



FLOOD RISK ASSESSMENT & DRAINAGE STRATEGY
FOR
PROPOSED RESIDENTIAL DEVELOPMENT (AREAS A & F)
OLD SARUM, SALISBURY
ON BEHALF OF
PERSIMMON HOMES (WESSEX) LTD

APRIL 2021

[ISSUE 2]

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1.0 INTRODUCTION

1.1 This *Flood Risk Assessment & Drainage Strategy (FRA & DS)* has been prepared by Cole Easdon Consultants Limited (CEC) on behalf of Persimmon Homes (Wessex) Limited, in respect of a residential development on land at Old Sarum, Salisbury. Refer to CEC Figure 5598/500/Figure1 [*Site Location Plan*] in Appendix 1.

1.2 The current development (referred to Areas A & F) falls within the wider Old Sarum development, which was the subject of an outline planning application, granted approval in June 2007 for 630 dwellings; employment use; a primary school; community hall; local retail facilities; and land for a doctors' surgery (Salisbury District Council Application Reference: S/2005/0211), and is nearing completion. Under the previous outline planning application, Areas A & F were allocated for employment uses.

Development Proposals

1.3 The current proposal includes the development of Areas A & F for residential use for 46 residential dwellings, with associated access off Roger Way, parking and landscaping. Refer to Drawing No. 1377-100(P3) [*Planning Layout*] by The Noble Consultancy included in Appendix 2.

Need for Study

1.4 The purpose of this assessment is to demonstrate that the development proposal outlined above can be satisfactorily accommodated without placing the development itself at risk and without worsening flood risk elsewhere. The study has been undertaken as per guidance provided within the national and local guidance documents, namely *National Planning Policy Framework (NPPF)* and its associated *Planning Practice Guidance (PPG)*.

1.5 Accordingly, this study has been prepared to:

- i) Assess flood risk to the development from fluvial sources;
- ii) Assess flood risk to the development from other potential sources, including ditches, sewers, groundwater and overland surface water flow;
- iii) Ensure that the development proposed will fully comply with the requirements of the EA's policy on the safeguarding of floodplains; and
- iv) Provide sustainable drainage solutions for the site.

Scope of Study

- 1.6 In Section 2.0, we describe the characteristics of the proposed development site and surrounding area. In Section 3.0, we assess flood risk. In Section 4.0, we discuss surface water and foul drainage proposals. Finally, conclusions are presented in Section 5.0.
- 1.7 The drainage proposals for the site will be guided by the following national and local guidance:
- *National Planning Policy Framework (February 2019);*
 - *Planning Practice Guidance - Flood Risk and Coastal Change (March 2014);*
 - *Flood risk assessments: climate change allowances (Updated July 2020);*
 - *DEFRA's Non-statutory technical standards for sustainable drainage systems (2015);*
 - *CIRIA C753 The SuDS Manual (November 2015);*
 - *Sewerage Sector Guidance Appendix C - Design and Construction Guidance V2 (April 2020);*
 - *Building Regulations Part H - Drainage and Waste Disposal (2015 Edition);*
 - *BRE Digest 365 Soakaway Design (Revised 2016);*
 - *Bournemouth, Christchurch, East Dorset, North Dorset and Salisbury Strategic Flood Risk Assessment (Halcrow, February 2008);*
 - *Wiltshire Council Groundwater Management Strategy 2016 (October 2015); and*
 - *Salisbury Surface Water Management Plan Intermediate Assessment of Groundwater Flooding Susceptibility, Phase 2 (November 2011).*
- 1.8 The following abbreviations have been used in this Report:
- AOD Above Ordnance Datum;
 - bgl below ground level;
 - BGS British Geological Survey;
 - DCG Design and Construction Guidance;
 - EA Environment Agency;
 - GwSPZ Groundwater Source Protection Zone;
 - LLFA Lead Local Flood Authority;
 - LPA Local Planning Authority;
 - NPPF National Planning Policy Framework;
 - PPG Planning Policy Guidance;
 - SFRA Strategic Flood Risk Assessment;
 - SSE Scottish and Southern Energy;
 - SSG Sewerage Sector Guidance;

- SuDS Sustainable Drainage Systems;
- SWFM Surface Water Flood Map; and
- SWMP Surface Water Management Plan.

2.0 THE EXISTING SITE

Site Location and Topography

- 2.1 The application site is located in Old Sarum development, 3.5km to the north of Salisbury City Centre. Refer to CEC Figure 5598/500/Figure1 [*Site Location Plan*] in Appendix 1. The site forms part of the wider Old Sarum mixed use development, located off Portway. The Old Sarum development site is located around an existing football stadium, and an established housing estate off Partridge Way.
- 2.2 Areas A & F, hereby referred as the Site, comprises an undeveloped parcel of land measuring c. 1.0 hectare, currently occurring as unmanaged grass field. The plot of land is located off Roger Way and is adjoined by the recently constructed properties on all sides with football stadium to the immediate south.
- 2.3 The local topography generally falls in a westerly direction towards a dry valley running adjacent to the north western site boundary. Land within the Site falls in a south westerly direction towards the football pitch, with levels falling from 74.60m at Rogers Way within the northern extent to 72.50m within the southwestern extent. Refer to Drawing No. BDS-04-19 [*Topographic Survey*] (by BDS) included in Appendix 2.

Nearby Watercourses/Drainage Features

- 2.4 The nearest watercourses relate to the River Avon located approx. 2km to the west of the site, and the River Bourne located 1.5km to the east. The rivers flow in a southerly direction to meet in Salisbury.

Existing Drainage/Sewers

- 2.5 There are existing foul and surface water sewers beneath the adjoining highway, Roger Way. The surface water sewer occurs as a 900/1050mm pipe which increases to 1200mm in size at its junction with Sherbourne Drive, and continues westward to discharge into a series of infiltration basin and swales located within the north western extent of the wider site.
- 2.6 A 150mm foul sewer increases in size to 225 and then 300mm as it moves along Roger Way in a westerly direction. These sewers have recently been construction in relation to the wider Old Sarum development, and owned by Scottish and Southern Energy (SSE) Water as further discussed in Section 4.0.

- 2.7 Wessex Water sewer records in Appendix 3 indicate further foul sewers located within existing residential estate off Partridge Way with a pump station to its north.

Existing Ground Conditions

- 2.8 The British Geological Survey (BGS) map available online indicates the site is underlain by Seaford Chalk Formation, with no superficial deposits. Refer to BGS data in Appendix 5.
- 2.9 Site Investigation works, undertaken by Structural Soils Limited in April 2005 across the wider site, confirmed the presence of Chalk geology. Tests determined soakage rates varying between 1.27×10^{-5} - 2.67×10^{-4} m/s for the underlying Chalk strata. Refer to SI report extract in Appendix 5.
- 2.10 The EA classifies the underlying Chalk formation as a 'Principal' aquifer. The site is located within Groundwater Source Protection Zone 2 associated with potable water abstraction sources in the vicinity. Any development activities, including management of foul water and surface water runoff, should ensure that the underlying vulnerable resources are not adversely impacted.

