



402-404 Wilmslow Road

Withington

Manchester M20 3BN

Proposed Residential Rear Extension/Conversion

Flood Risk Assessment

For: Concorde No.1 Ltd.

Integra Consulting
Suite 4
14-32 Hewitt Street
Manchester
M15 4GB

Ref: 3301-FRA
Job: 3301
Rev: D
By: NS

Date: Jun 2022

Environmental

Geotechnical

Highways

Structural

Civil

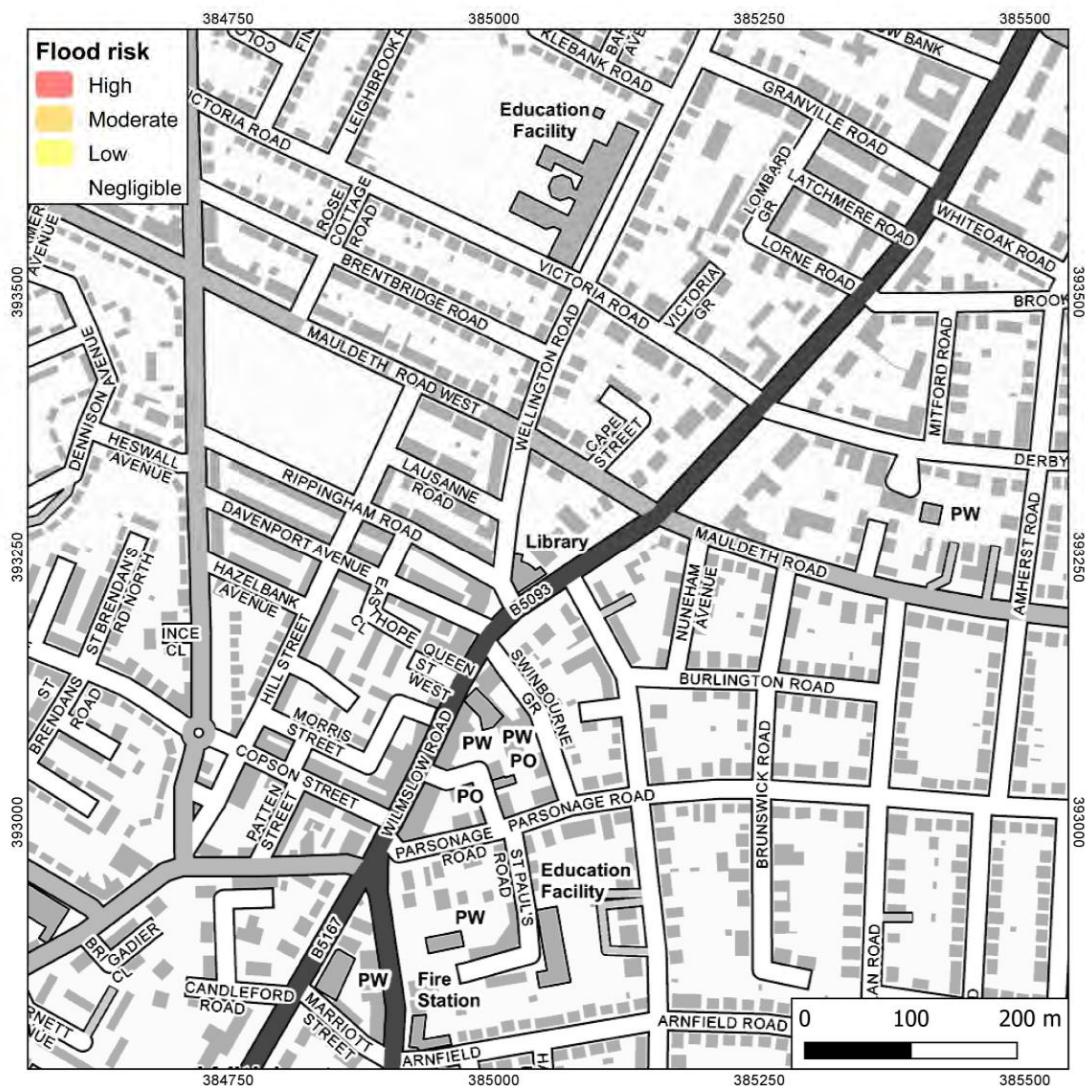
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GROUNDWATER FLOOD MAPPING

GeoSmart GW5 Groundwater Flood Risk Map v2.4 (GeoSmart, 2021)



Contains Ordnance Survey data © Crown copyright and database right 2021

Contains British Geological Survey (BGS) materials © NERC 2021

APPENDIX 8

STATUTORY FLOOD RISK AND DRAINAGE CONSULTEE CORRESPONDENCE

Manchester City Council
Development Control
PO Box 488
Manchester
Lancashire
M60 2JT

Our ref: SO/2021/121487/01-L01
Your ref: 130100/FO/2021
Date: 06 September 2021

FAO Jennifer Connor

Dear Jennifer

**ERECTION OF FIVE STOREY REAR EXTENSION TOGETHER WITH ASSOCIATED
ELEVATION ALTERATIONS INCLUDING REAR ROOF EXTENSION IN
ASSOCIATION WITH THE CONVERSION OF THE PROPERTY TO FORM 18 NO.
SELF CONTAINED APARTMENTS TOGETHER WITH CAR PARKING,
LANDSCAPING, BIN AND CYCLE STORES
402 WILMSLOW ROAD, MANCHESTER, M20 3BN**

Thank you for consulting us with the above planning application which was received in this office 23rd August 2021.

Environment Agency position

In the absence of an acceptable Flood Risk Assessment (FRA) we object to the grant of planning permission and recommend refusal on this basis for the following reasons:

Reason

The FRA from Integra Consulting (Ref 3301-FRA dated July 2021) submitted with this application does not comply with the requirements set out National Planning Policy Framework and associated guidance. In particular, the submitted FRA fails to:

1. Take the impacts of climate change into account in setting finished floor levels, new climate change allowances have been published on 20th July 2021, see <https://www.gov.uk/guidance/flood-risk-assessments-climate-change-allowances> for full details. We would recommend that additional 2D levels are requested adjacent to the proposed rear extension.
2. Provide compensatory flood storage for the proposed rear extension which would push flood volume to the surrounding area.
3. Consider how people will be kept safe from the identified flood hazards. Depth

Environment Agency
Richard Fairclough House Knutsford Road, Warrington, WA4 1HT.
Customer services line: 03708 506 506
www.gov.uk/environment-agency
Cont/d..

and velocities should be checked against the Flood Hazard Equation from "Flood Risks to People" - R&D Report FD2321/TR. Also, discussions should be held with the emergency services, emergency planner and/or Greater Manchester Civil Contingency Resilience Unit.

4. Consider how a range of flooding events (including extreme events) will affect people and property.
5. Consider the requirement for flood emergency planning including flood warning and evacuation of people for a range of flooding events up to and including the extreme event.

Overcoming our objection

The applicant can overcome our objection by submitting an FRA which covers the deficiencies highlighted above and demonstrates the development will not increase risk elsewhere and where possible reduces flood risk overall. Velocities associated with 2D levels can be obtained by contacting our customers and engagement team at Inforequests.gmmc@environment-agency.gov.uk. If this cannot be achieved we are likely to maintain our objection to the application. Production of an FRA will not in itself result in the removal of an objection.

We ask to be re-consulted with the results of the FRA. We will provide you with bespoke comments within 21 days of receiving formal reconsultation. Our objection will be maintained until an adequate FRA has been submitted.

Please forward a copy of this letter to the applicant.

Yours faithfully

Mr Stephen Sayce
Technical Planning Advisor

Direct e-mail stephen.sayce@environment-agency.gov.uk

Application number: 130100/FO/2021

Proposal: Erection of five storey rear extension together with associated elevation alterations including rear roof extension in association with the conversion of the property to form 18 no. self contained apartments together with car parking, landscaping, bin and cycle stores

Location: 402 Wilmslow Road, Manchester, M20 3BN

Flood Risk Management Team Comments (18th August 2021)

Condition 1: No development shall commence until the flood risk assessment (dated July 2021) has been updated and re-submitted to and approved in writing by the local planning authority. For the avoidance of doubt, as per the government standing advice, the assessment must include the following additional information:

- An assessment of the flood risk from all sources (such as: fluvial, surface water, groundwater, sewer, reservoir and canal) of flooding for your development (this does not require bespoke hydraulic modelling, and may be based on data obtained freely via an Environment Agency data request and opensource data on the DEFRA and government platforms). ***Note this should include publicly available maps where applicable.***
- An assessment of the proposed developments Flood Risk Vulnerability Classification and if development is appropriate within the specific Flood Zone (specifically the basement level, which is classed as 'highly vulnerable').
- Provide a clear plan showing all finished floor levels for the ground floor level and basement (including the basement layout and the levels of the flood mitigation measures) and the estimated flood levels. All levels should be in mAOD.
- Construction details of flood walls (which are proposed to protect the basement level).
- An assessment identifying if the proposed extension will displace flood water into surrounding properties.
- Production of a flood evacuation plan (identifying safe access and egress routes) where required.

Reason: To ensure that the development is not at an increased risk of flooding (from various sources) and that the appropriate flood resilience and resistance measures have been implemented on site where required.

Condition 2: Development shall not begin until a surface water drainage scheme for the site, based on sustainable drainage principles has been submitted to and approved in writing by the local planning authority. The development shall be constructed and completed in accordance with the approved details.

