44m - 1.006	S19		Time of Concentration	0.005	100	10	110	0.006
56.44m - 4.002	S28		Time of Concentration	0.006	100	10	110	0.006
56.44m - 4.002	S28		Time of Concentration	0.006	100	10	110	0.006
56.44m - 4.002	S28		Time of Concentration	0.006	100	10	110	0.006
57.55m - 3.001	S38		Time of Concentration	0.006	100	10	110	0.006
57.55m - 3.001	S38		Time of Concentration	0.006	100	10	110	0.006
57.95m - 6.001	S32		Time of Concentration	0.009	100	0	100	0.009
57.96m - 1.002	S3		Time of Concentration	0.006	100	10	110	0.006
57.96m - 1.007	S8		Time of Concentration	0.006	100	10	110	0.006
57.96m - 1.013	S15		Time of Concentration	0.006	100	10	110	0.006
57.96m - 1.014	S17		Time of Concentration	0.006	100	10	110	0.006
57.96m - 4.000	S27		Time of Concentration	0.006	100	10	110	0.006
57.96m - 4.001	S26		Time of Concentration	0.006	100	10	110	0.006
57.96m - 5.000	S20		Time of Concentration	0.006	100	10	110	0.006
58.13m - 1.008	S9		Time of Concentration	0.006	100	10	110	0.006

62.17m - 1.007	S8		Time of Concentration	0.006	100	0	100	0.006
62.59m - 4.000	S27		Time of Concentration	0.006	100	10	110	0.007
63.02m - 5.001	S21		Time of Concentration	0.006	100	10	110	0.007
63.04m - 5.001	S21		Time of Concentration	0.006	100	10	110	0.007
65.46m - 2.000	S23		Time of Concentration	0.007	100	10	110	0.007
66.03m - 4.002	S28		Time of Concentration	0.007	100	10	110	0.007
66.03m - 4.003	S29		Time of Concentration	0.007	100	10	110	0.007
67.51m - 1.012	S14		Time of Concentration	0.007	100	0	100	0.007
68.61m - 4.000	S27		Time of Concentration	0.007	100	10	110	0.008
71.91m - 6.000	S30		Time of Concentration	0.007	100	0	100	0.007
72.00m - 7.000	S39		Time of Concentration	0.007	100	0	100	0.007
73.53m - 2.000	S23		Time of Concentration	0.007	100	0	100	0.007
74.05m - 1.016	S17		Time of Concentration	0.007	100	10	110	0.008
74.05m - 1.016	S44		Time of Concentration	0.007	100	10	110	0.008
74.05m - 4.000	S27		Time of Concentration	0.007	100	10	110	0.008
74.05m - 6.001	S31		Time of Concentration	0.007	100	10	110	0.008
74.55m - 1.015	S17		Time of Concentration	0.007	100	0	100	0.007
75.47m - 1.001	S2		Time of Concentration	0.008	100	0	100	0.008
75.60m - 1.015	S17		Time of Concentration	0.008	100	0	100	0.008
76.39m - 1.000	S1		Time of Concentration	0.008	100	10	110	0.008
77.20m - 1.013	S15		Time of Concentration	0.008	100	0	100	0.008
78.04m - 6.000	S30		Time of Concentration	0.008	100	0	100	0.008
79.93m - 1.015	S16		Time of Concentration	0.008	100	0	100	0.008
80.64m - 4.000	S27		Time of Concentration	0.008	100	10	110	0.009
81.15m - 4.003	S8		Time of Concentration	0.007	100	0	100	0.007

81.23m - 2.000	S23		Time of Concentration	0.008	100	10	110	0.009
84.88m - 5.000	S20		Time of Concentration	0.008	100	0	100	0.008
91.82m - 1.006	S19		Time of Concentration	0.010	100	0	100	0.010
92.32m - 4.002	S28		Time of Concentration	0.009	100	0	100	0.009
92.56m - 4.002	S28		Time of Concentration	0.009	100	0	100	0.009
92.82m - 7.000	Porous Paving 6		Time of Concentration	0.009	100	0	100	0.009
94.53m - 1.013	Porous Paving 4		Time of Concentration	0.009	100	0	100	0.009
98.38m - 1.003	S38		Time of Concentration	0.010	100	10	110	0.011
102.48m - 2.000	S23		Time of Concentration	0.010	100	0	100	0.010
112.27m - 4.000	S27		Time of Concentration	0.011	100	0	100	0.011
115.47m - 5.002	S22		Time of Concentration	0.012	100	0	100	0.012
120.48m - 2.000	S23		Time of Concentration	0.012	100	0	100	0.012
122.37m - 6.002	Porous Paving 10		Time of Concentration	0.016	100	0	100	0.016
123.57m - 1.016	S17		Time of Concentration	0.012	100	0	100	0.012
128.25m - 3.000	Porous Paving 8		Time of Concentration	0.013	100	0	100	0.013
128.31m - 3.000	Porous Paving 8		Time of Concentration	0.013	100	0	100	0.013
130.76m - 1.006	Porous Paving 11		Time of Concentration	0.012	100	0	100	0.012
133.57m - 2.000	S23		Time of Concentration	0.013	100	0	100	0.013
138.58m - 1.000	S1		Time of Concentration	0.014	100	0	100	0.014
140m2 - 3.001	S38		Time of Concentration	0.014	100	0	100	0.014
143.61m - 1.016	S44		Time of Concentration	0.014	100	0	100	0.014
147.87m - 5.002	S22		Time of Concentration	0.015	100	0	100	0.015
152.27m - 1.011	S13		Time of Concentration	0.015	100	0	100	0.015
154.34m - 5.001	S21		Time of Concentration	0.015	100	0	100	0.015
174.04m - 4.000	Porous Paving 9		Time of Concentration	0.017	100	0	100	0.017