3.0 FLOOD RISK ISSUES

- 3.1 This Section of the study reviews historical flooding events within the local catchment area and presents an assessment of flood risk to the proposed development from various external sources. Recommended flood risk mitigation measures appropriate to the level of perceived risk are included. Flood risk posed by additional surface water runoff generated by the new development and appropriate mitigation measures are addressed within Section 4.0.

Flood History

- 3.2 SFRA/SWMP historical flood maps in Appendix 5 indicate flooding along the River Avon and River Bourne corridors; no flooding has been recorded at or immediately near the site.

Flooding from Fluvial/Tidal Sources

- 3.3 The site is located in Flood Zone 1. The *NPPF* identifies Flood Zone 1 as low flood risk areas with an annual probability of flooding of less than a 1 in 1000 (0.1%) from rivers or sea. Refer to CEC Figure 5598/500/Figure2 [*Flood Map*] in Appendix 1.
- 3.4 The proposed residential development, classed as ‘more vulnerable’ use under the *NPPF/PPG*, is considered acceptable in Flood Zone 1.

Fluvial/Tidal Flood Risk Mitigation Measures

- 3.5 No mitigation measures are required.

Flooding from Overland Flow (Surface Water)

- 3.6 The EA’s surface water flood map (in Appendix 5) indicates the site being susceptible to surface water flooding, albeit with low risk with less than 300mm depth of ponding likely in events exceeding the 1 in 100 year.

Overland Flow Flood Risk Mitigation Measures

- 3.7 The development layout will include appropriate overland flow routes (via roadways) to direct offsite overland runoff away from the properties, as indicated within CEC Plan 5598/501 [*Proposed Drainage Strategy*] in Appendix 1. Floor levels across the new properties will be set at least 300mm above such overland flow routes.
- 3.8 An adequately designed surface water drainage system and SuDS facilities will be

incorporated within the new development to prevent surface water runoff generated by the new development from causing flooding at the site or increasing flood risk elsewhere. Further details are included in Section 4.0.

Flooding from Existing Sewers/Drains

- 3.9 The sewers in the vicinity have been recently constructed, and are presumed to be adequately designed. These should not therefore fail or flood.
- 3.10 In the unlikely or extreme circumstance that these should flood, floodwater should largely be contained in the corridor of Roger Way; however, based on as-built road levels, some overflows are likely to direct towards the site.

Sewer Risk Mitigation Measures

- 3.11 The development layout will ensure that any floodwater entering the site is routed safely via onsite roadways towards low-risk areas (e.g. parking), away from the new properties.
- 3.12 Floor levels across the new properties will be adequately raised, at least 300mm above such flood flow routes, to prevent internal property flooding.

Flooding from Groundwater

- 3.13 The site is underlain by permeable Chalk strata; however, groundwater is expected to remain at a significant depth. Salisbury SWMP (Figure 5) in Appendix 5 confirms the site remains at low risk from groundwater flooding, with groundwater not anticipated within 4m bgl (below ground level).

Groundwater Flood Risk Mitigation Measures

- 3.14 No mitigation measures are considered necessary.

Table 3.1: Assessment of Flood Risk to the Development Site Arising from External Sources

Source of Potential Flooding to the Development Site	Flood Risk	Mitigation/Comments
Fluvial	Low	The site is located in Flood Zone 1 with low risk.
Overland Flow	Low-Medium	- The site is liable to surface water flooding to a depth of 300mm. - Mitigation measures will include raised floor levels and provision of overland flow routes (via roadways), and provision of adequate drainage/SuDS system to manage development runoff.
Sewers/Drains	Low-Medium	- Potential of public sewers flooding in Roger Way entering the site. - Mitigation measures will include raised floor levels and provision of overland flow routes (via roadways).
Groundwater	Low	Groundwater is expected to be deep (>4m bgl).

4.0 DRAINAGE PROPOSALS

- 4.1 This Section details how surface water flows arising from the development site will be managed in line with related national and local guidance, namely *NPPF*, *PPG* and *SFRA* recommendations. The proposals will consider the requirements of the Environment Agency, Local Planning Authority (Amber Valley Borough Council) and Lead Local Flood Authority (Derbyshire County Council).

Surface Water Drainage Proposals

- 4.2 The development site comprises a hectare of an effectively greenfield land, and generates greenfield runoff of 1.7l/s in the 100yr event. Refer to calculations in Appendix 6. The lower greenfield runoff rates derived for the site reflects that the underlying chalk strata has good infiltration characteristics.
- 4.3 Based on the current layout, (Drawing No. 1377-100(P3) [*Planning Layout*] (by The Noble Consultancy) included in Appendix 2, the development proposal will add 0.57ha of hard area across the site, with 0.39ha of roof and private parking/drives and 0.18ha of road area. A 10% urban creep will need to be applied to the private areas (0.39ha) to allow for future extensions etc, which increases the design hard area to 0.61ha.
- 4.4 The agreed drainage strategy for development on the Old Sarum site was set out in supporting documents (namely Environmental Statement and Development Brief, 2005, as well as the Flood Risk Assessment, 2007). The surface water drainage strategy for the development has been agreed with the Environment Agency. The agreed drainage strategy involves draining surface water runoff from the development site to ground via infiltration devices, comprising a series of linked infiltration basins/swales along the north-western boundary and the use of soakaways and permeable paving. Infiltration tests were carried out within the wider site, which established suitability of the underlying Chalk strata for infiltration drainage.
- 4.5 Within the strategy, hard areas within the current development were allowed for in the original drainage strategy and FRA. The strategy allowed roof runoff from the current site (5,380m²) to drain into the downstream piped network (and into the infiltration basin 5) whilst parking and access areas are to drain via pervious paving. Refer to Drawing Nos. P346/143 [*Surface Water Sewer Network*] and P609/12 [*Surface Water Drainage Strategy*]

(by PFA Consulting) in Appendix 2. The strategic drainage networks and infiltration basin have been designed for the 1:100-year event with 30% climate change allowance.