The scheme shall also include:

- Results of ground investigation carried out under Building Research Establishment Digest 365. Site investigations should be undertaken in locations and at proposed depths of the proposed infiltration devices. Proposal of the attenuation that is achieving half emptying time within 24 hours. If no ground investigations are possible or infiltration is not feasible on site, evidence of alternative surface water disposal routes is required.
- Surface water drainage layout including discharge points, proposed attenuation and proposed overland flow routes for extreme events (up to a 1 in 100 year including 40% climate change allowance).
- Details of surface water attenuation that offers a reduction in surface water runoff rate in line with the Manchester Trafford and Salford Strategic Flood Risk Assessment. Provide at least a 50% reduction in runoff rate compared to the existing rates, as the site is located within Conurbation Core Critical Drainage Area.
- Where surface water is connected to the public sewer, agreement in principle from United Utilities is required that there is adequate spare capacity in the existing system taking future development requirements into account. An email of acceptance of proposed flows and/or new connection will suffice.
- Hydraulic calculations to support the drainage proposal.
- Details of how the scheme shall be maintained and managed after completion.

Reason: To prevent the increased risk of flooding, to improve and protect water quality and ensure future maintenance of the surface water drainage system pursuant to policy EN17 of the Core Strategy.

Disclaimer: MCC records highlight that the underground Ley Brook is located within close proximity to the site (approximately 35 m to the East of the site), while our records are frequently updated to ensure the highest level of accuracy, the records cannot guarantee 100% accuracy for all MCC underground assets. Therefore, we would request that the applicant informs the onsite contractor to remain observant and to take the appropriate safety precautions during excavation works. If any major unknown drainage assets are found beneath the site, then further investigation works should take place to identify the asset and MCC should be contacted immediately.

Neville Shaw

From: Neville Shaw
Sent: 19 November 2021 15:23
To: jennifer.connor@manchester.gov.uk
Cc: Carol Clarke; Stuart Wall; Simon James
Subject: 402-404 Wilmslow Road, Withington
Attachments: Wilmslow Road - Existing and Proposed Extents Topographical Survey.pdf

Hi Jennifer,

Based on the recent LLFA comments regarding the latest proposed scheme, I have provided our responses below in **red**:

1. Proposed lower ground floor plan illustrating all the finished floor levels of the new and existing basement dwellings as they say it is not too clear on the 'Floor Level Review' drawing – **Simon will issue this plan to you shortly under separate cover.**
2. Sight of the EA correspondence which stipulates that a finished floor level of 36.12mAOD is an appropriate minimum floor level – **the basement FFL of 36.12m AOD is based on the 1 in 100 year + 35% cc (35.52m AOD) plus 600mm freeboard level and it is understood that this level had been discussed and agreed by a previous flood risk consultant with the statutory flood risk authorities in relation to this development. Based on the current EA modelling data provided for this site, this proposed FFL of 36.12m AOD compares favourably with a risk level average of the relevant nodes for 1 in 1000 plus 30% climate change risk of 35.5m AOD which demonstrates the adequacy of the proposed FFL in flood risk terms.**
3. Why are some basement floor levels are being raised to 36.12mAOD and others are only being raised to 35.59mAOD – **given that we understand that an FFL of 36.12m AOD had previously been discussed and agreed with the statutory flood risk authorities, this has been proposed as the basement FFL to the area of new extension at the rear of the property. Within the existing building, it is only feasible to raise the basement level at the rear of the existing building to a FFL of 35.59m AOD. However, this proposed FFL still lies above the risk level average of the relevant nodes for 1 in 1000 plus 30% climate change risk of 35.5m AOD which demonstrates the adequacy of this proposed FFL in flood risk terms. It is also noted that all areas within the existing building and the proposed extension are guarded against the 1 in 1000 year plus climate change event either by the proposed drainage measures and/or by the proposed FFL's.**
4. Details and calculations of how the compensatory storage volumes have been calculated – **please reference the attached plans. As stated in item 4 of section 5.0 of our FRA, this storage volume is provided by lowering the existing 25m x 15m rear car park by circa 160mm. The replacement volume of $25 \times 15 \times 0.16 = 61\text{m}^3$ compensates for top of Flood Zone 3a + climate change level of 35.25m AOD (average of the 4 No applicable nodes). The volume taken up by the new extension is $90\text{m}^2 \times 0.55\text{m} = 50\text{m}^3$. The 0.55m figure is derived from the difference between 35.25m AOD (average of the 4 No applicable nodes) and 34.7m AOD (average level of existing ground in the extension area).**

Kind regards,

Neville

Neville Shaw BSc (Hons) ACGI MBA CEng MICE MIStructE

Director

Integra Consulting

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A: Suite 4, 14-32 Hewitt Street, Manchester, M15 4GB

Application number: 130100/FO/2021

Proposal: Erection of five storey rear extension together with associated elevation alterations including rear roof extension in association with the conversion of the property to form 18 no. self contained apartments together with car parking, landscaping, bin and cycle stores

Location: 402 Wilmslow Road, Manchester, M20 3BN

Flood Risk Management Team Comments (14th December 2021)

Condition 1: Development shall not begin until a surface water drainage scheme for the site, based on sustainable drainage principles has been submitted to and approved in writing by the local planning authority. The development shall be constructed and completed in accordance with the approved details.

The scheme shall also include:

- Results of ground investigation carried out under Building Research Establishment Digest 365. Site investigations should be undertaken in locations and at proposed depths of the proposed infiltration devices. Proposal of the attenuation that is achieving half emptying time within 24 hours. If no ground investigations are possible or infiltration is not feasible on site, evidence of alternative surface water disposal routes is required.
- Surface water drainage layout including discharge points, proposed attenuation and proposed overland flow routes for extreme events (up to a 1 in 100 year including 40% climate change allowance).
- Details of the existing on-site drainage network and outfall.
- Hydraulic calculations to support the drainage proposal.
- Details of how the scheme shall be maintained and managed after completion.

Reason: To prevent the increased risk of flooding, to improve and protect water quality and ensure future maintenance of the surface water drainage system pursuant to policy EN17 of the Core Strategy.

Condition 2: No development hereby permitted shall be occupied until the approved flood mitigation measures as discussed through correspondence with the LLFA and illustrated on DWGs 131-2-PL-ELE5 and 131-2-PL-GA7 are implemented on site.

Disclaimer: MCC records highlight that the underground Ley Brook is located within close proximity to the site (approximately 35 m to the East of the site), while our records are frequently updated to ensure the highest level of accuracy, the records cannot guarantee 100% accuracy for all MCC underground assets. Therefore, we would request that the applicant informs the onsite contractor to remain observant and to take the appropriate safety precautions during excavation works. If any major unknown drainage assets are found beneath the site, then further investigation works should take place to identify the asset and MCC should be contacted immediately.

Neville Shaw

From: Neville Shaw
Sent: 22 December 2021 16:49
To: Flood Risk Management
Cc: Jennifer Connor
Subject: RE: 402-404 Wilmslow Road, Withington - Application number: 130100/FO/2021

Hi Oliver,

Many thanks for your e-mail below – much appreciated.

We will ensure that we do not exceed the runoff volume from the development site prior to redevelopment as you state and hence a flow restriction will be installed for surface water run-off to ensure a betterment to the UU sewer network.

Kind regards,

Neville

Neville Shaw BSc (Hons) ACGI MBA CEng MICE MIStructE

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From: Flood Risk Management <floodriskmanagement@manchester.gov.uk>
Sent: 22 December 2021 16:40
To: Neville Shaw <nevilleshaw@integraconsulting.co.uk>
Cc: Jennifer Connor <jennifer.connor@manchester.gov.uk>
Subject: RE: 402-404 Wilmslow Road, Withington - Application number: 130100/FO/2021

Good Afternoon Neville,

Having revisited this application and reviewed the proposed site layout again I would agree that soakaway systems would be problematic to construct as part of this development. Usually, we would encourage developers wherever possible to drain to soakaways, in accordance with the drainage hierarchy presented in Building Regulations Document H and also due to the continuing strain on public sewer systems. However, for this site, I appreciate that space is limited, therefore it would be difficult (without altering the site layout) to ensure the soakaways are positioned 5m away from building structures and roads/car parks.

That said, we would expect to see that the runoff volume in the 1 in 100 year, 6 hours rainfall for the site shall be constrained to a value as close as is reasonable practicable to the greenfield runoff volume for the same event, but never to exceed the runoff volume from the development site prior to redevelopment – therefore a flow restriction should be installed for surface water run-off, ensuring there is a betterment to the UU network.

I hope this provides some clarification.

Kind Regards,

Oliver

Oliver Timmins
Engineer (Flood Risk Management)

Lead Local Flood Authority
Highways
Growth & Development and Neighbourhoods Directorate
Manchester City Council
PO Box 532 Town Hall
Manchester
M60 2LA

Web: <http://www.manchester.gov.uk>

From: Neville Shaw <nevilleshaw@integraconsulting.co.uk>
Sent: 17 December 2021 14:58
To: Flood Risk Management <floodriskmanagement@manchester.gov.uk>
Cc: Jennifer Connor <jennifer.connor@manchester.gov.uk>
Subject: 402-404 Wilmslow Road, Withington - Application number: 130100/FO/2021

Dear LLFA,

I refer to the above project and specifically the first bullet point from condition 1 as per your comments from 14.12.21 (attached) as set out below for ease of reference:

The scheme shall also include:

- *Results of ground investigation carried out under Building Research Establishment Digest 365. Site investigations should be undertaken in locations and at proposed depths of the proposed infiltration devices. Proposal of the attenuation that is achieving half emptying time within 24 hours. If no ground investigations are possible or infiltration is not feasible on site, evidence of alternative surface water disposal routes is required.*

We are currently undertaking an existing drainage survey and it appears highly likely that the existing building / hard surfaced external areas drain freely to the local adopted UU combined sewer network.