187.59m - 1.010	S13		Time of Concentration	0.019	100	0	100	0.019
187.86m - 2.000	S24		Time of Concentration	0.019	100	0	100	0.019
189.19m - 4.001	S26		Time of Concentration	0.019	100	0	100	0.019
203.16m - 1.013	S16		Time of Concentration	0.020	100	0	100	0.020
203.74m - 1.001	S2		Time of Concentration	0.020	100	0	100	0.020
206.67m - 5.001	S21		Time of Concentration	0.021	100	0	100	0.021
206.75m - 7.000	S39		Time of Concentration	0.021	100	0	100	0.021
207.20m - 2.000	S23		Time of Concentration	0.021	100	0	100	0.021
220.69m - 1.016	S17		Time of Concentration	0.022	100	0	100	0.022
227.27m - 1.002	S3		Time of Concentration	0.023	100	0	100	0.023
231.63m - 2.001	S33		Time of Concentration	0.024	100	0	100	0.024
239.52m - 1.007	Porous Paving 11		Time of Concentration	0.025	100	0	100	0.025
260.34m - 1.000	S1		Time of Concentration	0.026	100	0	100	0.026
261.56m - 6.000	S30		Time of Concentration	0.026	100	0	100	0.026
267.49m - 2.003	Porous Paving 1		Time of Concentration	0.025	100	0	100	0.025
273.47m - 1.014	S17		Time of Concentration	0.027	100	0	100	0.027
276.92m - 1.009	Porous Paving 2		Time of Concentration	0.028	100	0	100	0.028
355.32m - 1.016	S45		Time of Concentration	0.032	100	0	100	0.032
367.70m - 5.000	S20		Time of Concentration	0.037	100	0	100	0.037
426.77m - 1.016	S41		Time of Concentration	0.041	100	0	100	0.041
472.96m - 4.002	S28		Time of Concentration	0.047	100	0	100	0.047
660m2 - 1.016	S47		Time of Concentration	0.066	100	0	100	0.066
TOTAL		**0.0**		**1.462**				**1.502**

Land to the east of Tilletts Lane, Warnham:	Date: 07/10/2025		
	Designed by: CC	Checked by: CG	Approved By: JM
Report Details: Type: Network Design Criteria Storm Phase: Surface Network 1	Motion: 84 North Street Guildford GU1 4AU		

Flow Options

Peak Flow Calculation	(UK) Modified Rational Method
Min. Time of Entry (mins)	5
Max. Travel Time (mins)	30

FEH22 PD

Type: FEH

Site Location	GB 515628 133872 TQ 15628 33872
Return Period (years)	2.0
Rainfall Version	2022

Pipe Options

Lock Slope Options	None
Design Options	Minimise Excavation
Design Level	Level Soffits
Min. Cover Depth (m)	1.200
Min. Slope (1:X)	500.00
Max. Slope (1:X)	40.00
Min. Velocity (m/s)	1.0
Max. Velocity (m/s)	3.0
Use Flow Restriction	☐
Reduce Channel Depths	☐

Pipe Size Library

Default

Add. Increment (mm)	75
Max. Diameter (mm)	0

Diameter (mm)	Min. Slope (1:X)	Max. Slope (1:X)
100	0.00	0.00
150	0.00	0.00

Land to the east of Tilletts Lane, Warnham:	Date: 07/10/2025		
	Designed by: CC	Checked by: CG	Approved By: JM
Report Details: Type: Network Design Criteria Storm Phase: Surface Network 1	Motion: 84 North Street Guildford GU1 4AU		

Manhole Options

Apply Offset	☐

Manhole Size Library

Default

Diameter / Width

Connection (mm)	Diameter / Length (m)	Width (m)
0	1.200	0.000
375	1.350	0.000
500	1.500	0.000
0	0.000	0.000

Additional Sizing

Connection (mm)	900
Diameter / Length (m)	0.900
Width (m)	0.000

Depth

Depth (m)	Diameter / Length (m)	Width (m)
0.000	1.050	0.000
1.500	1.200	0.000

Benching Requirements

Landing Width (mm)	500
Benching Width (mm)	225

Land to the east of Tilletts Lane, Warnham:	Date: 07/10/2025		
	Designed by: CC	Checked by: CG	Approved By: JM
Report Details: Type: Outfall Details Storm Phase: Surface Network 1	Motion: 84 North Street Guildford GU1 4AU		

Outfalls

Outfall	Outfall Type	Fixed Surcharged Level (m)	Level Curve
S35	Fixed Surcharged Level	63.960	
FEH22 : 2 years: +0 %: 15 mins: Summer		63.960	
FEH22 : 2 years: +0 %: 15 mins: Winter		63.960	
FEH22 : 30 years: +40 %: 15 mins: Summer		63.960	
FEH22 : 30 years: +40 %: 15 mins: Winter		63.960	
FEH22 : 100 years: +45 %: 15 mins: Summer		63.960	
FEH22 : 100 years: +45 %: 15 mins: Winter		63.960	
FEH22 : 2 years: +0 %: 30 mins: Summer		63.960	
FEH22 : 2 years: +0 %: 30 mins: Winter		63.960	
FEH22 : 30 years: +40 %: 30 mins: Summer		63.960	
FEH22 : 30 years: +40 %: 30 mins: Winter		63.960	
FEH22 : 100 years: +45 %: 30 mins: Summer		63.960	
FEH22 : 100 years: +45 %: 30 mins: Winter		63.960	
FEH22 : 2 years: +0 %: 60 mins: Summer		63.960	
FEH22 : 2 years: +0 %: 60 mins: Winter		63.960	
FEH22 : 30 years: +40 %: 60 mins: Summer		63.960	
FEH22 : 30 years: +40 %: 60 mins: Winter		63.960	
FEH22 : 100 years: +45 %: 60 mins: Summer		63.960	
FEH22 : 100 years: +45 %: 60 mins: Winter		63.960	
FEH22 : 2 years: +0 %: 120 mins: Summer		63.960	
FEH22 : 2 years: +0 %: 120 mins: Winter		63.960	
FEH22 : 30 years: +40 %: 120 mins: Summer		63.960	
FEH22 : 30 years: +40 %: 120 mins: Winter		63.960	
FEH22 : 100 years: +45 %: 120 mins: Summer		63.960	
FEH22 : 100 years: +45 %: 120 mins: Winter		63.960	
FEH22 : 2 years: +0 %: 240 mins: Summer		63.960	
FEH22 : 2 years: +0 %: 240 mins: Winter		63.960	
FEH22 : 30 years: +40 %: 240 mins: Summer		63.960	
FEH22 : 30 years: +40 %: 240 mins: Winter		63.960	
FEH22 : 100 years: +45 %: 240 mins: Summer		63.960	
FEH22 : 100 years: +45 %: 240 mins: Winter		63.960	
FEH22 : 2 years: +0 %: 360 mins: Summer		63.960	
FEH22 : 2 years: +0 %: 360 mins: Winter		63.960	
FEH22 : 30 years: +40 %: 360 mins: Summer		63.960	
FEH22 : 30 years: +40 %: 360 mins: Winter		63.960	
FEH22 : 100 years: +45 %: 360 mins: Summer		63.960	
FEH22 : 100 years: +45 %: 360 mins: Winter		63.960	
FEH22 : 2 years: +0 %: 480 mins: Summer		63.960	
FEH22 : 2 years: +0 %: 480 mins: Winter		63.960	