- 4.6 The current drainage proposals for Parcels A & F will however seek to manage runoff largely within the site, with only adoptable road areas draining offsite to strategic network and infiltration basin. Accordingly, all roof and parking/drives (0.43 with 10% urban creep) will be drained via soakaways where feasible, otherwise into permeable paving. Highway runoff (0.18ha) will drain to the as-built piped drainage systems and into the infiltration basin 5. Refer to CEC Plan 5598/501 [*Proposed Drainage Strategy*] in Appendix 1 for the proposed drainage arrangement.
- 4.7 All infiltration devices (soakaways, permeable paving) will be adequately designed to manage surface water runoff for events up to the 1:100 year, including 40% climate change allowance in line with the latest NPPF/EA climate change guidance. Preliminary calculations, using the lowest observed infiltration rate of $1.27 \times 10^{-5} \text{m/s}$ from previous testing, show that a cellular soakaway of $7\text{m}^2 \times 0.8\text{m}$ (4.6m^3) and a permeable paving ($5.5\text{m} \times 3\text{m}$) with 390mm subbase can drain 80m^2 hard area. Refer to calculations in Appendix 6.
- 4.8 The proposal will significantly reduce hard area draining to the strategic drainage system (by 67%), which will therefore reduce the flow to the downstream piped drainage system and infiltration basin compared to the original drainage strategy.
- 4.9 Care would need to be taken with the proximity of any infiltration device to structures with the potential for weakening of the ground through solution features. As such, all soakaways will be located at least 5m away from the buildings. Unlike soakaways, as permeable paving disposes runoff across much larger area, the 5m offset distance is not considered necessary.
- 4.10 Consequently, the new development will appropriately manage surface water runoff and will not increase flood risk within the site or the local area.

Residual Flood Risk

- 4.11 Should the drainage system block/fail or under extreme events of flooding exceed the design standard, floodwaters will be contained largely within private gardens and parking areas. Highway exceedance flows will direct towards the parking areas located towards the lower end.

Water Quality

- 4.12 With the site being located above a 'Principal' aquifer and within groundwater source protection zone SPZ2, it would be necessary to ensure that suitable treatment is provided to all surface water runoff before being discharged to the ground.
- 4.13 Accordingly, roof water considered fairly uncontaminated, will drain via catchpits and soakaways whilst runoff from parking/drive areas susceptible to sediment loading and hydrocarbon contaminants will be treated via catchpits and permeable paving. Runoff from road area will be treated within the infiltration basin with vegetated bed and banks.
- 4.14 All infiltration devices will afford more than a metre unsaturated buffer above the potential groundwater table (which remains at a significant depth) which provides further treatment of runoff entering the underlying aquifer and groundwater protection zone.

Adoption & Maintenance

- 4.15 The current adoption and maintenance arrangement of drainage and SuDS components across the wider development remain as below:
- It is understood that surface water and foul sewerage system, including the pumping station and rising main, serving the Old Sarum development have been adopted by SSE Water through an Inset arrangement between Wessex Water and SSE Water.
 - The infiltration basins and swales have been adopted by Wiltshire Council.
 - The access roads and footways together with the dedicated highway drainage and gullies are under a Section 38 Agreement and will be adopted by Wiltshire Council.
- 4.16 Within the current development, the maintenance of any private soakaways/permeable paving serving a single unit would be the responsibility of the individual home owner. Shared private soakaways/permeable paving would be maintained jointly by affected property owners. Piped network beneath the access roads will be offered for adoption to SSE Water who owns the wider site's surface water drainage network.
- 4.17 Regular inspection and maintenance are required to ensure the effective long-term operation of SuDS as designed. Maintenance should be carried out in line with the *CIRIA C753 The SuDS Manual* or as per manufacturer's specification, as briefly shown in Tables 4.1 and 4.2 below.

Table 4.1: Maintenance Schedule for Permeable Paving

Schedule	Maintenance Requirement	Frequency
Regular	Brushing and vacuuming over whole surface	Once a year, after autumn leaf fall
Occasional	Removal of weeds	As required
Remedial	Remedial work to any depressions or cracked or broken blocks considered a hazard to end users or detrimental to performance	As required
	Rehabilitation of surface and upper sub-structure by remedial sweeping	Every 10 - 15 years, or as required
Monitoring	Initial inspection	Monthly for 3 months after installation
	Inspect for evidence of weed growth or poor operation	Three monthly, 48 hours after large storms in first six months
	- Inspect silt accumulation rates - Monitor inspection chambers	Annually

Table 4.2: Maintenance Schedule for Cellular Soakaway

Schedule	Maintenance Requirement	Frequency
Regular	- Inspect for sediment and debris in pre-treatment devices and floor of inspection tube or chamber - Cleaning of gutters and any filters and downpipes - Trimming any roots that may be causing blockages	Annually, or as required based on inspection
Occasional	Remove sediment and debris from pre-treatment components and floor of inspection tube or chamber	As required
Remedial	- Reconstruct soakaways and/or replace or clean fill, if performance deteriorates or failure occurs - Replacement of clogged geotextile	As required
Monitoring	Inspect silt traps and note sediment accumulation rate	Monthly in the first year and then annually
	Check soakaways to ensure emptying is occurring	Annually

Foul Drainage Proposal

- 4.18 The development, with 46 dwellings, is likely to generate peak foul flow of 2.1 l/s based on 4000litres/day/dwelling as per the new *Design and Construction Guidance Code*.
- 4.19 It is proposed to discharge foul flows from the development into the 225/300mm diameter foul sewer located in Roger Way at appropriate location as suited by site layout. This sewer ultimately drains into a foul water pumping station located within the south western extent of the wider site, accessed off Castle Well Drive. The foul water pumping station was

designed to take foul flows from the wider Old Sarum development, which discharges via a new rising main running beneath Sherbourne Drive within the wider development and then along Portway, to the 225mm Wessex Water foul sewer (MH Ref. 6902) in Green Lane off Portway. Refer to Wessex Water sewer records in Appendix 3.

- 4.20 The piped foul network beneath the adoptable highways will be offered for adoption by SSE Water, who owns the wider site's foul drainage network.