The proposed additional building footprint area is circa 65m² and pragmatically we would suggest that the existing drainage connections to the adopted sewer network are maintained and surface water underground crate attenuation is provided in relation to this additional footprint area based on greenfield runoff rates as opposed to undertaking BRE 365 soakaway testing and following the surface water drainage hierarchy in this particular instance given the overall nature of the project i.e. principally refurbishment.

I trust that the above is clear and in order - happy to run through this by phone so please feel free to call on my mobile number below.

Kind regards,

Neville

Neville Shaw BSc (Hons) ACGI MBA CEng MICE MIStructE

Director

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APPENDIX 9

SITE PHOTOGRAPHS – REAR OF BUILDING









APPENDIX 10

DEFRA / ENVIRONMENT AGENCY: FLOOD RISKS TO PEOPLE – PHASE 2

Flood Risks to People

Phase 2

FD2321/TR1

The Flood Risks to People Methodology



Environment
Agency

**Defra / Environment Agency
Flood and Coastal Defence R&D Programme**

R&D OUTPUTS: FLOOD RISKS TO PEOPLE

Phase 2

FD2321/TR1 The Flood Risks to People Methodology

March 2006

Authors:
HR Wallingford
Flood Hazard Research Centre, Middlesex University
Risk & Policy Analysts Ltd.

height times mass for different ages based on UK Department of Health figures and (b) some thresholds indicating the relative hazard associated with different depth-velocity combinations.

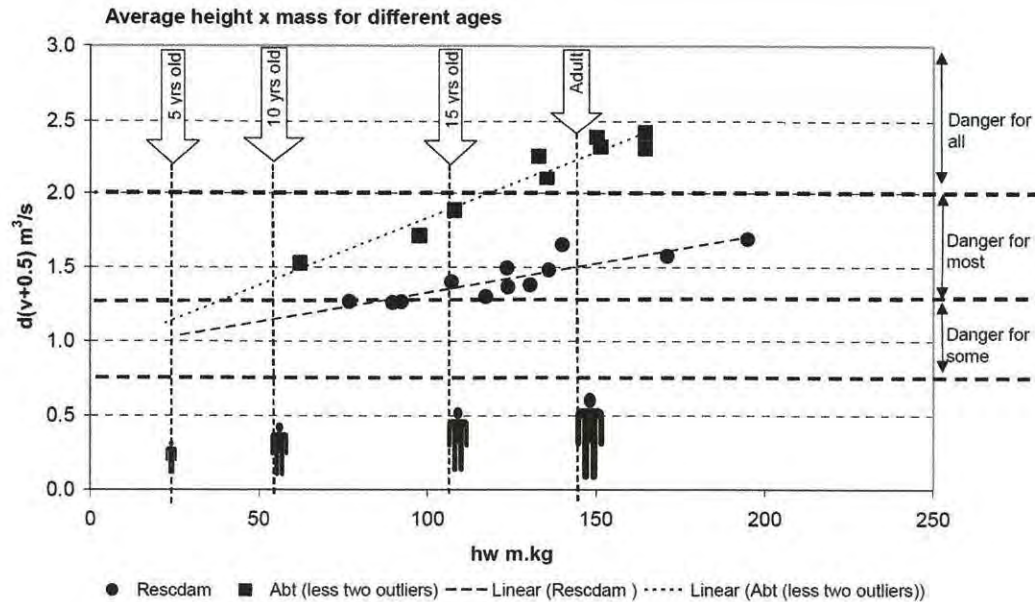


Figure 3.1: The interpretation of the data sets to derive flood hazard thresholds

The following expression was found to be reliable for determining the threshold for losing stability:

$$d \times (v + 0.5) = a \times hw + b$$

where,

- d = depth of flooding (m);
- v = velocity of floodwaters (m/sec);
- hw = height (m) x weight (kg) of subject; and
- a, b = constants.

Further details are provided in Appendix 1, HR Wallingford *et al* (2004b) section 3 and HR Wallingford (2004c) section 2.

3.3.2 Choice of flood hazard classes.

In the risks to people calculation flood hazard is used as a variable that affects the proportion of exposed people that are injured or killed. However, classification of flood hazard is required for flood hazard mapping and the development of guidance. Given the difference between the two main experiments and the fact that these cannot reproduce real flood conditions, it is appropriate to be precautionary in setting and describing hazard classes so that these are communicated effectively to those at risk.

The characterisation shown in Table 3.2 is proposed.

Table 3.2: Hazard to People as a Function of Velocity and Depth

$d \times (v + 0.5)$	Degree of Flood Hazard	Description
<0.75	Low	Caution <i>"Flood zone with shallow flowing water or deep standing water"</i>
0.75 - 1.25	Moderate	Dangerous for some (i.e. children) <i>"Danger: Flood zone with deep or fast flowing water"</i>
1.25 - 2.5	Significant	Dangerous for most people <i>"Danger: flood zone with deep fast flowing water"</i>
>2.5	Extreme	Dangerous for all <i>"Extreme danger: flood zone with deep fast flowing water"</i>

Such categorisation could be useful for a range of applications including:-

- Planning of safe access and exit for new developments
- Emergency planning advice for people at risk and the emergency services
- Development of household or community flood plans

Figure 3-2 provides a look-up table of flood hazard classes for different velocities and depths. The use of flood hazard classes is described in the Guidance Document.

Velocity Coefficient C	0.5										
(V+C) * D	Depth										
Velocity	0.25	0.50	0.75	1.00	1.25	1.50	1.75	2.00	2.25	2.50	
0.00	0.13	0.25	0.38	0.50	0.63	0.75	0.88	1.00	1.13	1.25	
0.50	0.25	0.50	0.75	1.00	1.25	1.50	1.75	2.00	2.25	2.50	
1.00	0.38	0.75	1.13	1.50	1.88	2.25	2.63	3.00	3.38	3.75	
1.50	0.50	1.00	1.50	2.00	2.50	3.00	3.50	4.00	4.50	5.00	
2.00	0.63	1.25	1.88	2.50	3.13	3.75	4.38	5.00	5.63	6.25	
2.50	0.75	1.50	2.25	3.00	3.75	4.50	5.25	6.00	6.75	7.50	
3.00	0.88	1.75	2.63	3.50	4.38	5.25	6.13	7.00	7.88	8.75	
3.50	1.00	2.00	3.00	4.00	5.00	6.00	7.00	8.00	9.00	10.00	
4.00	1.13	2.25	3.38	4.50	5.63	6.75	7.88	9.00	10.13	11.25	
4.50	1.25	2.50	3.75	5.00	6.25	7.50	8.75	10.00	11.25	12.50	
5.00	1.38	2.75	4.13	5.50	6.88	8.25	9.63	11.00	12.38	13.75	

	From	To	
Class 1	0.75	1.25	Danger for some
Class 2	1.25	2.50	Danger for most
Class 3	2.50	20.00	Danger for all

Figure 3.2: Velocity, depth and flood hazard matrix

3.3.3 Flood Damage to Buildings

In broad terms, buildings are more resilient to floodwaters than people. Extensive research into this area has been undertaken by CURBE (see, for example, Kelman 2002). Further detail is provided in HR Wallingford *et al* (2004b) section 3 and HR Wallingford *et al* (2004c) section 2, but, as for people, the severity of damage is a function of both depth and velocity.

The direct damage of floodwater to buildings and the potential risks to people related to building collapse is not included in the risks to people methodology. With the one recent exception of Boscastle, there is not substantial evidence of buildings collapsing during floods in the UK. Nevertheless, understanding the potential impacts of flood water on building structure is still an important area for research; further commentary is provided in Appendix 1 and building resilience is included in the Guidance Document.

3.3.4 Flood Damage to Vehicles

There are, essentially, three reasons why vehicles cannot be used in floodwaters:

- the presence of water stops the engine functioning;
- the vehicle floats; and
- the vehicle becomes difficult to control.

Cars will stop and/or float in relatively shallow water (as low as 0.5m in depth) while emergency vehicles may survive in slightly deeper waters (up to 1m in depth). However, with suitable modifications (high level air intakes/exhausts), a fire engine remains controllable in depths of 0.5m at up to 5 m/sec water flows.

APPENDIX 11

SCHEMATIC SURFACE WATER DRAINAGE STRATEGY LAYOUT

Notes:

- 1 All dimensions are in millimetres unless noted otherwise.
- 2 All levels are in metres unless noted otherwise.
- 3 This drawing is to be read in conjunction with all relevant Architect and Service Engineers drawings.
- 4 All drainage pipes to be Polypipe adoptable drainage system, or similar approved with 375mm dia and concrete from 450mm, bedding in accordance with manufacturers details.
- 5 All road gullies to have Grade D400 gratings to BS EN 124 with 400 x 500 deep Pre-Cast concrete or polyethylene pots by gullies or similar approved. Trapped gullies to be used when connecting to a combined sewer.
- 6 Manholes to be precast concrete rings to BS 5911 min 1200 dia u.n.d. to hard/ trafficked areas.
- 7 Invert levels quoted are exit inverts.
- 8 Pipes with cover of less than 900mm under road/paved and 600mm under landscaped areas to be enclosed in concrete bedding class 'S'.
- 9 SW orders to achieve a minimum pipe velocity of 1.0 m/s.
- 10 Proprietary items ie SW pipes, drainage channels, inspection chambers etc to be installed in accordance with the manufacturers recommendations.
- 11 All drainage is to comply with the requirements of BS EN 752 & Building Regulation part H.