FEH22 : 30 years: +40 %: 480 mins: Summer		63.960	
FEH22 : 30 years: +40 %: 480 mins: Winter		63.960	
FEH22 : 100 years: +45 %: 480 mins: Summer		63.960	
FEH22 : 100 years: +45 %: 480 mins: Winter		63.960	
FEH22 : 2 years: +0 %: 960 mins: Summer		63.960	
FEH22 : 2 years: +0 %: 960 mins: Winter		63.960	
FEH22 : 30 years: +40 %: 960 mins: Summer		63.960	
FEH22 : 30 years: +40 %: 960 mins: Winter		63.960	
FEH22 : 100 years: +45 %: 960 mins: Summer		63.960	
FEH22 : 100 years: +45 %: 960 mins: Winter		63.960	
FEH22 : 2 years: +0 %: 1440 mins: Summer		63.960	
FEH22 : 2 years: +0 %: 1440 mins: Winter		63.960	
FEH22 : 30 years: +40 %: 1440 mins: Summer		63.960	
FEH22 : 30 years: +40 %: 1440 mins: Winter		63.960	
FEH22 : 100 years: +45 %: 1440 mins: Summer		63.960	
FEH22 : 100 years: +45 %: 1440 mins: Winter		63.960	

Land to the east of Tilletts Lane, Warnham:	Date: 07/10/2025		
	Designed by: CC	Checked by: CG	Approved By: JM
Report Title: Rainfall Analysis Criteria	Motion: 84 North Street Guildford GU1 4AU		

Runoff Type	Dynamic
Output Interval (mins)	5
Time Step	Default
Urban Creep	Use Catchment Values
Junction Flood Risk Margin (mm)	0
Perform No Discharge Analysis	☐

Rainfall

FEH22

Type: FEH

Site Location	GB 516400 133950 TQ 16400 33950
Rainfall Version	2022
Summer	☑
Winter	☑

Return Period

Return Period (years)	Increase Rainfall (%)
2.0	0.000
30.0	40.000
100.0	45.000

Storm Durations

Duration (mins)	Run Time (mins)
15	30
30	60
60	120
120	240
240	480
360	720
480	960
960	1920
1440	2880

Land to the east of Tilletts Lane, Warnham:	Date: 07/10/2025		
	Designed by: CC	Checked by: CG	Approved By: JM
Report Title: UK and Ireland Rural Runoff Calculator	Motion: 84 North Street Guildford GU1 4AU		

FEH

Details

Site Location	GB 516400 133950 TQ 16400 33950
Rainfall Version	2022
Data Type	Catchment

Area (ha)	52.00
SAAR (mm)	784.0
SPRHOST (%)	46.18
URBEXT 2000	0.125
BFIHOST	0.34
FARL	1.000

Results

QMED Rural (L/s)	305.8
QMED Urban (L/s)	340.5

Land to the east of Tilletts Lane, Warnham:	Date: 07/10/2025		
	Designed by: CC	Checked by: CG	Approved By: JM
Report Details: Type: Junctions Summary Storm Phase: Surface Network 1	Motion: 84 North Street Guildford GU1 4AU		

FEH22: 2 years: Increase Rainfall (%): +0: Critical Storm Per Item: Rank By: Max. Depth

Junction	Storm Event	Cover Level (m)	Invert Level (m)	Max. Level (m)	Max. Depth (m)	Max. Inflow (L/s)	Max. Resident Volume (m³)	Max. Flooded Volume (m³)	Max. Outflow (L/s)	Total Discharge Volume (m³)	Status
S1	FEH22: 2 years: +0 %: 15 mins: Summer	77.425	76.075	76.137	0.062	11.1	0.109	0.000	10.7	4.828	OK
S2	FEH22: 2 years: +0 %: 15 mins: Summer	76.428	75.078	75.142	0.064	20.0	0.114	0.000	19.3	8.848	OK
S3	FEH22: 2 years: +0 %: 15 mins: Summer	73.577	72.227	72.291	0.065	28.6	0.115	0.000	27.9	12.893	OK
S4	FEH22: 2 years: +0 %: 15 mins: Summer	70.521	69.171	69.260	0.089	59.4	0.158	0.000	57.9	28.056	OK
S7	FEH22: 2 years: +0 %: 360 mins: Summer	70.443	67.291	67.702	0.410	3.1	0.464	0.000	3.1	100.804	Surcharged
S8	FEH22: 2 years: +0 %: 15 mins: Summer	70.782	66.852	67.021	0.169	55.6	0.191	0.000	51.8	27.722	OK
S9	FEH22: 2 years: +0 %: 480 mins: Summer	69.939	66.586	66.827	0.241	22.3	0.273	0.000	21.6	269.382	OK
S10	FEH22: 2 years: +0 %: 480 mins: Summer	69.670	66.504	66.826	0.323	22.6	0.365	0.000	22.3	283.738	OK
S13	FEH22: 2 years: +0 %: 30 mins: Summer	69.534	66.113	66.204	0.091	9.8	0.103	0.000	9.5	17.085	OK
S14	FEH22: 2 years: +0 %: 15 mins: Summer	69.726	65.984	66.110	0.126	27.4	0.143	0.000	26.3	17.302	OK
S15	FEH22: 2 years: +0 %: 15 mins: Summer	69.639	65.934	66.054	0.120	30.4	0.136	0.000	29.1	18.921	OK
S16	FEH22: 2 years: +0 %: 15 mins: Summer	68.641	65.729	65.878	0.149	38.6	0.169	0.000	36.2	23.271	OK
S17	FEH22: 2 years: +0 %: 15 mins: Summer	67.070	65.504	65.595	0.091	61.7	0.103	0.000	60.8	35.630	OK
S19	FEH22: 2 years: +0 %: 15 mins: Summer	70.980	67.069	67.135	0.066	9.3	0.074	0.000	8.4	6.469	OK
S20	FEH22: 2 years: +0 %: 15 mins: Summer	74.063	72.713	72.777	0.064	15.2	0.113	0.000	14.9	6.601	OK
S21	FEH22: 2 years: +0 %: 15 mins: Summer	73.176	71.826	71.906	0.080	29.8	0.141	0.000	28.9	13.043	OK
S22	FEH22: 2 years: +0 %: 15 mins: Summer	71.057	69.707	69.773	0.066	34.8	0.116	0.000	34.0	15.627	OK
S23	FEH22: 2 years: +0 %: 15 mins: Summer	75.795	74.445	74.504	0.059	21.8	0.104	0.000	21.5	9.476	OK
S24	FEH22: 2 years: +0 %: 15 mins: Summer	73.760	72.410	72.478	0.068	27.4	0.120	0.000	26.7	12.037	OK
S25	FEH22: 2 years: +0 %: 15 mins: Summer	71.951	70.601	70.670	0.069	28.4	0.121	0.000	27.9	12.778	OK