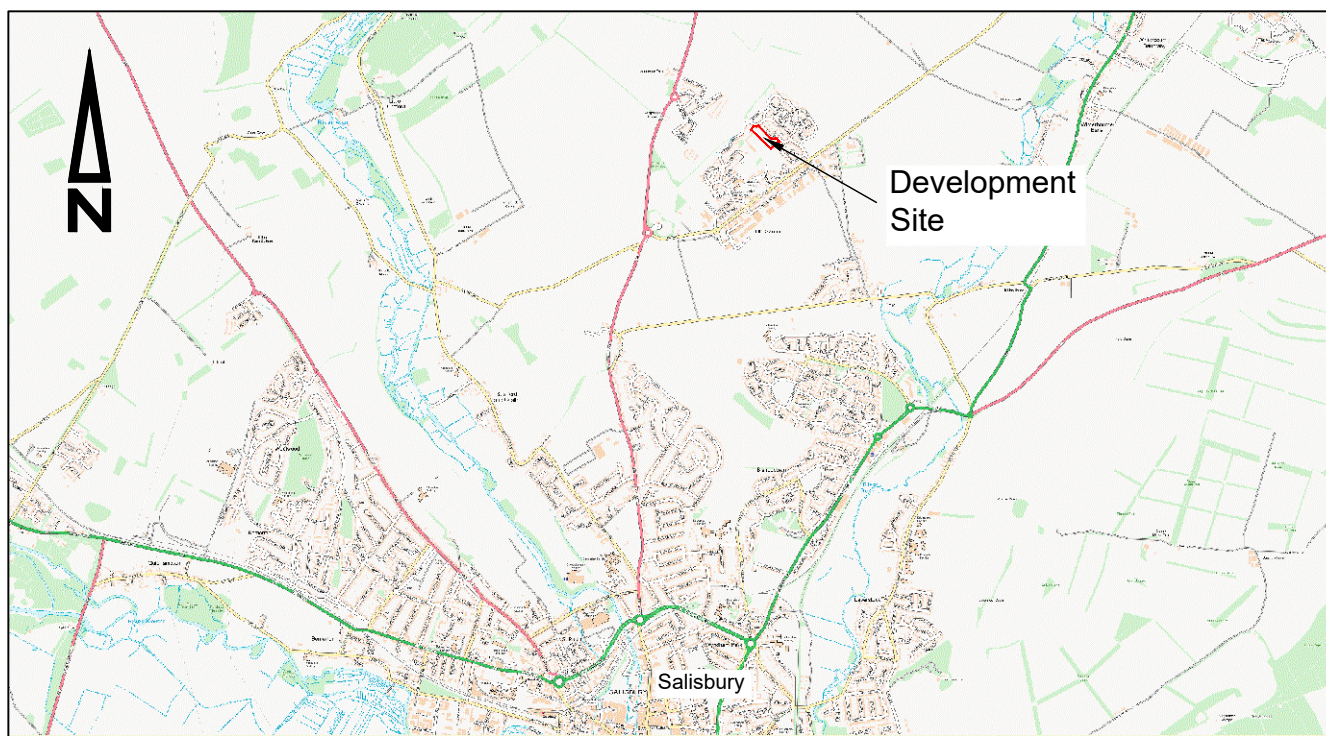
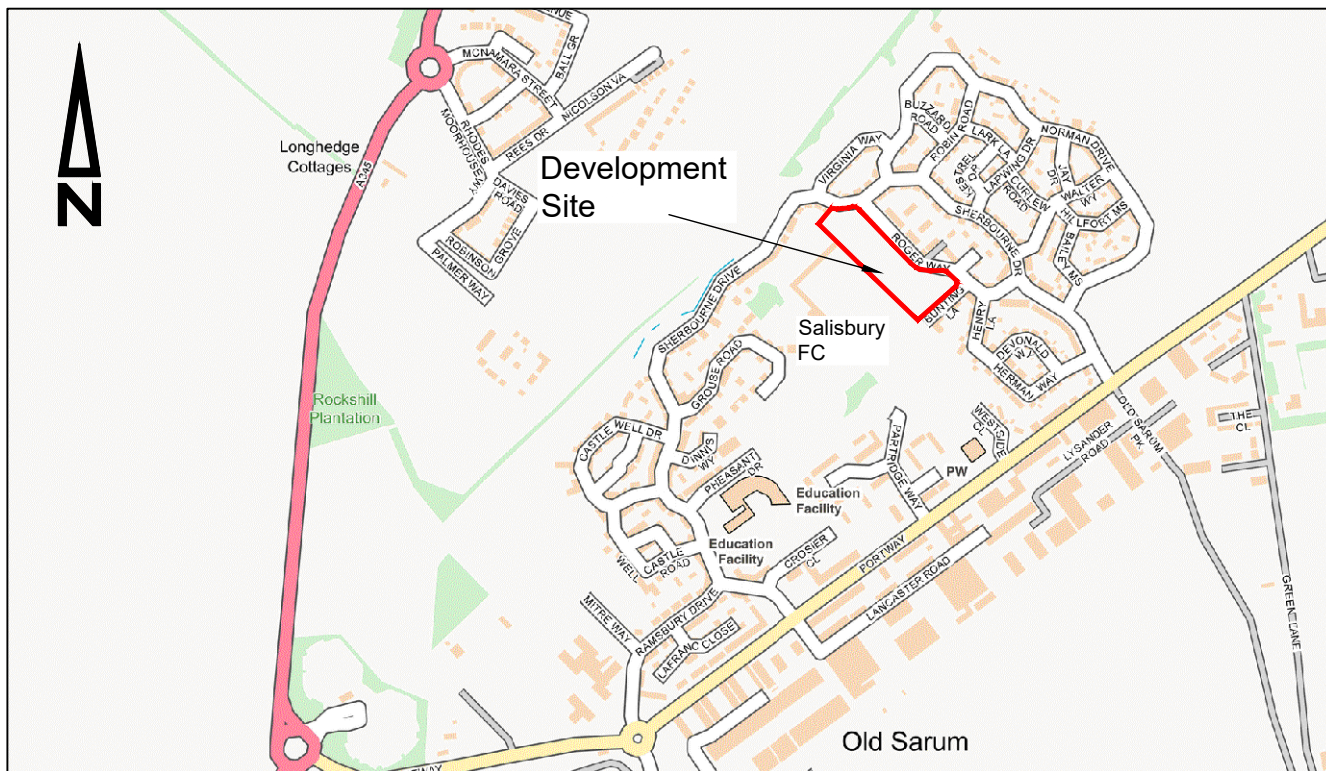
5.0 DISCUSSION AND CONCLUSIONS

- 5.1 This *Flood Risk Assessment & Drainage Strategy* Report discusses flood risk and drainage issues associated with the proposed residential development on land at Old Sarum, Salisbury (Areas A & F). The study considers the requirements of the Environment Agency and guidance contained within the *NPPF* and *PPG*.
- 5.2 There are no known historical records of flooding at the site. The site is located within Flood Zone 1 and therefore the development is compatible with regards to national and local flood risk Planning Policy. The proposed residential development, regarded as ‘more vulnerable’ usage, is considered acceptable in Flood Zone 1.
- 5.3 Flood risks from sewers, overland flow, groundwater have been considered in this study. The development remains at potential risk from sewer flooding at Roger Way and surface water runoff. Accordingly, the development will include mitigation measures as below to keep the development safe:
- *Raised floor levels;*
 - *Provision of overland flow routes (via roadways); and*
 - *Adequate drainage provision to manage surface water runoff.*
- 5.4 The drainage proposals for the site have been prepared in accordance with the approved FRA and drainage strategy works that supported the outline planning application. The agreed drainage strategy for the wider development site involves draining surface water runoff to ground via infiltration devices, comprising a series of linked infiltration basins/swales along the north-western boundary and the use of soakaways and permeable paving. The strategy allowed roof runoff from the current site to drain into the downstream piped network (and into the infiltration basin 5) whilst parking and access areas are to drain via pervious paving.
- 5.5 Within the current development, runoff will largely be managed within the site, with roof and private areas draining via soakaways and permeable paving; only adoptable highway areas will drain into the strategic network and infiltration basin 5. Impermeable areas connected to the downstream drainage system will significantly reduce compared to the allowance made within the original drainage strategy, which will reduce flow entering the downstream system.

