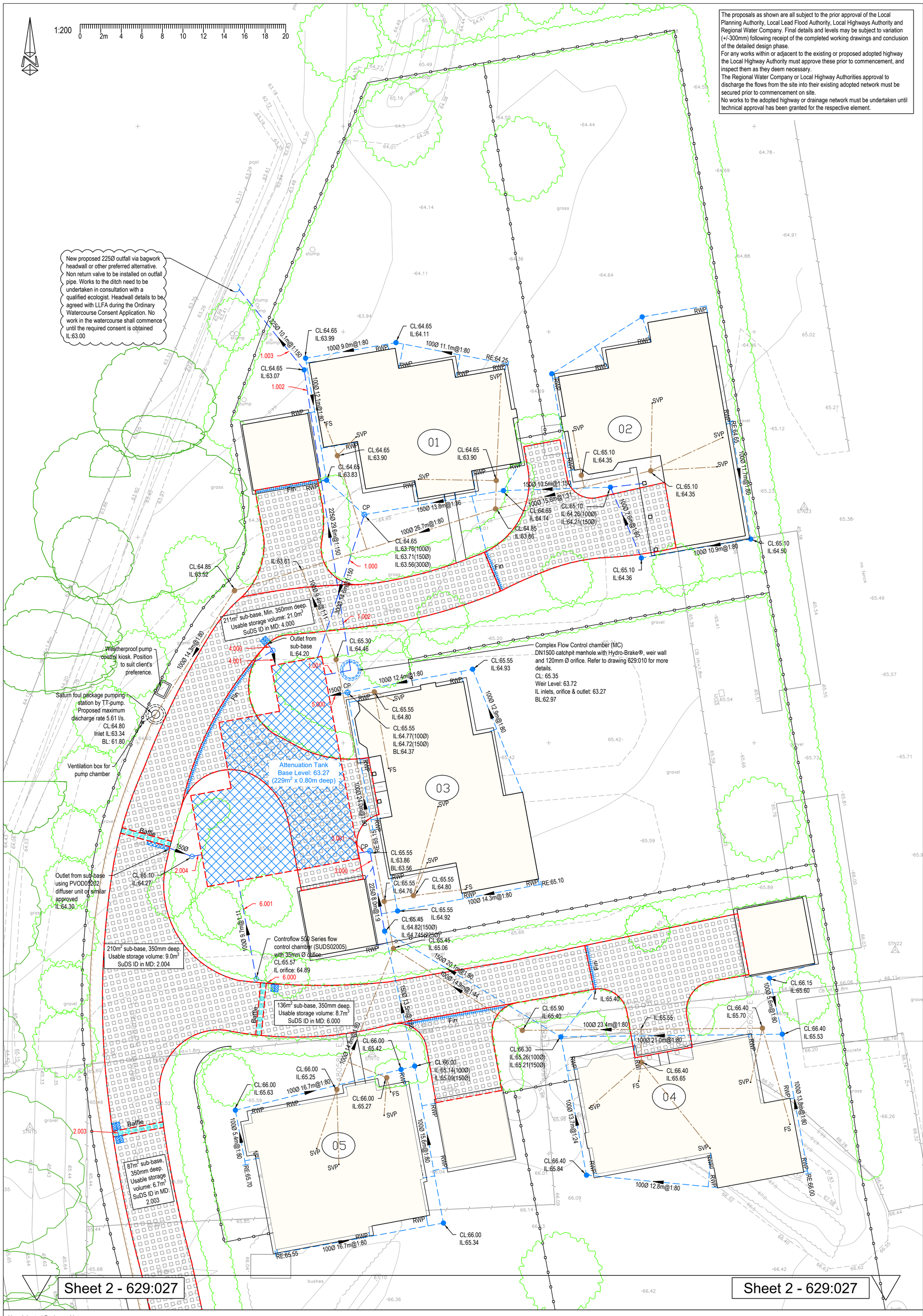

The proposals as shown are all subject to the prior approval of the Local Planning Authority, Local Lead Flood Authority, Local Highways Authority and Regional Water Company. Final details and levels may be subject to variation (+/-300mm) following receipt of the completed working drawings and conclusion of the detailed design phase.
For any works within or adjacent to the existing or proposed adopted highway the Local Highway Authority must approve these prior to commencement, and inspect them as they deem necessary.
The Regional Water Company or Local Highway Authorities approval to discharge the flows from the site into their existing adopted network must be secured prior to commencement on site.
No works to the adopted highway or drainage network must be undertaken until technical approval has been granted for the respective element.

© BEAL Consulting Engineers Ltd. All rights reserved.
No part of this document may be reproduced, stored in a retrieval system or transmitted, in any form or by means, electronic, mechanical, photocopying, recording or otherwise, without the prior permission of BEAL Consulting Engineers Ltd.