Existing 225dia SW connection to remain.

Site Location Plan

Scale 1:500

Legend	
●	G - New gully
●	RWP - New rain water pipe
●	S - New sump
●	SWMH - New surface water manhole
●	SWIC - New surface inspection chamber
□	Ex.FWH - Existing combined water manhole
—	New surface water drain
—	New drainage channel
—	35.20m Proposed ground level (approx)
—	9.999 Microdrainage pipe input number
—	Extent of existing building envelope
—	Extent of proposed building envelope
—	Proposed fall direction
—	Site boundary, etc by Architects

Attenuation design for 1 in 100 storm event plus 40% climate change allowance based on existing runoff with a minimum discharge of 2.0l/s.

All new drainage pipes/ inspection chambers to be Polypipe drainage system or similar approved up to 375mm dia. Bedding in accordance with the manufacturers details.

Location/ details of existing CW sewer taken from UU Sewer Plan map reference UUPS-ORD-307474.

Existing SW connection into manhole CW 0203 sewer to remain.

Drawing is based on Architect's drawing 'Existing Site Plan' drawing 131-2-PL-GSL1 revision D, by SJ arq Ltd.

Drawing is based on Architect's drawing 'Proposed Site Plan' drawing 131-2-PL-GL1 revision D, by SJ arq Ltd.

Location/ size etc. of RWP's, IC's, pipes indicative only subject to detailed design.

Drawing is based on drainage survey job number LAYERSERV0001126, by Layer Surveys Ltd.

Underground storage tank to provide attenuation for up to 1in100 year storm. Above that and up to 1in100 plus CC to be accommodate on carpark area between kerbs.

Existing catchments area - circa 300m2
Proposed catchments area - circa 1000m2

Hydrobrake to limit the flow to 2.0l/s @ 1.1m head.

Existing SW drainage to be removed/ grubbed up.

Plant room space located in the oversized floor void beneath the raised area of the lower ground floor is to be drained up to the level of the main surface water drainage system via a subsurface pump system that is to be located in a small manhole.

Drawing indicative and for strategy purposes only. Final design/ details to be provided for construction.

Rev	Date	Description
1	02/22	Issued for information
INFORMATION		
Contract:		
402-404 WILMSLOW ROAD WILMINGTON		
Drawing Title:		
BELOW GROUND SURFACE WATER DRAINAGE STRATEGY LAYOUT		
integra consulting Civil & Structural Engineers Tel : 0161 237 3400 Fax : 0161 237 3435 Email : manchester@integraconsulting.co.uk Web : www.integraconsulting.co.uk		
Scale:	1:100 @ A0	Date: 02/2022
Drawn:	JS	Checked: JS
Control No:	3301	Drawn No: 001
		P1

Below Ground SW Drainage Strategy Layout

Scale 1:100



APPENDIX 12

SURFACE WATER ATTENUATION CALCULATIONS

Calculations

Job Title Wilmslow Road, Withington

Site location = M20 3BN

MS - 60 = 18,0 mm

R = 0,36

Site area = 1475 m²

Existing catchments area = 281 m²

Proposed catchments area = 978 m²

Note: Proposed discharge rate / volume not to be greater than existing!

Existing MD input

- see separate calcs.

MD results:

1 in 2

d_{max} = 4,1 l/s

V_{6h} = 5,9 m³

1 in 30

d_{max} = 8,4 l/s

V_{6h} = 10,8 m³

1 in 100

d_{max} = 10,8 l/s

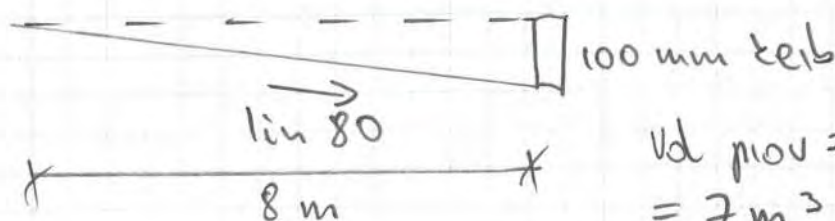
V_{6h} = 14,0 m³

1 in 100 + 40% CC

d_{max} = 15,2 l/s

V_{6h} = 19,6 m³

Above 1 in 100 & up to 1 in 100 + 40% CC indicates flood volume of c. 8 m³ in car park area to be accommodated on kerb side area.



$$V_{d \text{ prov}} = \frac{1}{2} \times 0,1 \times 8 \times 17 = 7 \text{ m}^3, \text{ say OK.}$$

Integra Consulting Calculations						Job No	Date
						3301	10.02.2022
						Sheet 01	By JS
Job Title Withington							
Storm Water Flood Model M5-60 = 18.00 r = 0.36 Return, T = 30 CC Factor = 0.00 Area (m²) = 978 Limit (l/s) = 2.0 Totals 20 20							
D (mins)	M5-D (mm)	MT-D (mm)	Rate (mm/hr)	Flow (l/s)	CC Flow (l/s)	Storage (m ³)	CC Storage (m ³)
10.00	9.14	13.50	80.98	21.86	21.86	11.91	11.91
15.00	10.96	16.47	65.89	17.78	17.78	14.21	14.21
20.00	12.31	18.56	55.68	15.03	15.03	15.64	15.64
25.00	13.40	20.30	48.71	13.15	13.15	16.72	16.72
30.00	14.31	21.75	43.51	11.74	11.74	17.54	17.54
35.00	15.10	23.02	39.46	10.65	10.65	18.17	18.17
40.00	15.79	24.13	36.20	9.77	9.77	18.65	18.65
45.00	16.42	25.13	33.51	9.05	9.05	19.02	19.02
50.00	16.99	26.04	31.25	8.44	8.44	19.31	19.31
55.00	17.51	26.88	29.32	7.92	7.92	19.52	19.52
60.00	18.00	27.65	27.65	7.46	7.46	19.67	19.67
65.00	18.45	28.37	26.19	7.07	7.07	19.77	19.77
70.00	18.88	29.05	24.90	6.72	6.72	19.83	19.83
75.00	19.28	29.68	23.75	6.41	6.41	19.84	19.84
80.00	19.66	30.28	22.71	6.13	6.13	19.83	19.83
85.00	20.02	30.85	21.78	5.88	5.88	19.78	19.78
90.00	20.37	31.39	20.93	5.65	5.65	19.70	19.70
95.00	20.70	31.91	20.15	5.44	5.44	19.60	19.60
100.00	21.02	32.40	19.44	5.25	5.25	19.48	19.48
105.00	21.32	32.87	18.78	5.07	5.07	19.34	19.34
110.00	21.61	33.32	18.18	4.91	4.91	19.18	19.18
115.00	21.90	33.76	17.61	4.75	4.75	19.00	19.00
120.00	22.17	34.18	17.09	4.61	4.61	18.81	18.81
125.00	22.43	34.58	16.60	4.48	4.48	18.60	18.60
130.00	22.69	34.97	16.14	4.36	4.36	18.38	18.38
135.00	22.94	35.35	15.71	4.24	4.24	18.15	18.15
140.00	23.18	35.72	15.31	4.13	4.13	17.91	17.91
145.00	23.41	36.07	14.93	4.03	4.03	17.65	17.65
150.00	23.64	36.41	14.57	3.93	3.93	17.39	17.39
155.00	23.86	36.75	14.23	3.84	3.84	17.11	17.11
160.00	24.08	37.07	13.90	3.75	3.75	16.83	16.83
165.00	24.29	37.39	13.60	3.67	3.67	16.53	16.53
170.00	24.50	37.70	13.31	3.59	3.59	16.23	16.23
175.00	24.70	38.00	13.03	3.52	3.52	15.92	15.92
180.00	24.90	38.29	12.76	3.45	3.45	15.61	15.61
185.00	25.09	38.58	12.51	3.38	3.38	15.29	15.29
190.00	25.28	38.85	12.27	3.31	3.31	14.96	14.96
195.00	25.47	39.13	12.04	3.25	3.25	14.62	14.62
200.00	25.65	39.39	11.82	3.19	3.19	14.28	14.28