- 5.6 All infiltration devices (soakaways, permeable paving) will be designed to manage surface water runoff for events up to the 1:100 year with 40% climate change allowance. Residual flooding in extreme events or drainage failure/blockage occasions will mostly be contained within the private gardens and parking areas. Runoff will be appropriately treated within SuDS (soakaways, permeable paving and infiltration basin) with pre-treatment devices (catchpits) before entering the underlying groundwater body.
- 5.7 Foul flow from the site will discharge into the strategic foul sewer located in Roger Way in agreement with SSE Water. The foul sewer network drains into a foul water pumping station that serves the wider Old Sarum development, with its rising main finally draining into Wessex Water sewer in Green Lane.
- 5.8 All SuDS devices will be constructed and maintained in line with *The SuDS Manual* or manufacturer's specification. Maintenance of any private soakaways/permeable paving serving a single unit would be the responsibility of the individual home owner. Shared private soakaways/permeable paving would be maintained jointly by affected property owners. Piped network beneath the access roads will be offered for adoption to SSE Water who owns the wider site's piped drainage network.
- 5.9 This study has been undertaken in accordance with the principles set out in NPPF. We can conclude that providing the development adheres to the conditions advised within this Report, the said development proposals can be accommodated without increasing flood risk within the locality in accordance with objectives set by Central Government and the EA.

Cole Easdon Consultants Limited
April 2021

Appendix 1



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Drawing Title:

Site Location Plan

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Date Drawn

January 2021

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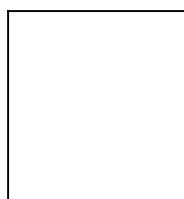
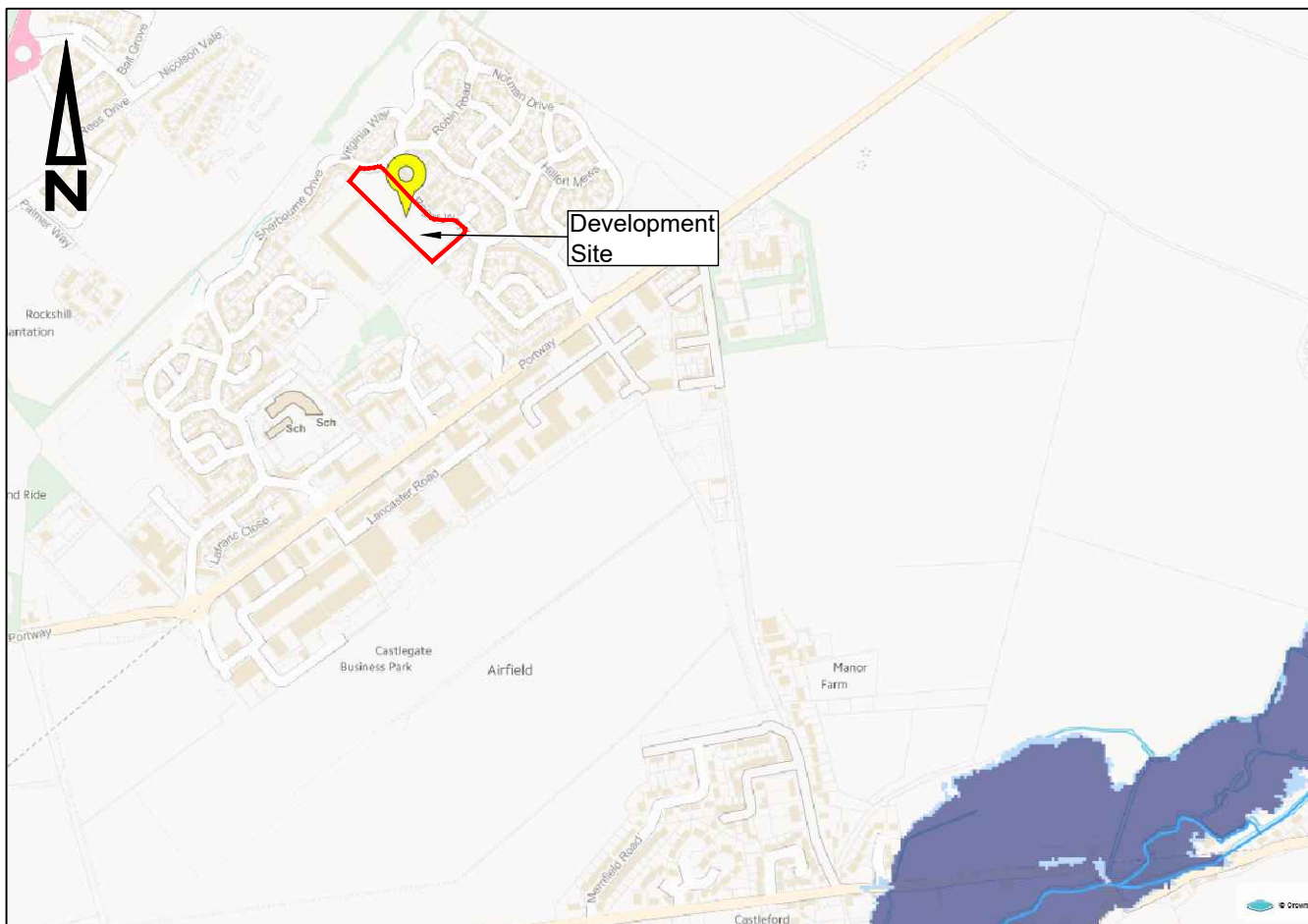
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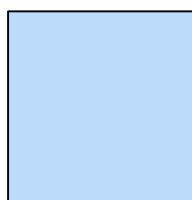
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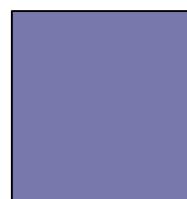
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Flood Zone 1
Low Risk



Flood Zone 2
Medium Risk



Flood Zone 3
High Risk



Main Rivers

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Drawing Title:

Flood Map

Client:

Persimmon Homes Wessex

Drawn By

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Checked By

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January 2021

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Client

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Job Title

Parcel A & F Development
Old Sarum
Salisbury

Drawing Title

Proposed Drainage Strategy

Drawing Status

FOR COMMENT

FOR PLANNING

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FOR APPROVAL

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CONSTRUCTION AT CLIENT / CONTRACTOR RISK

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NP

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NP

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RB

Date

Feb 2021

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Rev.