NOTES:

1. Do not scale from this drawing. This drawing shall be read in conjunction with all other relevant Architect's and Engineer's drawings.
2. Any discrepancies, ambiguities, or anomalies in the information provided on this or any of the engineering drawings package must be reported prior to work proceeding.
3. All accommodation work deemed necessary to facilitate a satisfactory link between the new works and the existing to be undertaken by the developer.
4. It is the contractor's responsibility to locate all existing services and verify their level & location prior to commencing any works. Should they be affected by the works then the respective statutory undertaker should be contacted and any special protection requirements agreed.
5. All highway works shall be undertaken in accordance with the Local Highway Authorities Design Guide and Specification and strictly in accordance with the 'Specification for Highway Works'. All drainage works shall be undertaken in accordance with the 'Design & Construction Guidance', and any other Regional Water company requirements. All works to be supervised/inspected as required by the relevant Inspector.
6. All works must comply with current Health and Safety guidance & standards. All temporary signing to comply with Traffic Signs Manual - Chapter 8.
7. All products are to be installed and maintained strictly in accordance with manufacturer's recommendations & guidelines.

Surface Water Drainage Legend	
	New surface water sewer proposed to fall under the maintenance responsibility of the Management Company (MC)
(MC)	Denotes drainage element that fall under the maintenance responsibility of the appointed Management Company
	New surface water drainage (min gradient@1:80) to fall under the management responsibility of the property owner
	New shallow surface water inspection chamber (typ. 450mm dia.) up to 1.2m deep
	New deep surface water inspection chamber (typ. 450mm dia.) up to 3m deep with access opening restricted to 350mm diameter
CP	New surface water catchpit chamber (typ. 600mm dia. for pipe greater than 150Ø and 450mm dia. for pipe up to 150Ø) up to 3m deep. Restict access opening to 350mm Ø for depth greater than 1.2m (cover level to base of chamber).
RE	New surface water rodding eye
RWP	New rain water down pipe with rodding access point
SL	Slot drain, Aco Hexdrain brickslot drainage system.
ACO	Aco Channel, Aco HexDrain Garage System.
Fin	Formpave SC Findrain or similar approved laid at the base of the permeable paving sub-base to collect/transport surface water to outlet.
Baffle	450mm concrete baffle, see details.
	Extent of permeable paving with sub-base attenuation under, min. 350mm thick of sub-base type 4/20 (min 30% voids), sub-base formation level to fall towards outlet. Full impermeable tanking to sub-base to be provided.
	New SEL Permavoid diffuser unit PVOD05101 (or similar approved) pre-wrapped in 2mm mesh with 110mm Ø socket used as outlet of permeable paving sub-base. Dimensions: 710 x 710 x 150mm
	Aquacell Core-R/Plus-R storm water storage units (each 1.0x0.5x0.4), or similar approved, installed in accordance with manufacturer's instructions (see also construction details). To be fully encapsulated with impermeable membrane to maintain storage. Vent pipe to be provided and brought up close to ground level (see details).
	Root protection areas.
	Potential surface water flood exceedance route. For storm events in excess of design storm event (1:100y + 40% c/c).
	Proposed landscaping.

Foul Water Drainage Legend	
	New foul drain/sewer (see 'Non Adopted Drainage Notes' for requirements)
	New shallow foul water inspection chamber (typ. 450mm dia.) up to 1.2m deep
	New deep foul water inspection chamber (typ. 450mm dia.) up to 3m deep with access opening restricted to 350mm diameter
SVP	New soil and vent pipe
FS	New floor socket
TG	New trapped bottle gully

Existing Drainage Legend	
	Existing adopted foul water manhole
	Existing adopted foul water sewer
	Existing adopted rising main foul water sewer
	Existing adopted surface water manhole
	Existing adopted surface water sewer

Note
The proposals as shown are all subject to the prior approval of the Local Planning Authority, Local Highway Authority and Local Water Authority. No works to the adopted highway or drainage network must be undertaken until technical approval has been granted for the respective element.

APPLICATION NOTES

The Client intention is for the proposed new drainage to remain private. Therefore a S104 application is not required.

S104 Application - Not required.	
S106 Application - Submitted. Waiting for Thames Water capacity assessment and confirmation of point of connection.	
Land Drainage Consent - Waiting for client instruction.	

Non-Adopted Drainage Notes

1. All new private surface water and foul drainage shall be constructed and tested in accordance with BS EN 752, Building Regulations Approved Document Part 'H' and NHBC Chapter 5.3, as appropriate.

2. Pipes shall be 100 mm diameter, flexibly jointed manufactured from vitrified clay or uPVC, and constructed to a minimum fall of 1:80 (min. 1 toilet) or 1:40 (no toilet), unless noted otherwise. Sewers and drains of different diameters to be laid soffit to soffit. All non straight junctions between pipes to be formed using preformed connections (curved square or oblique junctions) laid in the direction of the flow.