205.00	25.83	39.65	11.61	3.13	3.13	13.93	13.93
210.00	26.01	39.91	11.40	3.08	3.08	13.58	13.58
215.00	26.18	40.15	11.21	3.02	3.02	13.22	13.22
220.00	26.35	40.40	11.02	2.97	2.97	12.86	12.86
225.00	26.51	40.64	10.84	2.93	2.93	12.49	12.49
230.00	26.68	40.87	10.66	2.88	2.88	12.12	12.12
235.00	26.84	41.10	10.49	2.83	2.83	11.74	11.74
240.00	27.00	41.32	10.33	2.79	2.79	11.36	11.36
245.00	27.15	41.55	10.17	2.75	2.75	10.97	10.97
250.00	27.31	41.76	10.02	2.71	2.71	10.58	10.58
255.00	27.46	41.97	9.88	2.67	2.67	10.19	10.19
260.00	27.61	42.18	9.73	2.63	2.63	9.79	9.79
265.00	27.75	42.39	9.60	2.59	2.59	9.39	9.39
270.00	27.90	42.59	9.46	2.55	2.55	8.99	8.99
275.00	28.04	42.79	9.34	2.52	2.52	8.58	8.58
280.00	28.18	42.98	9.21	2.49	2.49	8.17	8.17
285.00	28.32	43.17	9.09	2.45	2.45	7.75	7.75
290.00	28.45	43.36	8.97	2.42	2.42	7.34	7.34
295.00	28.59	43.55	8.86	2.39	2.39	6.92	6.92
300.00	28.72	43.73	8.75	2.36	2.36	6.49	6.49
305.00	28.85	43.91	8.64	2.33	2.33	6.07	6.07
310.00	28.98	44.09	8.53	2.30	2.30	5.64	5.64
315.00	29.11	44.26	8.43	2.28	2.28	5.21	5.21
320.00	29.24	44.43	8.33	2.25	2.25	4.78	4.78
325.00	29.37	44.60	8.23	2.22	2.22	4.34	4.34
330.00	29.49	44.77	8.14	2.20	2.20	3.90	3.90
335.00	29.61	44.93	8.05	2.17	2.17	3.46	3.46
340.00	29.73	45.09	7.96	2.15	2.15	3.02	3.02
345.00	29.85	45.25	7.87	2.12	2.12	2.57	2.57
350.00	29.97	45.41	7.78	2.10	2.10	2.13	2.13
355.00	30.09	45.56	7.70	2.08	2.08	1.68	1.68
360.00	30.20	45.72	7.62	2.06	2.06	1.22	1.22
365.00	30.32	45.87	7.54	2.04	2.04	0.77	0.77
370.00	30.43	46.02	7.46	2.01	2.01	0.32	0.32
375.00	30.55	46.16	7.39	1.99	1.99	-0.14	-0.14
380.00	30.66	46.31	7.31	1.97	1.97	-0.60	-0.60
385.00	30.77	46.45	7.24	1.95	1.95	-1.06	-1.06
390.00	30.88	46.59	7.17	1.93	1.93	-1.53	-1.53
395.00	30.98	46.73	7.10	1.92	1.92	-1.99	-1.99
400.00	31.09	46.97	7.05	1.90	1.90	-2.35	-2.35
405.00	31.20	47.12	6.98	1.88	1.88	-2.81	-2.81
410.00	31.30	47.27	6.92	1.87	1.87	-3.27	-3.27
415.00	31.41	47.41	6.85	1.85	1.85	-3.73	-3.73
420.00	31.51	47.55	6.79	1.83	1.83	-4.19	-4.19
425.00	31.61	47.69	6.73	1.82	1.82	-4.66	-4.66
430.00	31.71	47.83	6.67	1.80	1.80	-5.12	-5.12
435.00	31.81	47.97	6.62	1.79	1.79	-5.58	-5.58
440.00	31.91	48.11	6.56	1.77	1.77	-6.05	-6.05
445.00	32.01	48.24	6.50	1.76	1.76	-6.52	-6.52
450.00	32.11	48.38	6.45	1.74	1.74	-6.99	-6.99

455.00	32.21	48.51	6.40	1.73	1.73	-7.46	-7.46
460.00	32.30	48.65	6.35	1.71	1.71	-7.93	-7.93
465.00	32.40	48.78	6.29	1.70	1.70	-8.40	-8.40
470.00	32.49	48.91	6.24	1.69	1.69	-8.87	-8.87
475.00	32.59	49.04	6.19	1.67	1.67	-9.35	-9.35
480.00	32.68	49.16	6.15	1.66	1.66	-9.82	-9.82
485.00	32.77	49.29	6.10	1.65	1.65	-10.30	-10.30
490.00	32.87	49.42	6.05	1.63	1.63	-10.78	-10.78
495.00	32.96	49.54	6.01	1.62	1.62	-11.26	-11.26
500.00	33.05	49.67	5.96	1.61	1.61	-11.74	-11.74
505.00	33.14	49.79	5.92	1.60	1.60	-12.22	-12.22
510.00	33.23	49.91	5.87	1.58	1.58	-12.70	-12.70
515.00	33.32	50.03	5.83	1.57	1.57	-13.18	-13.18
520.00	33.40	50.15	5.79	1.56	1.56	-13.66	-13.66
525.00	33.49	50.27	5.75	1.55	1.55	-14.15	-14.15
530.00	33.58	50.39	5.70	1.54	1.54	-14.63	-14.63
535.00	33.66	50.51	5.66	1.53	1.53	-15.12	-15.12
540.00	33.75	50.62	5.62	1.52	1.52	-15.61	-15.61
545.00	33.83	50.74	5.59	1.51	1.51	-16.09	-16.09
550.00	33.92	50.85	5.55	1.50	1.50	-16.58	-16.58
555.00	34.00	50.97	5.51	1.49	1.49	-17.07	-17.07
560.00	34.08	51.08	5.47	1.48	1.48	-17.56	-17.56
565.00	34.17	51.19	5.44	1.47	1.47	-18.05	-18.05
570.00	34.25	51.31	5.40	1.46	1.46	-18.54	-18.54
575.00	34.33	51.42	5.37	1.45	1.45	-19.04	-19.04
580.00	34.41	51.53	5.33	1.44	1.44	-19.53	-19.53
585.00	34.49	51.64	5.30	1.43	1.43	-20.02	-20.02
590.00	34.57	51.75	5.26	1.42	1.42	-20.52	-20.52
595.00	34.65	51.85	5.23	1.41	1.41	-21.01	-21.01
600.00	34.73	51.96	5.20	1.40	1.40	-21.51	-21.51
605.00	34.81	52.07	5.16	1.39	1.39	-22.00	-22.00
610.00	34.89	52.17	5.13	1.39	1.39	-22.50	-22.50
615.00	34.96	52.28	5.10	1.38	1.38	-23.00	-23.00
620.00	35.04	52.38	5.07	1.37	1.37	-23.50	-23.50
625.00	35.12	52.49	5.04	1.36	1.36	-24.00	-24.00
630.00	35.19	52.59	5.01	1.35	1.35	-24.50	-24.50
635.00	35.27	52.69	4.98	1.34	1.34	-25.00	-25.00
640.00	35.34	52.79	4.95	1.34	1.34	-25.50	-25.50
645.00	35.42	52.89	4.92	1.33	1.33	-26.00	-26.00
650.00	35.49	52.99	4.89	1.32	1.32	-26.50	-26.50
655.00	35.57	53.09	4.86	1.31	1.31	-27.01	-27.01
660.00	35.64	53.19	4.84	1.31	1.31	-27.51	-27.51
665.00	35.71	53.29	4.81	1.30	1.30	-28.01	-28.01
670.00	35.79	53.39	4.78	1.29	1.29	-28.52	-28.52
675.00	35.86	53.49	4.75	1.28	1.28	-29.02	-29.02
680.00	35.93	53.59	4.73	1.28	1.28	-29.53	-29.53
685.00	36.00	53.68	4.70	1.27	1.27	-30.04	-30.04
690.00	36.07	53.78	4.68	1.26	1.26	-30.54	-30.54
695.00	36.14	53.87	4.65	1.26	1.26	-31.05	-31.05
700.00	36.21	53.97	4.63	1.25	1.25	-31.56	-31.56

705.00	36.28	54.06	4.60	1.24	1.24	-32.07	-32.07
710.00	36.35	54.16	4.58	1.24	1.24	-32.57	-32.57
715.00	36.42	54.25	4.55	1.23	1.23	-33.08	-33.08
720.00	36.49	54.34	4.53	1.22	1.22	-33.59	-33.59
725.00	36.56	54.43	4.50	1.22	1.22	-34.10	-34.10
730.00	36.63	54.53	4.48	1.21	1.21	-34.62	-34.62
735.00	36.70	54.62	4.46	1.20	1.20	-35.13	-35.13
740.00	36.76	54.71	4.44	1.20	1.20	-35.64	-35.64
745.00	36.83	54.80	4.41	1.19	1.19	-36.15	-36.15
750.00	36.90	54.89	4.39	1.19	1.19	-36.66	-36.66
755.00	36.96	54.98	4.37	1.18	1.18	-37.18	-37.18
760.00	37.03	55.07	4.35	1.17	1.17	-37.69	-37.69
765.00	37.10	55.15	4.33	1.17	1.17	-38.21	-38.21
770.00	37.16	55.24	4.30	1.16	1.16	-38.72	-38.72
775.00	37.23	55.33	4.28	1.16	1.16	-39.23	-39.23
780.00	37.29	55.42	4.26	1.15	1.15	-39.75	-39.75
785.00	37.36	55.50	4.24	1.15	1.15	-40.27	-40.27
790.00	37.42	55.59	4.22	1.14	1.14	-40.78	-40.78
795.00	37.48	55.67	4.20	1.13	1.13	-41.30	-41.30
800.00	37.55	55.76	4.18	1.13	1.13	-41.82	-41.82
805.00	37.61	55.84	4.16	1.12	1.12	-42.33	-42.33
810.00	37.68	55.93	4.14	1.12	1.12	-42.85	-42.85
815.00	37.74	56.01	4.12	1.11	1.11	-43.37	-43.37
820.00	37.80	56.10	4.10	1.11	1.11	-43.89	-43.89
825.00	37.86	56.18	4.09	1.10	1.10	-44.41	-44.41
830.00	37.92	56.26	4.07	1.10	1.10	-44.93	-44.93
835.00	37.99	56.34	4.05	1.09	1.09	-45.45	-45.45
840.00	38.05	56.43	4.03	1.09	1.09	-45.97	-45.97
845.00	38.11	56.51	4.01	1.08	1.08	-46.49	-46.49
850.00	38.17	56.59	3.99	1.08	1.08	-47.01	-47.01
855.00	38.23	56.67	3.98	1.07	1.07	-47.53	-47.53
860.00	38.29	56.75	3.96	1.07	1.07	-48.05	-48.05
865.00	38.35	56.83	3.94	1.06	1.06	-48.58	-48.58
870.00	38.41	56.91	3.92	1.06	1.06	-49.10	-49.10
875.00	38.47	56.99	3.91	1.05	1.05	-49.62	-49.62
880.00	38.53	57.07	3.89	1.05	1.05	-50.14	-50.14
885.00	38.59	57.15	3.87	1.05	1.05	-50.67	-50.67
890.00	38.65	57.22	3.86	1.04	1.04	-51.19	-51.19
895.00	38.71	57.30	3.84	1.04	1.04	-51.72	-51.72
900.00	38.76	57.38	3.83	1.03	1.03	-52.24	-52.24
905.00	38.82	57.46	3.81	1.03	1.03	-52.77	-52.77
910.00	38.88	57.53	3.79	1.02	1.02	-53.29	-53.29
915.00	38.94	57.61	3.78	1.02	1.02	-53.82	-53.82
920.00	38.99	57.69	3.76	1.02	1.02	-54.34	-54.34
925.00	39.05	57.76	3.75	1.01	1.01	-54.87	-54.87
930.00	39.11	57.84	3.73	1.01	1.01	-55.40	-55.40
935.00	39.17	57.91	3.72	1.00	1.00	-55.92	-55.92
940.00	39.22	57.99	3.70	1.00	1.00	-56.45	-56.45
945.00	39.28	58.06	3.69	1.00	1.00	-56.98	-56.98
950.00	39.33	58.14	3.67	0.99	0.99	-57.50	-57.50