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- KEY
- Existing Highway Drain/Gully Connection (not owned by Thames Water)
 - Existing Thames Water Foul Sewer
 - Existing level
 - Proposed highway drain & manhole
 - Proposed foul water sewer & manhole
 - Proposed private surface water drain
 - Proposed private foul water drain
 - Proposed private cellular soakaway
 - Proposed permeable paving
 - Proposed catchpit
 - Design exceedance flow route

DRAINAGE NOTES:

- Surface water runoff to be disposed of into ground via cellular soakaways and permeable paving.
- Adoptable roads to discharge into the strategic storm sewer network which drains into the already built infiltration basin.
- Soakaways and permeable paving to be designed for up to the 1:100 year + 40% event.
- Foul water to discharge into the existing public foul sewer located beneath Roger Way at site frontage at appropriate location as governed by the layout.
- Drainage shown subject to detailed design.

Site Area 1.00ha

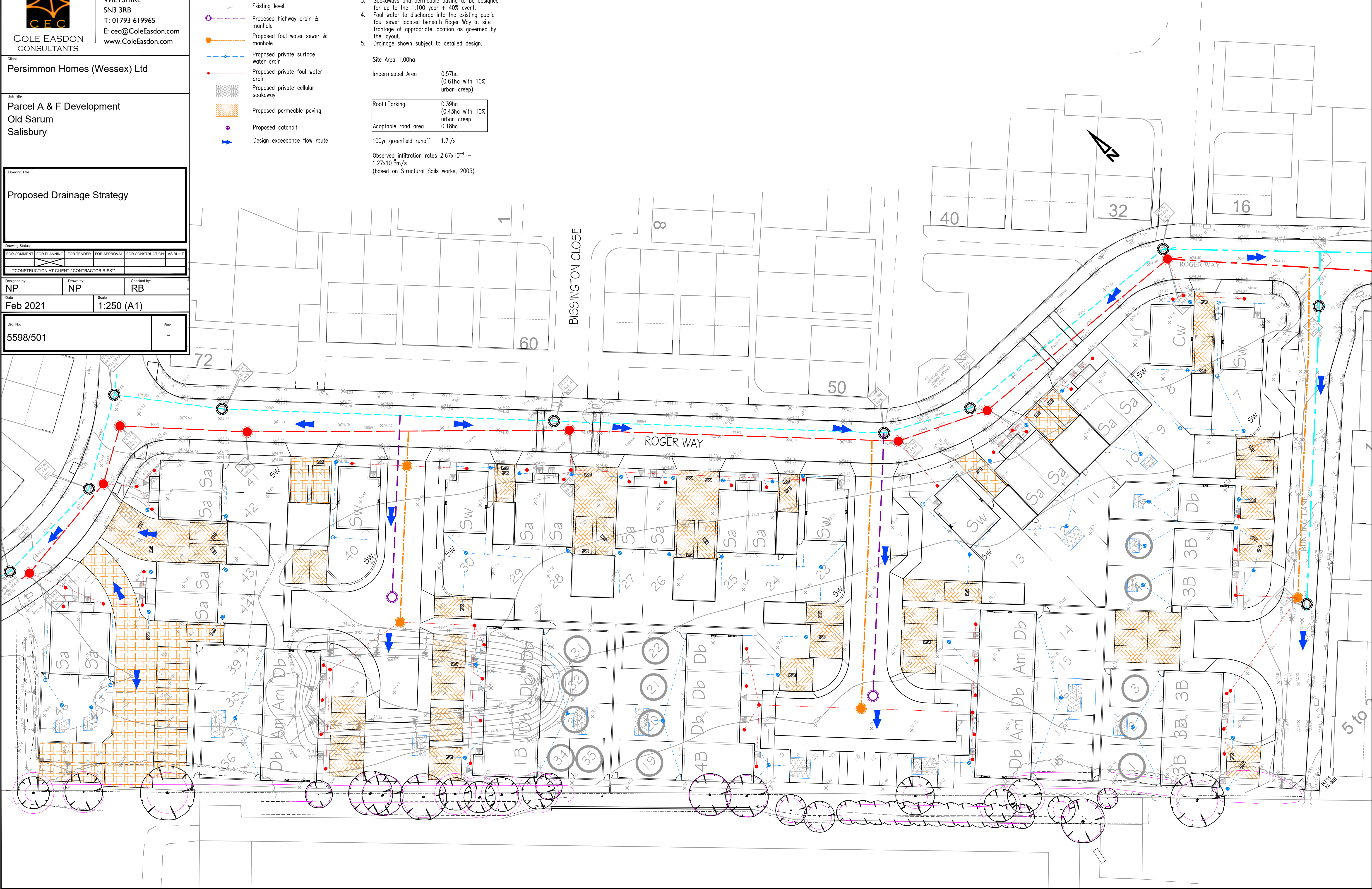
Impermeable Area 0.57ha
(0.61ha with 10% urban creep)