3. Pipe bedding to be class 'S' bedding (100 mm granular bed and surround).

4. Where cover to soffit of pipe is less than 900mm in trafficked private areas (600mm, untrafficked), the following shall apply:-

a) Vitrified clay pipes - provide a 100mm min. thick concrete bed and surround (instead of class 'S' bedding) and a 13 mm thick compressible filler at each joint.
b) uPVC pipes - provide a concrete bridge (in addition to class 'S' bedding) in accordance with appendix A15, Building Regulations Part 'H'.

5. Unless noted otherwise concrete indicated in the construction of drainage infrastructure (pipe bedding, bridging, manholes etc) shall be standardised prescribed concrete ST2 and is to conform to BS EN 206-1 and BS 8500-2. The maximum aggregate size shall be 20mm.

6. Pipe runs adjacent to proposed foundations are to be installed in accordance with appendix A11, Building Regulations Part 'H'.

7. Excavations for manholes, pipe runs etc. located within a 45 degree load distribution splay from any adjoining existing foundations, are to be adequately supported for the duration of the works and pipe runs protected as note 6 above.

8. Foundations adjacent to pipe runs or manholes are to have their formation level set above the invert level, no higher than the equivalent of the horizontal distance between the pipe/excavation trench and the foundation, minus 500mm.

9. Where excavations for pipe runs are parallel and in close proximity to each other and/or other service trenches, the Contractor shall ensure that adequate safety measures, including temporary shoring, are provided in line with current Health & Safety legislation and good practice. Particular attention is to be paid to adjacent trenches of differing invert levels.

10. All existing drainage found on site during the works shall be investigated, its operational status confirmed, and the following applied:-
a) Inoperative drainage shall be cut back and pipe runs filled with concrete grout.
b) 'Live' drainage shall be temporarily re-routed to allow the new drainage to be constructed. Prior to the reuse of any existing drainage its condition shall be verified and its suitability for reuse confirmed.

11. All new private shallow surface water and foul drain inspection chambers and rodding eyes shown without cover levels (CL) shall be assumed to be at external ground level.

Surface and Foul Water Drainage Notes

The surface water drainage strategy for the site is based on an attenuated discharge into the ditch present along the western boundary. The discharge rates will be restricted to less than the greenfield rates for the 1, 30, and 100-year return period (5 l/s, 13.3 l/s and 18.7 l/s respectively), in general accordance with the drainage strategy by Lanmor Consulting submitted to the planning authority.
The attenuation storage has been sized to prevent any flooding from occurring for the most critical 100y+40% climate change storm event. For further details refer to the Micro Drainage Calculations.
Discharges from the driveway area will be adequately treated by the permeable block paving which includes an Inbitex geo-textile, that in conjunction with its stone attenuation storage beneath will slow and treat the surface water which passes through it. Discharges from the roof will be directed to catch pits for the collection of roof debris and prevent it from entering the attenuation storage.
A Land Drainage Consent is anticipated to be required by Wokingham Borough Council prior to the construction of the new outfall into the watercourse.
With regard to the foul strategy, a S106 Consent to Connect was submitted to Thames Water to obtain legal consent to connect to the existing network. A response from Thames Water is expected in the near future.
All works to the existing foul water connection will be agreed with The Building Inspector/Thames Water prior to commencement of the works and inspected as required.

Foul package pumping station maintenance note

The package pumping station should be serviced regularly to ensure optimal performance. As per the recommendation of TT-pump, the package pumping station should be serviced twice a year. In addition, it is recommended to consider subscribing to a 24/7 monitoring service that will allow for early detection of any potential issues and ensure minimum disruption and downtime. By subscribing to this service, the package pumping station can be closely monitored and any concerns identified and addressed in a timely manner.

SuDS Maintenance Details

The extent of the new proposed shared surface water drainage network marked with "MC" or drawn with a dashed dark blue line as shown in the legend is proposed to fall under the maintenance responsibility of the appointed Management Company. This include the access road, shared driveways, attenuation tank, catch pits, flow control chamber and the outfall into the ditch. The maintenance of the the drainage elements and driveways serving a single property is to be undertaken by the respective property owners. For further operation and maintenance requirements associated with the respective drainage elements refer to the tables in drawing 629:007.

PRELIMINARY

Rev:	Date:	Description:
P1	26/02/25	Pipe identification numbers added.

Client: PALATINE HOMES

Project:
Johnson Drive, Finchampstead

Drawing Title:
Drainage Layout (Sheet 1 of 2)

BEAL CONSULTING ENGINEERS
Haddenham Business Centre, Chiltern House, Thame Road, Haddenham, Bucks, HP17 8BY.
01844 396233
www.beal-uk.com

Designed:	Drawn:	Checked:
FD	SRC	----
Scale: 1:200 @ A1	Date: Oct 2024	Approved: ----
Drawing Number: 629:026	Revision:	P1