955.00	39.39	58.21	3.66	0.99	0.99	-58.03	-58.03
960.00	39.45	58.29	3.64	0.98	0.98	-58.56	-58.56
965.00	39.50	58.36	3.63	0.98	0.98	-59.09	-59.09
970.00	39.56	58.43	3.61	0.98	0.98	-59.62	-59.62
975.00	39.61	58.50	3.60	0.97	0.97	-60.15	-60.15
980.00	39.67	58.58	3.59	0.97	0.97	-60.68	-60.68
985.00	39.72	58.65	3.57	0.96	0.96	-61.21	-61.21
990.00	39.77	58.72	3.56	0.96	0.96	-61.74	-61.74
995.00	39.83	58.79	3.55	0.96	0.96	-62.27	-62.27
1000.00	39.88	58.86	3.53	0.95	0.95	-62.80	-62.80
1005.00	39.94	58.94	3.52	0.95	0.95	-63.33	-63.33
1010.00	39.99	59.01	3.51	0.95	0.95	-63.86	-63.86
1015.00	40.04	59.08	3.49	0.94	0.94	-64.39	-64.39
1020.00	40.10	59.15	3.48	0.94	0.94	-64.92	-64.92
1025.00	40.15	59.22	3.47	0.94	0.94	-65.46	-65.46
1030.00	40.20	59.29	3.45	0.93	0.93	-65.99	-65.99
1035.00	40.25	59.36	3.44	0.93	0.93	-66.52	-66.52
1040.00	40.31	59.43	3.43	0.93	0.93	-67.05	-67.05
1045.00	40.36	59.49	3.42	0.92	0.92	-67.59	-67.59
1050.00	40.41	59.56	3.40	0.92	0.92	-68.12	-68.12
1055.00	40.46	59.63	3.39	0.92	0.92	-68.65	-68.65
1060.00	40.51	59.70	3.38	0.91	0.91	-69.19	-69.19
1065.00	40.57	59.77	3.37	0.91	0.91	-69.72	-69.72
1070.00	40.62	59.83	3.36	0.91	0.91	-70.26	-70.26
1075.00	40.67	59.90	3.34	0.90	0.90	-70.79	-70.79
1080.00	40.72	59.97	3.33	0.90	0.90	-71.33	-71.33
1085.00	40.77	60.04	3.32	0.90	0.90	-71.86	-71.86
1090.00	40.82	60.10	3.31	0.89	0.89	-72.40	-72.40
1095.00	40.87	60.17	3.30	0.89	0.89	-72.93	-72.93
1100.00	40.92	60.23	3.29	0.89	0.89	-73.47	-73.47
1105.00	40.97	60.30	3.27	0.88	0.88	-74.00	-74.00
1110.00	41.02	60.37	3.26	0.88	0.88	-74.54	-74.54
1115.00	41.07	60.43	3.25	0.88	0.88	-75.08	-75.08
1120.00	41.12	60.50	3.24	0.87	0.87	-75.61	-75.61
1125.00	41.17	60.56	3.23	0.87	0.87	-76.15	-76.15
1130.00	41.22	60.63	3.22	0.87	0.87	-76.69	-76.69
1135.00	41.27	60.69	3.21	0.87	0.87	-77.22	-77.22
1140.00	41.32	60.76	3.20	0.86	0.86	-77.76	-77.76
1145.00	41.37	60.82	3.19	0.86	0.86	-78.30	-78.30
1150.00	41.42	60.88	3.18	0.86	0.86	-78.84	-78.84
1155.00	41.46	60.95	3.17	0.85	0.85	-79.38	-79.38
1160.00	41.51	61.01	3.16	0.85	0.85	-79.91	-79.91
1165.00	41.56	61.07	3.15	0.85	0.85	-80.45	-80.45
1170.00	41.61	61.14	3.14	0.85	0.85	-80.99	-80.99
1175.00	41.66	61.20	3.13	0.84	0.84	-81.53	-81.53
1180.00	41.70	61.26	3.12	0.84	0.84	-82.07	-82.07
1185.00	41.75	61.32	3.11	0.84	0.84	-82.61	-82.61
1190.00	41.80	61.39	3.10	0.84	0.84	-83.15	-83.15
1195.00	41.85	61.45	3.09	0.83	0.83	-83.69	-83.69
1200.00	41.89	61.51	3.08	0.83	0.83	-84.23	-84.23

1205.00	41.94	61.57	3.07	0.83	0.83	-84.77	-84.77
1210.00	41.99	61.63	3.06	0.82	0.82	-85.31	-85.31
1215.00	42.03	61.69	3.05	0.82	0.82	-85.85	-85.85
1220.00	42.08	61.75	3.04	0.82	0.82	-86.39	-86.39
1225.00	42.13	61.82	3.03	0.82	0.82	-86.93	-86.93
1230.00	42.17	61.88	3.02	0.81	0.81	-87.47	-87.47
1235.00	42.22	61.94	3.01	0.81	0.81	-88.01	-88.01
1240.00	42.26	62.00	3.00	0.81	0.81	-88.56	-88.56
1245.00	42.31	62.06	2.99	0.81	0.81	-89.10	-89.10
1250.00	42.36	62.12	2.98	0.80	0.80	-89.64	-89.64
1255.00	42.40	62.18	2.97	0.80	0.80	-90.18	-90.18
1260.00	42.45	62.23	2.96	0.80	0.80	-90.72	-90.72
1265.00	42.49	62.29	2.95	0.80	0.80	-91.27	-91.27
1270.00	42.54	62.35	2.95	0.80	0.80	-91.81	-91.81
1275.00	42.58	62.41	2.94	0.79	0.79	-92.35	-92.35
1280.00	42.63	62.47	2.93	0.79	0.79	-92.90	-92.90
1285.00	42.67	62.53	2.92	0.79	0.79	-93.44	-93.44
1290.00	42.72	62.59	2.91	0.79	0.79	-93.98	-93.98
1295.00	42.76	62.64	2.90	0.78	0.78	-94.53	-94.53
1300.00	42.81	62.70	2.89	0.78	0.78	-95.07	-95.07
1305.00	42.85	62.76	2.89	0.78	0.78	-95.61	-95.61
1310.00	42.89	62.82	2.88	0.78	0.78	-96.16	-96.16
1315.00	42.94	62.88	2.87	0.77	0.77	-96.70	-96.70
1320.00	42.98	62.93	2.86	0.77	0.77	-97.25	-97.25
1325.00	43.03	62.99	2.85	0.77	0.77	-97.79	-97.79
1330.00	43.07	63.05	2.84	0.77	0.77	-98.34	-98.34
1335.00	43.11	63.10	2.84	0.77	0.77	-98.88	-98.88
1340.00	43.16	63.16	2.83	0.76	0.76	-99.43	-99.43
1345.00	43.20	63.22	2.82	0.76	0.76	-99.97	-99.97
1350.00	43.24	63.27	2.81	0.76	0.76	-100.52	-100.52
1355.00	43.29	63.33	2.80	0.76	0.76	-101.06	-101.06
1360.00	43.33	63.38	2.80	0.75	0.75	-101.61	-101.61
1365.00	43.37	63.44	2.79	0.75	0.75	-102.15	-102.15
1370.00	43.41	63.49	2.78	0.75	0.75	-102.70	-102.70
1375.00	43.46	63.55	2.77	0.75	0.75	-103.25	-103.25
1380.00	43.50	63.61	2.77	0.75	0.75	-103.79	-103.79
1385.00	43.54	63.66	2.76	0.74	0.74	-104.34	-104.34
1390.00	43.58	63.72	2.75	0.74	0.74	-104.89	-104.89
1395.00	43.63	63.77	2.74	0.74	0.74	-105.43	-105.43
1400.00	43.67	63.82	2.74	0.74	0.74	-105.98	-105.98
1405.00	43.71	63.88	2.73	0.74	0.74	-106.53	-106.53
1410.00	43.75	63.93	2.72	0.73	0.73	-107.07	-107.07
1415.00	43.79	63.99	2.71	0.73	0.73	-107.62	-107.62
1420.00	43.84	64.04	2.71	0.73	0.73	-108.17	-108.17
1425.00	43.88	64.10	2.70	0.73	0.73	-108.72	-108.72
1430.00	43.92	64.15	2.69	0.73	0.73	-109.26	-109.26
1435.00	43.96	64.20	2.68	0.72	0.72	-109.81	-109.81
1440.00	44.00	64.26	2.68	0.72	0.72	-110.36	-110.36
1445.00	44.04	64.31	2.67	0.72	0.72	-110.91	-110.91
1450.00	44.08	64.36	2.66	0.72	0.72	-111.46	-111.46