S26	FEH22: 2 years: +0 %: 15 mins: Summer	74.483	73.133	73.198	0.065	15.1	0.115	0.000	14.7	6.713	OK
S27	FEH22: 2 years: +0 %: 15 mins: Summer	75.354	74.004	74.055	0.051	10.1	0.091	0.000	9.9	4.393	OK
S28	FEH22: 2 years: +0 %: 15 mins: Summer	74.123	72.573	72.663	0.090	38.5	0.158	0.000	37.6	17.068	OK
S29	FEH22: 2 years: +0 %: 15 mins: Summer	71.524	70.174	70.231	0.057	40.2	0.101	0.000	39.7	18.210	OK
S30	FEH22: 2 years: +0 %: 15 mins: Summer	72.478	71.128	71.178	0.050	10.9	0.088	0.000	10.7	4.707	OK
S31	FEH22: 2 years: +0 %: 15 mins: Summer	71.683	70.236	70.296	0.060	13.6	0.106	0.000	13.2	5.961	OK
S32	FEH22: 2 years: +0 %: 15 mins: Summer	70.803	69.453	69.501	0.048	17.5	0.084	0.000	17.2	7.808	OK
S33	FEH22: 2 years: +0 %: 15 mins: Summer	71.047	69.697	69.814	0.117	32.9	0.207	0.000	31.4	14.941	OK
S35	FEH22: 2 years: +0 %: 15 mins: Summer	63.960	62.960	63.960	1.000	2.9	0.000	0.000	2.9	2.618	OK
S36	FEH22: 2 years: +0 %: 15 mins: Summer	67.711	65.618	65.752	0.134	41.8	0.151	0.000	40.1	26.326	OK
S37	FEH22: 2 years: +0 %: 240 mins: Summer	69.453	68.103	68.121	0.018	0.7	0.031	0.000	0.7	5.991	OK
S38	FEH22: 2 years: +0 %: 15 mins: Summer	69.616	67.788	67.844	0.056	8.5	0.063	0.000	8.3	3.954	OK
S39	FEH22: 2 years: +0 %: 15 mins: Summer	67.001	65.947	66.013	0.066	5.7	0.117	0.000	5.3	2.488	OK
S44	FEH22: 2 years: +0 %: 15 mins: Summer	67.243	65.818	65.894	0.076	26.6	0.086	0.000	25.8	14.405	OK
S43	FEH22: 2 years: +0 %: 15 mins: Summer	68.205	66.540	66.615	0.075	22.9	0.085	0.000	22.0	12.384	OK
S41	FEH22: 2 years: +0 %: 15 mins: Summer	70.109	66.703	66.828	0.125	24.3	0.142	0.000	22.9	12.408	OK
S40	FEH22: 2 years: +0 %: 15 mins: Summer	70.800	66.794	66.898	0.104	16.7	0.118	0.000	15.7	8.720	OK
S45	FEH22: 2 years: +0 %: 15 mins: Summer	71.065	66.887	66.994	0.107	18.0	0.121	0.000	16.7	8.742	OK
S46	FEH22: 2 years: +0 %: 15 mins: Summer	70.524	67.063	67.142	0.079	12.7	0.090	0.000	11.3	5.870	OK
S47	FEH22: 2 years: +0 %: 15 mins: Summer	68.535	67.410	67.498	0.088	13.6	0.099	0.000	12.7	5.909	OK

Land to the east of Tilletts Lane, Warnham:	Date: 07/10/2025		
	Designed by: CC	Checked by: CG	Approved By: JM
Report Details: Type: Junctions Summary Storm Phase: Surface Network 1	Motion: 84 North Street Guildford GU1 4AU		

FEH22: 30 years: Increase Rainfall (%): +40: Critical Storm Per Item: Rank By: Max. Depth