Roof+Parking	0.39ha (0.43ha with 10% urban creep)
Adoptable road area	0.18ha

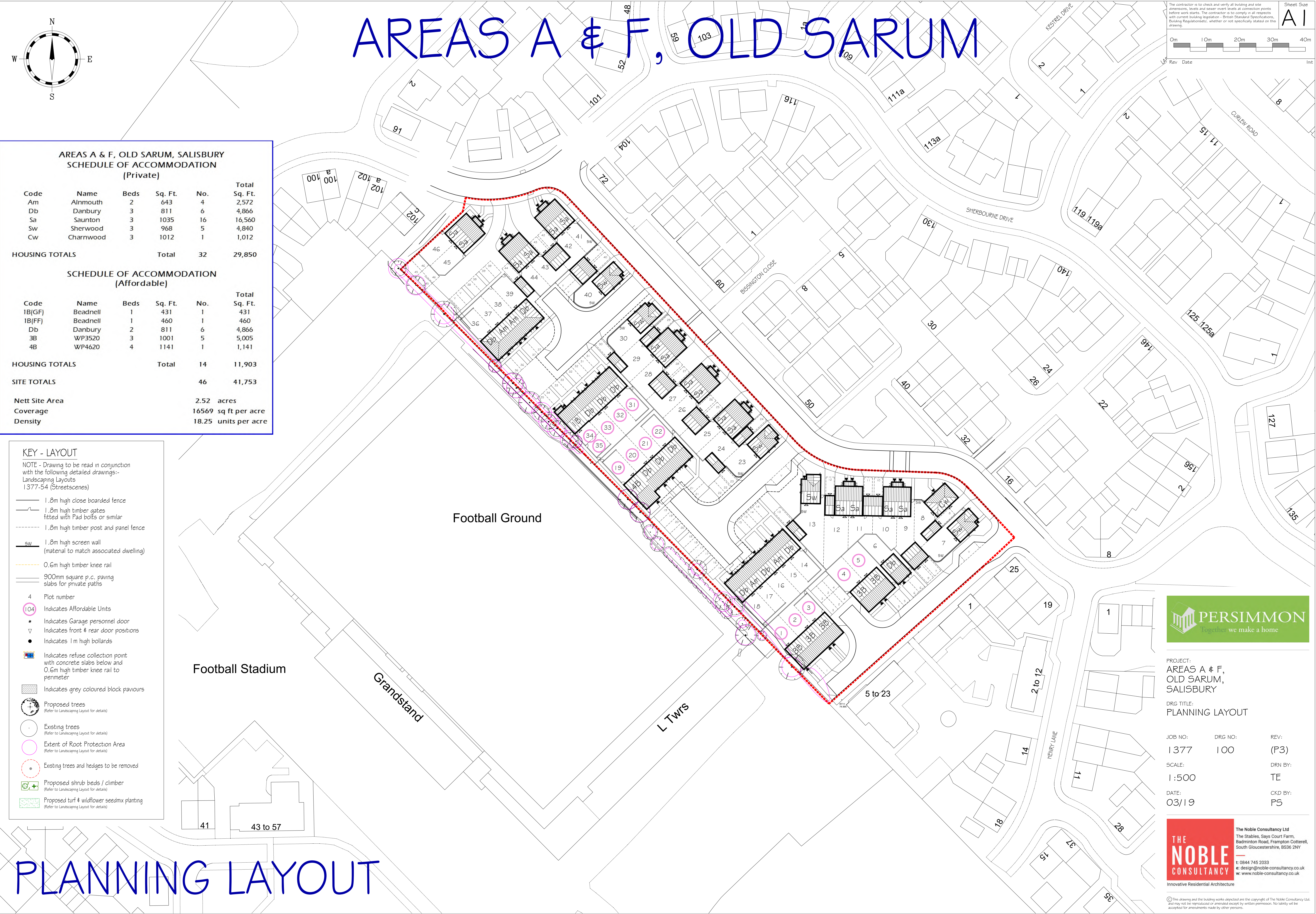
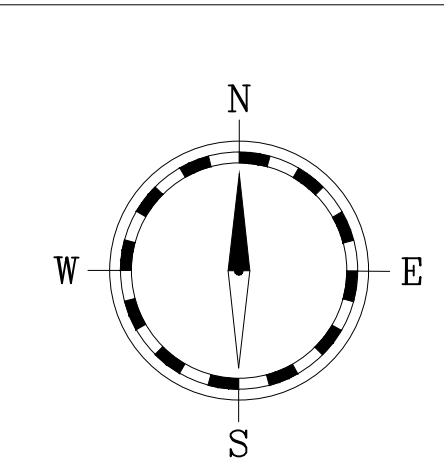
100yr greenfield runoff 1.7l/s

Observed infiltration rates 2.67×10^{-4} – 1.27×10^{-5} m/s
(based on Structural Soils works, 2005)

REFERENCE DRAWINGS:				
Drawing No.	Drawing Title	Revision	Date	Company
1377-100	Planning Layout	P3	3.2019	Noble Consultancy
BOS-04-19	Topographical Survey	-	4.2019	BOS



Appendix 2



AREAS A & F, OLD SARUM

AREAS A & F, OLD SARUM, SALISBURY SCHEDULE OF ACCOMMODATION (Private)					
Code	Name	Beds	Sq. Ft.	No.	Total Sq. Ft.
Am	Alnmouth	2	643	4	2,572
Db	Danbury	3	811	6	4,866
Sa	Saunton	3	1035	16	16,560
Sw	Sherwood	3	968	5	4,840
Cw	Charnwood	3	1012	1	1,012
HOUSING TOTALS		Total	32	29,850	
SCHEDULE OF ACCOMMODATION (Affordable)					
Code	Name	Beds	Sq. Ft.	No.	Total Sq. Ft.
1B(GF)	Beadnell	1	431	1	431
1B(FF)	Beadnell	1	460	1	460
Db	Danbury	2	811	6	4,866
3B	WP3520	3	1001	5	5,005
4B	WP4620	4	1141	1	1,141
HOUSING TOTALS		Total	14	11,903	
SITE TOTALS			46	41,753	
Nett Site Area		2.52 acres			
Coverage		16569 sq ft per acre			
Density		18.25 units per acre			

KEY - LAYOUT

NOTE - Drawing to be read in conjunction with the following detailed drawings:-
Landscaping Layouts
1377-54 (Streetscenes)

1.8m high close boarded fence

1.8m high timber gates fitted with Pad bolts or similar

1.8m high timber post and panel fence

1.8m high screen wall (material to match associated dwelling)

0.6m high timber knee rail

900mm square p.c. paving slabs for private paths

Plot number

Indicates Affordable Units

Indicates Garage personnel door

Indicates front & rear door positions

Indicates 1m high bollards

Indicates refuse collection point with concrete slabs below and 0.6m high timber knee rail to perimeter

Indicates grey coloured block pavours

Proposed trees
(Refer to Landscaping Layout for details)

Existing trees
(Refer to Landscaping Layout for details)

Extent of Root Protection Area
(Refer to Landscaping Layout for details)

Existing trees and hedges to be removed

Proposed shrub beds / climber
(Refer to Landscaping Layout for details)

Proposed turf & wildflower seedmix planting
(Refer to Landscaping Layout for details)

The contractor is to check and verify all building and site dimensions, levels and sewer invert levels at connection points before work starts. The contractor is to comply in all respects with current building legislation - British Standards Specifications, Building Regulations etc, whether or not specifically stated on this drawing.

Sheet Size
A1

0m 10m 20m 30m 40m

Rev Date

PERSIMMON
Together we make a home

PROJECT:
AREAS A & F,
OLD SARUM,
SALISBURY

DRG TITLE:
PLANNING LAYOUT

JOB NO:
1377

DRG NO:
100

REV:
(P3)