1455.00	44.12	64.41	2.66	0.72	0.72	-112.01	-112.01
1460.00	44.16	64.47	2.65	0.72	0.72	-112.55	-112.55
1465.00	44.20	64.52	2.64	0.71	0.71	-113.10	-113.10
1470.00	44.25	64.57	2.64	0.71	0.71	-113.65	-113.65
1475.00	44.29	64.63	2.63	0.71	0.71	-114.20	-114.20
1480.00	44.33	64.68	2.62	0.71	0.71	-114.75	-114.75
1485.00	44.37	64.73	2.62	0.71	0.71	-115.30	-115.30
1490.00	44.41	64.78	2.61	0.70	0.70	-115.85	-115.85
1495.00	44.45	64.83	2.60	0.70	0.70	-116.40	-116.40
1500.00	44.49	64.88	2.60	0.70	0.70	-116.95	-116.95
1505.00	44.53	64.94	2.59	0.70	0.70	-117.50	-117.50
1510.00	44.57	64.99	2.58	0.70	0.70	-118.05	-118.05
1515.00	44.61	65.04	2.58	0.70	0.70	-118.60	-118.60
1520.00	44.65	65.09	2.57	0.69	0.69	-119.15	-119.15
1525.00	44.68	65.14	2.56	0.69	0.69	-119.70	-119.70
1530.00	44.72	65.19	2.56	0.69	0.69	-120.25	-120.25
1535.00	44.76	65.24	2.55	0.69	0.69	-120.80	-120.80
1540.00	44.80	65.29	2.54	0.69	0.69	-121.35	-121.35
1545.00	44.84	65.34	2.54	0.68	0.68	-121.90	-121.90
1550.00	44.88	65.39	2.53	0.68	0.68	-122.45	-122.45
1555.00	44.92	65.44	2.53	0.68	0.68	-123.01	-123.01
1560.00	44.96	65.49	2.52	0.68	0.68	-123.56	-123.56
1565.00	45.00	65.54	2.51	0.68	0.68	-124.11	-124.11
1570.00	45.04	65.59	2.51	0.68	0.68	-124.66	-124.66
1575.00	45.07	65.64	2.50	0.68	0.68	-125.21	-125.21
1580.00	45.11	65.69	2.49	0.67	0.67	-125.76	-125.76
1585.00	45.15	65.74	2.49	0.67	0.67	-126.32	-126.32
1590.00	45.19	65.79	2.48	0.67	0.67	-126.87	-126.87
1595.00	45.23	65.84	2.48	0.67	0.67	-127.42	-127.42
1600.00	45.27	65.89	2.47	0.67	0.67	-127.97	-127.97
1605.00	45.30	65.94	2.47	0.67	0.67	-128.52	-128.52
1610.00	45.34	65.99	2.46	0.66	0.66	-129.08	-129.08
1615.00	45.38	66.04	2.45	0.66	0.66	-129.63	-129.63
1620.00	45.42	66.08	2.45	0.66	0.66	-130.18	-130.18
1625.00	45.45	66.13	2.44	0.66	0.66	-130.74	-130.74
1630.00	45.49	66.18	2.44	0.66	0.66	-131.29	-131.29
1635.00	45.53	66.23	2.43	0.66	0.66	-131.84	-131.84
1640.00	45.57	66.28	2.42	0.65	0.65	-132.40	-132.40
1645.00	45.60	66.33	2.42	0.65	0.65	-132.95	-132.95
1650.00	45.64	66.37	2.41	0.65	0.65	-133.50	-133.50
1655.00	45.68	66.42	2.41	0.65	0.65	-134.06	-134.06
1660.00	45.72	66.47	2.40	0.65	0.65	-134.61	-134.61
1665.00	45.75	66.52	2.40	0.65	0.65	-135.16	-135.16
1670.00	45.79	66.56	2.39	0.65	0.65	-135.72	-135.72
1675.00	45.83	66.61	2.39	0.64	0.64	-136.27	-136.27
1680.00	45.86	66.66	2.38	0.64	0.64	-136.83	-136.83
1685.00	45.90	66.71	2.38	0.64	0.64	-137.38	-137.38
1690.00	45.94	66.75	2.37	0.64	0.64	-137.93	-137.93
1695.00	45.97	66.80	2.36	0.64	0.64	-138.49	-138.49
1700.00	46.01	66.85	2.36	0.64	0.64	-139.04	-139.04

1705.00	46.05	66.89	2.35	0.64	0.64	-139.60	-139.60
1710.00	46.08	66.94	2.35	0.63	0.63	-140.15	-140.15
1715.00	46.12	66.99	2.34	0.63	0.63	-140.71	-140.71
1720.00	46.15	67.03	2.34	0.63	0.63	-141.26	-141.26
1725.00	46.19	67.08	2.33	0.63	0.63	-141.82	-141.82
1730.00	46.23	67.12	2.33	0.63	0.63	-142.37	-142.37
1735.00	46.26	67.17	2.32	0.63	0.63	-142.93	-142.93
1740.00	46.30	67.22	2.32	0.63	0.63	-143.48	-143.48
1745.00	46.33	67.26	2.31	0.62	0.62	-144.04	-144.04
1750.00	46.37	67.31	2.31	0.62	0.62	-144.59	-144.59
1755.00	46.40	67.35	2.30	0.62	0.62	-145.15	-145.15
1760.00	46.44	67.40	2.30	0.62	0.62	-145.71	-145.71
1765.00	46.47	67.44	2.29	0.62	0.62	-146.26	-146.26
1770.00	46.51	67.49	2.29	0.62	0.62	-146.82	-146.82
1775.00	46.55	67.53	2.28	0.62	0.62	-147.37	-147.37
1780.00	46.58	67.58	2.28	0.61	0.61	-147.93	-147.93
1785.00	46.62	67.62	2.27	0.61	0.61	-148.49	-148.49
1790.00	46.65	67.67	2.27	0.61	0.61	-149.04	-149.04
1795.00	46.69	67.71	2.26	0.61	0.61	-149.60	-149.60
1800.00	46.72	67.76	2.26	0.61	0.61	-150.16	-150.16
1805.00	46.76	67.80	2.25	0.61	0.61	-150.71	-150.71
1810.00	46.79	67.85	2.25	0.61	0.61	-151.27	-151.27
1815.00	46.83	67.89	2.24	0.61	0.61	-151.83	-151.83
1820.00	46.86	67.94	2.24	0.60	0.60	-152.38	-152.38
1825.00	46.89	67.98	2.23	0.60	0.60	-152.94	-152.94
1830.00	46.93	68.02	2.23	0.60	0.60	-153.50	-153.50
1835.00	46.96	68.07	2.23	0.60	0.60	-154.06	-154.06
1840.00	47.00	68.11	2.22	0.60	0.60	-154.61	-154.61
1845.00	47.03	68.16	2.22	0.60	0.60	-155.17	-155.17
1850.00	47.07	68.20	2.21	0.60	0.60	-155.73	-155.73
1855.00	47.10	68.24	2.21	0.60	0.60	-156.29	-156.29
1860.00	47.13	68.29	2.20	0.59	0.59	-156.84	-156.84
1865.00	47.17	68.33	2.20	0.59	0.59	-157.40	-157.40
1870.00	47.20	68.37	2.19	0.59	0.59	-157.96	-157.96
1875.00	47.24	68.42	2.19	0.59	0.59	-158.52	-158.52
1880.00	47.27	68.46	2.18	0.59	0.59	-159.07	-159.07
1885.00	47.30	68.50	2.18	0.59	0.59	-159.63	-159.63
1890.00	47.34	68.55	2.18	0.59	0.59	-160.19	-160.19
1895.00	47.37	68.59	2.17	0.59	0.59	-160.75	-160.75
1900.00	47.40	68.63	2.17	0.59	0.59	-161.31	-161.31
1905.00	47.44	68.67	2.16	0.58	0.58	-161.87	-161.87
1910.00	47.47	68.72	2.16	0.58	0.58	-162.43	-162.43
1915.00	47.50	68.76	2.15	0.58	0.58	-162.98	-162.98
1920.00	47.54	68.80	2.15	0.58	0.58	-163.54	-163.54
1925.00	47.57	68.84	2.15	0.58	0.58	-164.10	-164.10
1930.00	47.60	68.89	2.14	0.58	0.58	-164.66	-164.66
1935.00	47.64	68.93	2.14	0.58	0.58	-165.22	-165.22
1940.00	47.67	68.97	2.13	0.58	0.58	-165.78	-165.78
1945.00	47.70	69.01	2.13	0.57	0.57	-166.34	-166.34
1950.00	47.74	69.05	2.12	0.57	0.57	-166.90	-166.90