Junction	Storm Event	Cover Level (m)	Invert Level (m)	Max. Level (m)	Max. Depth (m)	Max. Inflow (L/s)	Max. Resident Volume (m³)	Max. Flooded Volume (m³)	Max. Outflow (L/s)	Total Discharge Volume (m³)	Status
S1	FEH22: 30 years: +40 %: 15 mins: Summer	77.425	76.075	76.246	0.170	34.8	0.301	0.000	29.6	15.074	Surcharged
S2	FEH22: 30 years: +40 %: 15 mins: Summer	76.428	75.078	75.325	0.248	58.6	0.437	0.000	51.6	27.713	Surcharged
S3	FEH22: 30 years: +40 %: 15 mins: Summer	73.577	72.227	72.342	0.116	80.8	0.205	0.000	79.9	40.401	OK
S4	FEH22: 30 years: +40 %: 15 mins: Summer	70.521	69.171	69.327	0.156	168.8	0.276	0.000	168.1	88.516	OK
S7	FEH22: 30 years: +40 %: 360 mins: Winter	70.443	67.291	68.210	0.918	4.8	1.038	0.000	4.7	166.108	Surcharged
S8	FEH22: 30 years: +40 %: 15 mins: Summer	70.782	66.852	68.042	1.189	154.1	1.345	0.000	146.2	81.947	Surcharged
S9	FEH22: 30 years: +40 %: 480 mins: Winter	69.939	66.586	67.376	0.790	35.7	0.894	0.000	35.5	587.163	Surcharged
S10	FEH22: 30 years: +40 %: 480 mins: Winter	69.670	66.504	67.376	0.872	37.5	0.986	0.000	37.4	622.531	Surcharged
S13	FEH22: 30 years: +40 %: 15 mins: Summer	69.534	66.113	66.703	0.590	30.2	0.668	0.000	20.9	21.218	Surcharged
S14	FEH22: 30 years: +40 %: 15 mins: Summer	69.726	65.984	66.419	0.435	80.2	0.492	0.000	75.9	48.597	Surcharged
S15	FEH22: 30 years: +40 %: 15 mins: Summer	69.639	65.934	66.356	0.422	88.9	0.477	0.000	83.8	53.962	Surcharged
S16	FEH22: 30 years: +40 %: 15 mins: Summer	68.641	65.729	66.159	0.430	114.1	0.486	0.000	110.8	68.083	Surcharged
S17	FEH22: 30 years: +40 %: 15 mins: Summer	67.070	65.504	65.677	0.173	191.6	0.196	0.000	188.5	107.679	OK
S19	FEH22: 30 years: +40 %: 15 mins: Summer	70.980	67.069	68.055	0.986	28.4	1.116	0.000	24.2	16.535	Surcharged
S20	FEH22: 30 years: +40 %: 15 mins: Summer	74.063	72.713	73.003	0.291	47.7	0.514	0.000	40.6	20.717	Surcharged
S21	FEH22: 30 years: +40 %: 15 mins: Summer	73.176	71.826	71.982	0.156	87.2	0.275	0.000	85.6	40.917	OK
S22	FEH22: 30 years: +40 %: 15 mins: Summer	71.057	69.707	69.829	0.122	104.3	0.216	0.000	102.8	48.971	OK
S23	FEH22: 30 years: +40 %: 15 mins: Summer	75.795	74.445	74.557	0.112	68.6	0.198	0.000	67.6	29.743	OK
S24	FEH22: 30 years: +40 %: 15 mins: Summer	73.760	72.410	72.542	0.131	86.2	0.232	0.000	86.6	37.780	OK
S25	FEH22: 30 years: +40 %: 15 mins: Summer	71.951	70.601	70.770	0.169	92.0	0.299	0.000	74.2	40.132	OK

S26	FEH22: 30 years: +40 %: 15 mins: Summer	74.483	73.133	73.476	0.343	47.7	0.606	0.000	39.8	21.291	Surcharged
S27	FEH22: 30 years: +40 %: 15 mins: Summer	75.354	74.004	74.108	0.104	31.7	0.183	0.000	31.2	13.753	OK
S28	FEH22: 30 years: +40 %: 15 mins: Summer	74.123	72.573	72.761	0.187	114.7	0.331	0.000	112.2	53.727	OK
S29	FEH22: 30 years: +40 %: 15 mins: Summer	71.524	70.174	70.276	0.103	120.5	0.181	0.000	119.5	57.298	OK
S30	FEH22: 30 years: +40 %: 15 mins: Summer	72.478	71.128	71.229	0.101	34.0	0.178	0.000	33.5	14.762	OK
S31	FEH22: 30 years: +40 %: 15 mins: Summer	71.683	70.236	70.371	0.136	42.6	0.240	0.000	41.0	18.712	OK
S32	FEH22: 30 years: +40 %: 15 mins: Summer	70.803	69.453	69.546	0.093	54.3	0.164	0.000	53.8	24.479	OK
S33	FEH22: 30 years: +40 %: 15 mins: Summer	71.047	69.697	70.486	0.789	89.9	1.395	0.000	88.5	46.999	Surcharged
S35	FEH22: 30 years: +40 %: 15 mins: Summer	63.960	62.960	63.960	1.000	8.4	0.000	0.000	8.4	9.501	OK
S36	FEH22: 30 years: +40 %: 15 mins: Summer	67.711	65.618	65.875	0.257	128.7	0.291	0.000	124.0	78.413	OK
S37	FEH22: 30 years: +40 %: 360 mins: Winter	69.453	68.103	68.223	0.120	1.4	0.212	0.000	1.4	18.792	OK
S38	FEH22: 30 years: +40 %: 360 mins: Winter	69.616	67.788	68.222	0.434	4.7	0.491	0.000	4.4	48.734	Surcharged
S39	FEH22: 30 years: +40 %: 15 mins: Summer	67.001	65.947	66.111	0.164	18.0	0.290	0.000	16.1	7.814	Surcharged
S44	FEH22: 30 years: +40 %: 15 mins: Summer	67.243	65.818	65.955	0.137	72.9	0.155	0.000	71.5	45.373	OK
S43	FEH22: 30 years: +40 %: 15 mins: Summer	68.205	66.540	66.674	0.134	59.6	0.152	0.000	58.3	39.061	OK
S41	FEH22: 30 years: +40 %: 15 mins: Summer	70.109	66.703	67.123	0.420	62.9	0.475	0.000	59.6	39.086	Surcharged
S40	FEH22: 30 years: +40 %: 15 mins: Summer	70.800	66.794	67.216	0.422	40.6	0.477	0.000	40.4	27.486	Surcharged
S45	FEH22: 30 years: +40 %: 15 mins: Summer	71.065	66.887	67.338	0.451	47.2	0.510	0.000	40.6	27.495	Surcharged
S46	FEH22: 30 years: +40 %: 15 mins: Summer	70.524	67.063	67.437	0.374	34.0	0.423	0.000	28.2	18.492	Surcharged
S47	FEH22: 30 years: +40 %: 15 mins: Summer	68.535	67.410	67.604	0.194	42.6	0.220	0.000	34.0	18.350	OK

