L. Urban Greening Factor

Intensive green roof area assumed for Development Area 2: 1787m2

Extensive green roof area assumed for Development Area 2: 369m2

LEGEND

GENERAL

- Semi-natural vegetation
- Intensive green roof
- Standard trees
  Soil volume equivalent to at least two thirds of the projected canopy
- Extensive green roof
- Rain gardens
- Hedges
- Standard trees
  Soil volume less than two thirds of the projected canopy area of the mature tree
- Flower-rich perennial planting
- Amenity grassland
- Water features
  Chlorinated
- Permeable paving

rev	details	by	date
P00	Issued for planning submission	WQ	11.03.2022

rev	details	by	date

Notes

1.0 Do not scale from drawing, use figured dimensions only
1.1 All dimensions to be checked onsite
1.2 This drawing to be read in conjunction with all other Gillespies drawings and specifications

N

0 5 10 25 50 m

Project title
STAG BREWERY

Drawing title
URBAN GREENING FACTOR - SITE WIDE

Drawing number
P10736-00-004-GIL-0802

Drawing Status: PLANNING
Revision: P00

Date	Scale	Drawn	Checked
11.03.2022	1:500 @ A0	WQ	JG

Client
DARTMOUTH CAPITAL

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M. Foul Flow Estimate

		Sheet No:	1 of 3	Project No:	WIE18671	
Project Title:	**Stag Brewery**	By:	M Stuart	Date:	18/02/2022	
Calculations Title:	**Existing Foul Flow Estimate**	Checked:	B McCarthy	Date:	18/02/2022	

	Dry Weather Flow Rate (per day)	Source	Number of	Factor	Profile (hours)	Peak Flow Rate (litres/second)
Residential				2.12	24	
Existing property = 160 litres/person/day	368.0 litres per unit	Thames Water Guidelines (2016)	0 existing units			0.0
New property = 125 litres/person/day	287.5 litres per unit	Thames Water Guidelines (2016)	0 proposed units			0.0
Occupancy = 2.3 persons						
Hotel	500.0 litres per room	British Water (2013)	15 rooms	3	24	0.3
Student Accommodation	200.0 litres per bed	Thames Water Guidelines (2016)	0 beds	3	24	0.0
Offices	750.0 litres per $100m^2$	Jones (1992)	2318 m^2	3	10	1.4
Retail	400.0 litres per $100m^2$	Jones (1992)	0 m^2	3	12	0.0
Cinema	10.0 litres per seat	Jones (1992)	0 seats*	3	8	0.0
Health Club/Sports Centre	50.0 litres per customer	British Water (2013)	168 customers**	3	16	0.4
Day School	90.0 litres per pupil	British Water (2013)	0 pupils	3	10	0.0
Boarding School	175.0 litres per pupil	British Water (2013)	0 pupils	3	24	0.0
Hospital	625.0 litres per bed	Jones (1992)	0 beds	3	24	0.0
Nursing Home	350.0 litres per bed	British Water (2013)	0 beds	3	24	0.0
Restaurant	30.0 litres per cover	British Water (2013)	0 covers	3	8	0.0
Pub/Club	15.0 litres per customer	Butler and Davies (2004)	0 customers***	3	12	0.0
Warehouse	150.0 litres per $100m^2$	Jones (1992)	0 m^2	3	12	0.0
Manufacturing	550.0 litres per $100m^2$	Jones (1992)	28671 m^2	3	12	11.0
Commercial	300.0 litres per $100m^2$	Jones (1992)	0 m^2	3	12	0.0
SUB TOTAL						13.1
Infiltration percentage 10%						1.3
TOTAL						**14.4**

* Foul flow rate needs to be calculated based on number of seats. An allowance of $4m^2$ has been made for each seat.

Floor area = 0 m^2 4 m^2 per person

** Foul flow rate needs to be calculated based on number of customers. An allowance of $4m^2$ has been made for each customer.

Floor area = 672 m^2 4 m^2 per person

*** Foul flow rate needs to be calculated based on number of customers. An allowance of $4m^2$ has been made for each customer.