SCALE:
1:500

DATE:
03/19

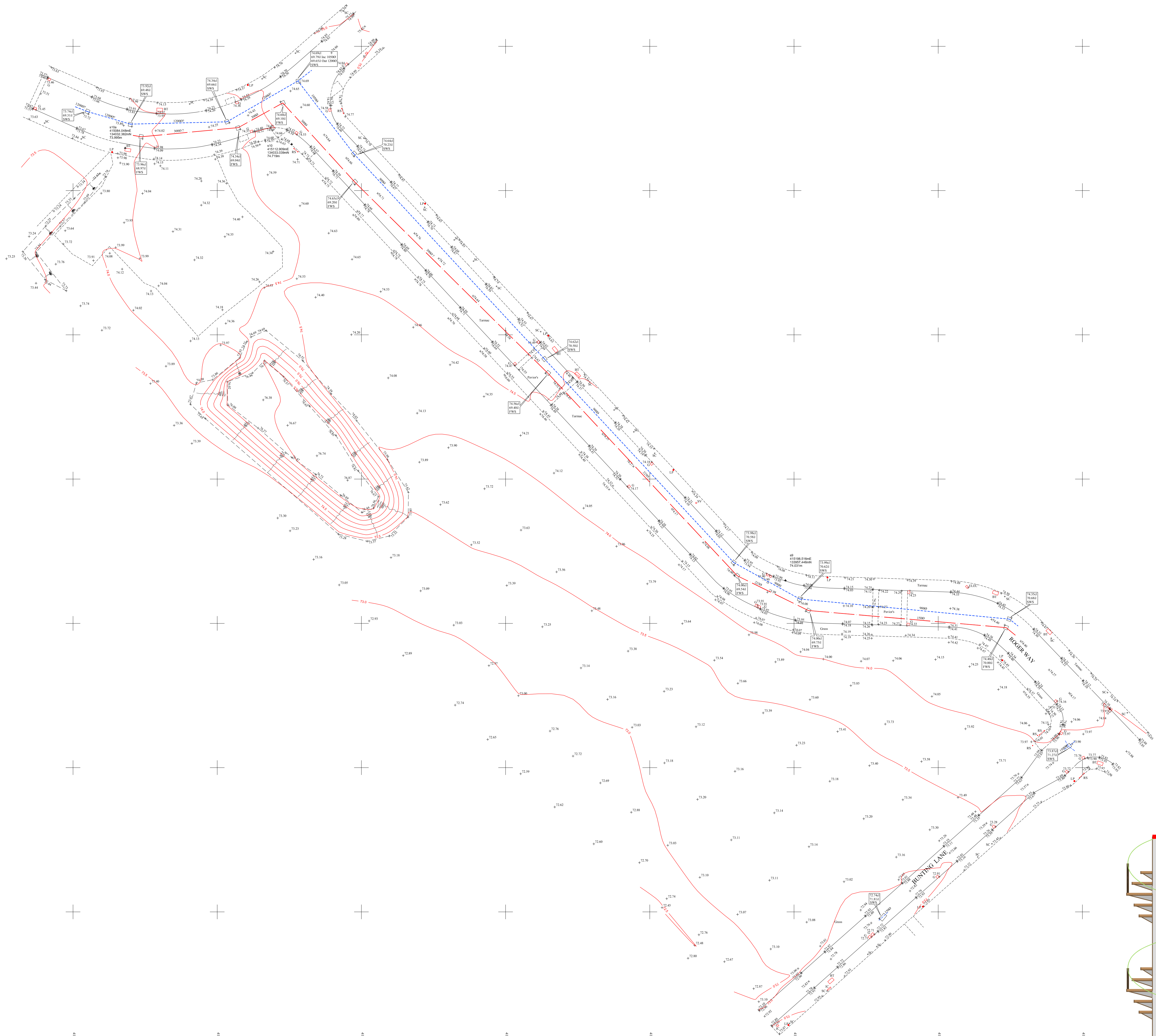
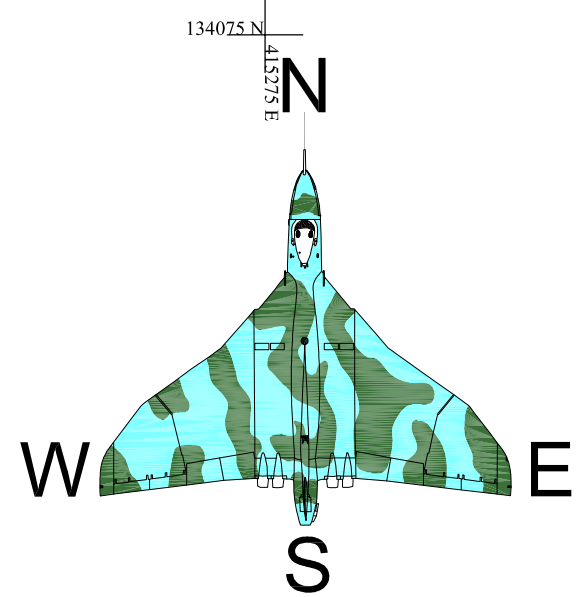
DRN BY:
TE

CKD BY:
PS

THE NOBLE CONSULTANCY
Innovative Residential Architecture

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Key

AV	Air Valve	RS	Road Sign	Bank
BL	Bollard	SC	Stop Cock	Building
BM	Bench Mark	Str	Strainer	Kerb
BP	Boundary Point	SV	Stop Valve	Foliage
BT	British Telecom Cover	TL	Threshold Level	Hedge
CATV	Cable Television Cover	TP	Telephone Pole	Pipe
CL	Cover Level	WM	Water Meter	Verge
EP	Electric Power Pole	WO	Wash Out	Wall
EV	Eave Level	UTL	Unable To Lift	Track
FH	Fire Hydrant	Fence Descriptions		
FL	Floor Level	B/W	Barbed Wire	Fence
FP	Fence Post	C/B	Close Board	Telephone
G	Gully	C/I	Corrugated Iron	Electric
GP	Gate Post	C/L	Chain Link	Water line
GV	Gas Valve	C/P	Chestnut Puling	
IC	Inspection Chamber	C/W	Chicken Wire	
IL	Invert Level	IR	Iron Railings	Speed/Trunk/Dia/Height
KO	Kerb Outlet	P/R	Post & Rail	Manhole
LC	Basement Light	P/W	Post & Wire	SWS (Standard for SWS)
L.P	Lamp Post			1750
M	Manter			
MH	Manhole			
MK	Marker			
MS	Milestone			
RG	Ridge Level			

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Email: info@bds.co.uk
Tel/Fax: (01248) 616026
Mobile: 07745 135660

Project Name:
Roger Way
Old Sarum Salisbury

Drawing Title:
Topographic Survey
For Code Easement Consultants

Client:
Persimmon Homes

Date:
April 2019

Scale:
1:200 @ A0

Drawn:
P-J-S

Checked:
G-H

Dwg No:
HDS-04-19

Rev:
1

Notes:
Survey Grid based on OS
Levels based on OSGM-15
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dh

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Rev	Date	Description	Initials
Client			
 PERSIMMON HOMES			
Project			
Land at Old Sarum Phase 2			
Drawing Title			
Surface Water Sewer Network			
Drawing No.			
P346/143			
Date	November 2006		
Scale	1:1250		
Drawn By	DRB		
Checked By	NB		
E-Mail	nbennett@pplpc.com		
File Ref	P346/Drawings/P346_143_144		