Land to the east of Tilletts Lane, Warnham:	Date: 07/10/2025		
	Designed by: CC	Checked by: CG	Approved By: JM
Report Details: Type: Junctions Summary Storm Phase: Surface Network 1	Motion: 84 North Street Guildford GU1 4AU		

FEH22: 100 years: Increase Rainfall (%): +45: Critical Storm Per Item: Rank By: Max. Depth

Junction	Storm Event	Cover Level (m)	Invert Level (m)	Max. Level (m)	Max. Depth (m)	Max. Inflow (L/s)	Max. Resident Volume (m³)	Max. Flooded Volume (m³)	Max. Outflow (L/s)	Total Discharge Volume (m³)	Status
S1	FEH22: 100 years: +45 %: 15 mins: Summer	77.425	76.075	76.762	0.687	45.7	1.213	0.000	30.6	19.763	Surcharged
S2	FEH22: 100 years: +45 %: 15 mins: Summer	76.428	75.078	75.799	0.721	68.7	1.274	0.000	55.4	36.352	Surcharged
S3	FEH22: 100 years: +45 %: 15 mins: Summer	73.577	72.227	72.353	0.127	93.8	0.224	0.000	92.8	52.991	OK
S4	FEH22: 100 years: +45 %: 15 mins: Summer	70.521	69.171	69.343	0.172	198.7	0.304	0.000	196.3	115.906	OK
S7	FEH22: 100 years: +45 %: 480 mins: Winter	70.443	67.291	68.435	1.143	4.7	1.293	0.000	4.7	232.790	Surcharged
S8	FEH22: 100 years: +45 %: 15 mins: Summer	70.782	66.852	68.767	1.915	174.4	2.166	0.000	167.8	104.635	Surcharged
S9	FEH22: 100 years: +45 %: 15 mins: Summer	69.939	66.586	67.851	1.265	304.9	1.430	0.000	298.7	168.374	Surcharged
S10	FEH22: 100 years: +45 %: 960 mins: Winter	69.670	66.504	67.590	1.086	30.6	1.228	0.000	30.6	1049.219	Surcharged
S13	FEH22: 100 years: +45 %: 15 mins: Summer	69.534	66.113	67.048	0.935	39.4	1.057	0.000	23.8	26.048	Surcharged
S14	FEH22: 100 years: +45 %: 15 mins: Summer	69.726	65.984	66.689	0.705	92.3	0.797	0.000	88.2	60.847	Surcharged
S15	FEH22: 100 years: +45 %: 15 mins: Summer	69.639	65.934	66.603	0.669	105.2	0.756	0.000	101.5	67.934	Surcharged
S16	FEH22: 100 years: +45 %: 15 mins: Summer	68.641	65.729	66.316	0.587	141.1	0.664	0.000	138.7	86.392	Surcharged
S17	FEH22: 100 years: +45 %: 15 mins: Summer	67.070	65.504	65.708	0.204	247.9	0.231	0.000	245.9	138.295	OK
S19	FEH22: 100 years: +45 %: 15 mins: Summer	70.980	67.069	68.825	1.756	37.2	1.986	0.000	30.3	20.916	Surcharged
S20	FEH22: 100 years: +45 %: 15 mins: Summer	74.063	72.713	73.529	0.816	62.6	1.443	0.000	49.7	27.164	Surcharged
S21	FEH22: 100 years: +45 %: 15 mins: Summer	73.176	71.826	72.018	0.192	110.8	0.339	0.000	107.5	53.652	OK
S22	FEH22: 100 years: +45 %: 15 mins: Summer	71.057	69.707	69.850	0.143	132.0	0.253	0.000	130.1	64.175	OK
S23	FEH22: 100 years: +45 %: 15 mins: Summer	75.795	74.445	74.579	0.135	89.9	0.238	0.000	88.8	39.001	OK
S24	FEH22: 100 years: +45 %: 15 mins: Summer	73.760	72.410	72.564	0.154	113.2	0.272	0.000	109.4	49.510	OK
S25	FEH22: 100 years: +45 %: 15 mins: Summer	71.951	70.601	71.501	0.900	116.5	1.590	0.000	99.1	52.621	Surcharged

S26	FEH22: 100 years: +45 %: 15 mins: Summer	74.483	73.133	73.796	0.662	52.8	1.170	0.000	44.0	28.081	Surcharged
S27	FEH22: 100 years: +45 %: 15 mins: Summer	75.354	74.004	74.400	0.396	41.6	0.700	0.000	31.2	18.024	Surcharged
S28	FEH22: 100 years: +45 %: 15 mins: Summer	74.123	72.573	72.972	0.398	142.2	0.704	0.000	123.5	70.380	Surcharged
S29	FEH22: 100 years: +45 %: 15 mins: Winter	71.524	70.174	70.286	0.113	139.8	0.199	0.000	138.8	75.256	OK
S30	FEH22: 100 years: +45 %: 15 mins: Summer	72.478	71.128	71.320	0.192	44.6	0.339	0.000	36.9	19.350	Surcharged
S31	FEH22: 100 years: +45 %: 15 mins: Summer	71.683	70.236	70.621	0.385	48.9	0.681	0.000	44.2	24.557	Surcharged
S32	FEH22: 100 years: +45 %: 15 mins: Summer	70.803	69.453	69.555	0.102	61.6	0.180	0.000	61.3	32.116	OK
S33	FEH22: 100 years: +45 %: 15 mins: Summer	71.047	69.697	70.915	1.218	119.7	2.152	0.000	105.3	61.624	Surcharged
S35	FEH22: 100 years: +45 %: 15 mins: Summer	63.960	62.960	63.960	1.000	8.6	0.000	0.000	8.6	10.199	OK
S36	FEH22: 100 years: +45 %: 15 mins: Summer	67.711	65.618	65.922	0.304	162.0	0.344	0.000	159.2	99.901	OK
S37	FEH22: 100 years: +45 %: 480 mins: Winter	69.453	68.103	68.447	0.344	1.5	0.608	0.000	1.4	26.180	Surcharged
S38	FEH22: 100 years: +45 %: 480 mins: Winter	69.616	67.788	68.447	0.659	5.0	0.745	0.000	4.8	67.126	Surcharged
S39	FEH22: 100 years: +45 %: 15 mins: Summer	67.001	65.947	66.229	0.282	23.6	0.499	0.000	20.9	10.249	Surcharged
S44	FEH22: 100 years: +45 %: 15 mins: Summer	67.243	65.818	65.982	0.164	93.8	0.186	0.000	91.3	59.489	OK
S43	FEH22: 100 years: +45 %: 30 mins: Summer	68.205	66.540	66.704	0.164	76.0	0.186	0.000	75.8	68.958	OK
S41	FEH22: 100 years: +45 %: 15 mins: Summer	70.109	66.703	67.430	0.727	82.6	0.822	0.000	77.0	51.307	Surcharged
S40	FEH22: 100 years: +45 %: 15 mins: Summer	70.800	66.794	67.578	0.784	54.2	0.887	0.000	49.3	36.082	Surcharged
S45	FEH22: 100 years: +45 %: 15 mins: Summer	71.065	66.887	67.771	0.884	62.3	1.000	0.000	54.2	36.089	Surcharged
S46	FEH22: 100 years: +45 %: 15 mins: Summer	70.524	67.063	67.911	0.848	44.5	0.959	0.000	35.0	24.273	Surcharged
S47	FEH22: 100 years: +45 %: 15 mins: Summer	68.535	67.410	68.316	0.906	55.9	1.025	0.000	44.5	24.097	Surcharged