Floor area = 0 m^2 4 m^2 per person

			Sheet No:	2 of 2	Project No:	WIE18671	
Project Title:	**Stag Brewery**		By:	S Whelan	Date:	02/08/2022	
Calculations Title:	**Proposed Foul Flow Estimate**		Checked:	B McCarthy	Date:	02/08/2022	

		Dry Weather Flow Rate (per day)	Source	Number of	Factor	Profile (hours)	Peak Flow Rate (litres/second)
Residential					2.12	24	
Existing property =	*160 litres/person/day*	400.0 litres per unit	Thames Water Guidelines (2016)	0 existing units			0.0
New property =	*125 litres/person/day*	312.5 litres per unit	Thames Water Guidelines (2016)	1071 proposed units			8.2
Occupancy =	*2.5 persons*						
Hotel		500.0 litres per room	British Water (2013)	15 rooms	3	24	0.3
Student Accommodation		200.0 litres per bed	Thames Water Guidelines (2016)	0 beds	3	24	0.0
Offices		750.0 litres per $100m^2$	Jones (1992)	4468 m^2	3	10	2.8
Retail		400.0 litres per $100m^2$	Jones (1992)	4782 m^2	3	12	1.3
Cinema		10.0 litres per seat	Jones (1992)	334 seats*	3	8	0.3
Health Club/Sports Centre		50.0 litres per customer	British Water (2013)	0 customers**	3	16	0.0
Day School		90.0 litres per pupil	British Water (2013)	1200 pupils	3	10	9.0
Boarding School		175.0 litres per pupil	British Water (2013)	0 pupils	3	24	0.0
Hospital		625.0 litres per bed	Jones (1992)	0 beds	3	24	0.0
Nursing Home		350.0 litres per bed	British Water (2013)	0 beds	3	24	0.0
Restaurant		30.0 litres per cover	British Water (2013)	0 covers	3	8	0.0
Pub/Club		15.0 litres per customer	Butler and Davies (2004)	0 customers***	3	12	0.0
Warehouse		150.0 litres per $100m^2$	Jones (1992)	0 m^2	3	12	0.0
Manufacturing		550.0 litres per $100m^2$	Jones (1992)	0 m^2	3	12	0.0
Commercial		300.0 litres per $100m^2$	Jones (1992)	0 m^2	3	12	0.0
SUB TOTAL							21.9
Infiltration percentage	10%						2.2
TOTAL							**24.1**

* Foul flow rate needs to be calculated based on number of seats. An allowance of $4m^2$ has been made for each seat.

Floor area = 1606 m^2 4 m^2 per person

** Foul flow rate needs to be calculated based on number of customers. An allowance of $4m^2$ has been made for each customer.

Floor area = 0 m^2 4 m^2 per person

*** Foul flow rate needs to be calculated based on number of customers. An allowance of $4m^2$ has been made for each customer.

Floor area = 0 m^2 4 m^2 per person

		Sheet No:	3 of 3	Project No:	WIE18671
Project Title:	**Stag Brewery**	By:	S Whelan	Date:	02/08/2022
		Checked:	B McCarthy	Date:	02/08/2022
Calculations Title:	**Proposed Foul Flow Estimate by development block**				

Description: **The proposed foul flows per development block have been calculated based on the number of residential units, commercial floor space, cinema seating, hotel rooms, and number of students attending the school, as captured within the proposed foul flow estimate calculation (Sheet 2 of 3) and the development proposals (Appendix A).**

Development Block	TW Manhole ref	Foul Flow (l/s)
1	4902	2.0
2	3005	1.1
3	4101	0.4
4	4101	0.3
5	4903	1.8
6	4901	0.3
7	4101	0.8
8	4101	0.9
9	6003	0.2
10	6901	0.3
11	6003	0.5
12	6003	0.5
13	3005	0.3
14	3901	0.3
15	3901	0.9
16	3007	0.6
17	3005	0.6
18	3007	0.9
19	3007	0.4
20	3007	0.1
21	3007	0.1
School	2801	9.0
Total	-	21.9

Our vision

"Engineering a better environment for people and the planet"

Our mission

"To solve complex problems for the benefit of clients, communities and the climate"

Our values

People orientated

Individually and collectively, people are our business.
We strive to create environments for everyone to flourish and thrive.

Flexible

Pragmatic by nature and dedicated to getting the job done to the highest possible standard.

Professional

Operating at pace with integrity to deliver technical and robust solutions.

Environmentally aware

We understand our responsibility to the environment, it shapes our decision making and informs our practice.

Innovative

Our forensic questioning provides the ability to deliver appropriate innovations at every stage on every project.

Relationship focused

We value individuality and the benefits of working collaboratively to achieve positive outcomes for all.