Land to the east of Tilletts Lane, Warnham:	Date: 07/10/2025		
	Designed by: CC	Checked by: CG	Approved By: JM
Report Details: Type: Stormwater Controls Summary Storm Phase: Surface Network 1	Motion: 84 North Street Guildford GU1 4AU		

FEH22: 2 years: Increase Rainfall (%): +0: Critical Storm Per Item: Rank By: Max. Avg. Depth

Stormwater Control	Storm Event	Max. US Level (m)	Max. DS Level (m)	Max. US Depth (m)	Max. DS Depth (m)	Max. Inflow (L/s)	Max. Resident Volume (m³)	Max. Flooded Volume (m³)	Total Lost Volume (m³)	Max. Outflow (L/s)	Total Discharge Volume (m³)	Half Drain Down Time (mins)	Percentage Available (%)
Basin 2	FEH22: 2 years: +0 %: 480 mins: Summer	66.827	66.827	0.427	0.427	22.3	112.026	0.000	0.000	6.0	244.660		73.571
Basin 3	FEH22: 2 years: +0 %: 960 mins: Summer	64.784	64.784	0.284	0.284	18.7	146.552	0.000	0.000	8.4	526.532		81.721
Basin 1	FEH22: 2 years: +0 %: 360 mins: Summer	67.708	67.708	0.308	0.308	18.7	67.251	0.000	0.000	3.1	101.163		81.335
Porous Paving 4	FEH22: 2 years: +0 %: 60 mins: Summer	68.110	68.110	0.049	0.049	1.1	0.562	0.000	0.000	0.7	1.345		89.075
Porous Paving 5	FEH22: 2 years: +0 %: 15 mins: Summer	67.131	67.131	0.000	0.000	0.0	0.000	0.000	0.000	0.0	0.000		100.000
Porous Paving 6	FEH22: 2 years: +0 %: 60 mins: Summer	67.180	67.180	0.049	0.049	1.1	0.551	0.000	0.000	0.7	1.329		89.128
Porous Paving 7	FEH22: 2 years: +0 %: 120 mins: Summer	67.159	67.159	0.028	0.028	0.5	0.425	0.000	0.000	0.3	0.984		93.714
Porous Paving 1	FEH22: 2 years: +0 %: 240 mins: Summer	69.983	69.983	0.042	0.042	1.6	3.797	0.000	0.000	0.5	5.473		90.747
Porous Paving 8	FEH22: 2 years: +0 %: 240 mins: Summer	68.921	68.921	0.047	0.047	1.7	3.720	0.000	0.000	0.7	6.009		89.465
Porous Paving 9	FEH22: 2 years: +0 %: 360 mins: Summer	73.928	73.928	0.025	0.025	0.9	3.202	0.000	0.000	0.2	4.064		94.529
Porous Paving 10	FEH22: 2 years: +0 %: 120 mins: Summer	69.201	69.201	0.055	0.055	1.5	1.321	0.000	0.000	0.9	2.980		87.830
Porous Paving 11	FEH22: 2 years: +0 %: 240 mins: Summer	69.143	69.143	0.053	0.053	2.5	5.566	0.000	0.000	0.9	8.242		88.114
Porous Paving 2	FEH22: 2 years: +0 %: 120 mins: Summer	69.033	69.033	0.079	0.079	2.6	2.767	0.000	0.000	1.2	5.227		82.525
Porous Paving 3	FEH22: 2 years: +0 %: 15 mins: Summer	68.061	68.061	0.000	0.000	0.0	0.000	0.000	0.000	0.0	0.000		100.000

Land to the east of Tilletts Lane, Warnham:	Date: 07/10/2025		
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Report Details: Type: Stormwater Controls Summary Storm Phase: Surface Network 1	Motion: 84 North Street Guildford GU1 4AU		

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Land to the east of Tilletts Lane, Warnham:	Date: 07/10/2025		
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Report Details: Type: Stormwater Controls Summary Storm Phase: Surface Network 1	Motion: 84 North Street Guildford GU1 4AU		

FEH22: 30 years: Increase Rainfall (%): +40: Critical Storm Per Item: Rank By: Max. Avg. Depth

Stormwater Control	Storm Event	Max. US Level (m)	Max. DS Level (m)	Max. US Depth (m)	Max. DS Depth (m)	Max. Inflow (L/s)	Max. Resident Volume (m³)	Max. Flooded Volume (m³)	Total Lost Volume (m³)	Max. Outflow (L/s)	Total Discharge Volume (m³)	Half Drain Down Time (mins)	Percentage Available (%)
Basin 2	FEH22: 30 years: +40 %: 480 mins: Winter	67.375	67.375	0.975	0.975	37.4	317.711	0.000	0.000	9.4	421.121	450	25.046
Basin 3	FEH22: 30 years: +40 %: 1440 mins: Summer	65.433	65.433	0.933	0.933	32.6	580.692	0.000	0.000	8.6	1155.058	990	27.572
Basin 1	FEH22: 30 years: +40 %: 360 mins: Winter	68.222	68.222	0.822	0.822	32.2	216.769	0.000	0.000	4.8	167.025	155	39.839
Porous Paving 4	FEH22: 30 years: +40 %: 30 mins: Summer	68.226	68.226	0.165	0.165	4.1	1.885	0.000	0.000	1.9	3.295		63.330
Porous Paving 5	FEH22: 30 years: +40 %: 15 mins: Summer	67.131	67.131	0.000	0.000	0.0	0.000	0.000	0.000	0.0	0.000		100.000
Porous Paving 6	FEH22: 30 years: +40 %: 30 mins: Summer	67.294	67.294	0.163	0.163	4.0	1.834	0.000	0.000	1.9	3.247		63.790
Porous Paving 7	FEH22: 30 years: +40 %: 60 mins: Summer	67.204	67.204	0.073	0.073	2.0	1.097	0.000	0.000	1.1	2.341		83.779
Porous Paving 1	FEH22: 30 years: +40 %: 120 mins: Summer	70.047	70.047	0.106	0.106	6.7	9.623	0.000	0.000	1.4	11.299		76.551
Porous Paving 8	FEH22: 30 years: +40 %: 120 mins: Summer	68.999	68.999	0.126	0.126	7.1	9.851	0.000	0.000	1.6	12.556		72.101
Porous Paving 9	FEH22: 30 years: +40 %: 240 mins: Summer	73.959	73.959	0.056	0.056	3.0	7.314	0.000	0.000	0.9	9.788		87.503
Porous Paving 10	FEH22: 30 years: +40 %: 60 mins: Summer	69.321	69.321	0.175	0.175	5.9	4.225	0.000	0.000	2.0	6.877		61.090
Porous Paving 11	FEH22: 30 years: +40 %: 120 mins: Summer	69.234	69.234	0.144	0.144	10.1	15.017	0.000	0.000	1.7	16.019		67.935
Porous Paving 2	FEH22: 30 years: +40 %: 60 mins: Summer	69.204	69.204	0.250	0.250	10.6	8.800	0.000	0.000	2.4	10.843	15	44.421
Porous Paving 3	FEH22: 30 years: +40 %: 15 mins: Summer	68.061	68.061	0.000	0.000	0.0	0.000	0.000	0.000	0.0	0.000		100.000

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	Designed by: CC	Checked by: CG	Approved By: JM
Report Details: Type: Stormwater Controls Summary Storm Phase: Surface Network 1	Motion: 84 North Street Guildford GU1 4AU		

FEH22: 100 years: Increase Rainfall (%): +45: Critical Storm Per Item: Rank By: Max. Avg. Depth

Stormwater Control	Storm Event	Max. US Level (m)	Max. DS Level (m)	Max. US Depth (m)	Max. DS Depth (m)	Max. Inflow (L/s)	Max. Resident Volume (m³)	Max. Flooded Volume (m³)	Total Lost Volume (m³)	Max. Outflow (L/s)	Total Discharge Volume (m³)	Half Drain Down Time (mins)	Percentage Available (%)
Basin 2	FEH22: 100 years: +45 %: 960 mins: Winter	67.589	67.589	1.189	1.189	30.6	418.603	0.000	0.000	10.4	901.117	870	1.243
Basin 3	FEH22: 100 years: +45 %: 1440 mins: Summer	65.697	65.697	1.197	1.197	41.5	798.694	0.000	0.000	8.6	1270.798		0.382
Basin 1	FEH22: 100 years: +45 %: 480 mins: Winter	68.446	68.446	1.046	1.046	33.6	298.343	0.000	0.000	4.7	233.874	460	17.199
Porous Paving 4	FEH22: 100 years: +45 %: 60 mins: Summer	68.292	68.292	0.231	0.231	4.8	2.639	0.000	0.000	2.3	5.903	0	48.661
Porous Paving 5	FEH22: 100 years: +45 %: 15 mins: Summer	67.131	67.131	0.000	0.000	0.0	0.000	0.000	0.000	0.0	0.000		100.000
Porous Paving 6	FEH22: 100 years: +45 %: 60 mins: Summer	67.359	67.359	0.228	0.228	4.7	2.567	0.000	0.000	2.3	5.805	0	49.320
Porous Paving 7	FEH22: 100 years: +45 %: 60 mins: Summer	67.230	67.230	0.099	0.099	2.6	1.491	0.000	0.000	1.4	3.159		77.957
Porous Paving 1	FEH22: 100 years: +45 %: 120 mins: Summer	70.080	70.080	0.139	0.139	8.8	12.701	0.000	0.000	1.7	14.717		69.049
Porous Paving 8	FEH22: 100 years: +45 %: 120 mins: Summer	69.039	69.039	0.166	0.166	9.3	13.051	0.000	0.000	1.9	16.278		63.040
Porous Paving 9	FEH22: 100 years: +45 %: 120 mins: Summer	73.975	73.975	0.072	0.072	6.1	9.367	0.000	0.000	1.1	8.836		83.994
Porous Paving 10	FEH22: 100 years: +45 %: 60 mins: Summer	69.388	69.388	0.242	0.242	7.9	5.843	0.000	0.000	2.4	9.151	5	46.185
Porous Paving 11	FEH22: 100 years: +45 %: 120 mins: Summer	69.281	69.281	0.191	0.191	13.2	19.899	0.000	0.000	2.1	19.792		57.510
Porous Paving 2	FEH22: 100 years: +45 %: 60 mins: Summer	69.296	69.296	0.342	0.342	14.1	12.017	0.000	0.000	2.8	13.586	40	24.102
Porous Paving 3	FEH22: 100 years: +45 %: 15 mins: Summer	68.061	68.061	0.000	0.000	0.0	0.000	0.000	0.000	0.0	0.000		100.000

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