1955.00	47.77	69.10	2.12	0.57	0.57	-167.46	-167.46
1960.00	47.80	69.14	2.12	0.57	0.57	-168.02	-168.02
1965.00	47.83	69.18	2.11	0.57	0.57	-168.58	-168.58
1970.00	47.87	69.22	2.11	0.57	0.57	-169.14	-169.14
1975.00	47.90	69.26	2.10	0.57	0.57	-169.69	-169.69
1980.00	47.93	69.30	2.10	0.57	0.57	-170.25	-170.25
1985.00	47.96	69.35	2.10	0.57	0.57	-170.81	-170.81
1990.00	48.00	69.39	2.09	0.56	0.56	-171.37	-171.37
1995.00	48.03	69.43	2.09	0.56	0.56	-171.93	-171.93
2000.00	48.06	69.47	2.08	0.56	0.56	-172.49	-172.49
2005.00	48.09	69.51	2.08	0.56	0.56	-173.05	-173.05
2010.00	48.13	69.55	2.08	0.56	0.56	-173.61	-173.61
2015.00	48.16	69.59	2.07	0.56	0.56	-174.18	-174.18
2020.00	48.19	69.63	2.07	0.56	0.56	-174.74	-174.74
2025.00	48.22	69.67	2.06	0.56	0.56	-175.30	-175.30
2030.00	48.25	69.71	2.06	0.56	0.56	-175.86	-175.86
2035.00	48.29	69.75	2.06	0.56	0.56	-176.42	-176.42
2040.00	48.32	69.79	2.05	0.55	0.55	-176.98	-176.98
2045.00	48.35	69.83	2.05	0.55	0.55	-177.54	-177.54
2050.00	48.38	69.87	2.05	0.55	0.55	-178.10	-178.10
2055.00	48.41	69.91	2.04	0.55	0.55	-178.66	-178.66
2060.00	48.44	69.95	2.04	0.55	0.55	-179.22	-179.22
2065.00	48.48	69.99	2.03	0.55	0.55	-179.78	-179.78
2070.00	48.51	70.03	2.03	0.55	0.55	-180.34	-180.34
2075.00	48.54	70.07	2.03	0.55	0.55	-180.91	-180.91
2080.00	48.57	70.11	2.02	0.55	0.55	-181.47	-181.47
2085.00	48.60	70.15	2.02	0.54	0.54	-182.03	-182.03
2090.00	48.63	70.19	2.02	0.54	0.54	-182.59	-182.59
2095.00	48.66	70.23	2.01	0.54	0.54	-183.15	-183.15
2100.00	48.70	70.27	2.01	0.54	0.54	-183.71	-183.71
2105.00	48.73	70.31	2.00	0.54	0.54	-184.27	-184.27
2110.00	48.76	70.35	2.00	0.54	0.54	-184.84	-184.84
2115.00	48.79	70.39	2.00	0.54	0.54	-185.40	-185.40
2120.00	48.82	70.43	1.99	0.54	0.54	-185.96	-185.96
2125.00	48.85	70.47	1.99	0.54	0.54	-186.52	-186.52
2130.00	48.88	70.51	1.99	0.54	0.54	-187.08	-187.08
2135.00	48.91	70.55	1.98	0.54	0.54	-187.65	-187.65
2140.00	48.94	70.59	1.98	0.53	0.53	-188.21	-188.21
2145.00	48.97	70.62	1.98	0.53	0.53	-188.77	-188.77
2150.00	49.00	70.66	1.97	0.53	0.53	-189.33	-189.33
2155.00	49.03	70.70	1.97	0.53	0.53	-189.90	-189.90
2160.00	49.06	70.74	1.97	0.53	0.53	-190.46	-190.46
2165.00	49.10	70.78	1.96	0.53	0.53	-191.02	-191.02
2170.00	49.13	70.82	1.96	0.53	0.53	-191.58	-191.58
2175.00	49.16	70.86	1.95	0.53	0.53	-192.15	-192.15
2180.00	49.19	70.89	1.95	0.53	0.53	-192.71	-192.71
2185.00	49.22	70.93	1.95	0.53	0.53	-193.27	-193.27
2190.00	49.25	70.97	1.94	0.52	0.52	-193.83	-193.83
2195.00	49.28	71.01	1.94	0.52	0.52	-194.40	-194.40
2200.00	49.31	71.05	1.94	0.52	0.52	-194.96	-194.96

2205.00	49.34	71.09	1.93	0.52	0.52	-195.52	-195.52
2210.00	49.37	71.12	1.93	0.52	0.52	-196.09	-196.09
2215.00	49.40	71.16	1.93	0.52	0.52	-196.65	-196.65
2220.00	49.43	71.20	1.92	0.52	0.52	-197.21	-197.21
2225.00	49.46	71.24	1.92	0.52	0.52	-197.78	-197.78
2230.00	49.49	71.27	1.92	0.52	0.52	-198.34	-198.34
2235.00	49.52	71.31	1.91	0.52	0.52	-198.90	-198.90
2240.00	49.55	71.35	1.91	0.52	0.52	-199.47	-199.47
2245.00	49.58	71.39	1.91	0.51	0.51	-200.03	-200.03
2250.00	49.61	71.42	1.90	0.51	0.51	-200.59	-200.59
2255.00	49.63	71.46	1.90	0.51	0.51	-201.16	-201.16
2260.00	49.66	71.50	1.90	0.51	0.51	-201.72	-201.72
2265.00	49.69	71.54	1.89	0.51	0.51	-202.29	-202.29
2270.00	49.72	71.57	1.89	0.51	0.51	-202.85	-202.85
2275.00	49.75	71.61	1.89	0.51	0.51	-203.41	-203.41
2280.00	49.78	71.65	1.89	0.51	0.51	-203.98	-203.98
2285.00	49.81	71.68	1.88	0.51	0.51	-204.54	-204.54
2290.00	49.84	71.72	1.88	0.51	0.51	-205.11	-205.11
2295.00	49.87	71.76	1.88	0.51	0.51	-205.67	-205.67
2300.00	49.90	71.79	1.87	0.51	0.51	-206.23	-206.23
2305.00	49.93	71.83	1.87	0.50	0.50	-206.80	-206.80
2310.00	49.96	71.87	1.87	0.50	0.50	-207.36	-207.36
2315.00	49.99	71.90	1.86	0.50	0.50	-207.93	-207.93
2320.00	50.01	71.94	1.86	0.50	0.50	-208.49	-208.49
2325.00	50.04	71.98	1.86	0.50	0.50	-209.06	-209.06
2330.00	50.07	72.01	1.85	0.50	0.50	-209.62	-209.62
2335.00	50.10	72.05	1.85	0.50	0.50	-210.19	-210.19
2340.00	50.13	72.09	1.85	0.50	0.50	-210.75	-210.75
2345.00	50.16	72.12	1.85	0.50	0.50	-211.32	-211.32
2350.00	50.19	72.16	1.84	0.50	0.50	-211.88	-211.88
2355.00	50.22	72.19	1.84	0.50	0.50	-212.45	-212.45
2360.00	50.24	72.23	1.84	0.50	0.50	-213.01	-213.01
2365.00	50.27	72.27	1.83	0.49	0.49	-213.58	-213.58
2370.00	50.30	72.30	1.83	0.49	0.49	-214.14	-214.14
2375.00	50.33	72.34	1.83	0.49	0.49	-214.71	-214.71
2380.00	50.36	72.37	1.82	0.49	0.49	-215.27	-215.27
2385.00	50.39	72.41	1.82	0.49	0.49	-215.84	-215.84
2390.00	50.41	72.44	1.82	0.49	0.49	-216.40	-216.40
2395.00	50.44	72.48	1.82	0.49	0.49	-216.97	-216.97
2400.00	50.47	72.52	1.81	0.49	0.49	-217.53	-217.53
2405.00	50.50	72.55	1.81	0.49	0.49	-218.10	-218.10
2410.00	50.53	72.59	1.81	0.49	0.49	-218.67	-218.67
2415.00	50.56	72.62	1.80	0.49	0.49	-219.23	-219.23
2420.00	50.58	72.66	1.80	0.49	0.49	-219.80	-219.80
2425.00	50.61	72.69	1.80	0.49	0.49	-220.36	-220.36
2430.00	50.64	72.73	1.80	0.48	0.48	-220.93	-220.93
2435.00	50.67	72.76	1.79	0.48	0.48	-221.49	-221.49
2440.00	50.70	72.80	1.79	0.48	0.48	-222.06	-222.06
2445.00	50.72	72.83	1.79	0.48	0.48	-222.63	-222.63
2450.00	50.75	72.87	1.78	0.48	0.48	-223.19	-223.19

2455.00	50.78	72.90	1.78	0.48	0.48	-223.76	-223.76
2460.00	50.81	72.94	1.78	0.48	0.48	-224.32	-224.32
2465.00	50.83	72.97	1.78	0.48	0.48	-224.89	-224.89
2470.00	50.86	73.01	1.77	0.48	0.48	-225.46	-225.46
2475.00	50.89	73.04	1.77	0.48	0.48	-226.02	-226.02
2480.00	50.92	73.07	1.77	0.48	0.48	-226.59	-226.59
2485.00	50.94	73.11	1.77	0.48	0.48	-227.16	-227.16
2490.00	50.97	73.14	1.76	0.48	0.48	-227.72	-227.72
2495.00	51.00	73.18	1.76	0.48	0.48	-228.29	-228.29
2500.00	51.03	73.21	1.76	0.47	0.47	-228.86	-228.86
2505.00	51.05	73.25	1.75	0.47	0.47	-229.42	-229.42
2510.00	51.08	73.28	1.75	0.47	0.47	-229.99	-229.99
2515.00	51.11	73.32	1.75	0.47	0.47	-230.56	-230.56
2520.00	51.14	73.35	1.75	0.47	0.47	-231.12	-231.12
2525.00	51.16	73.38	1.74	0.47	0.47	-231.69	-231.69
2530.00	51.19	73.42	1.74	0.47	0.47	-232.26	-232.26
2535.00	51.22	73.45	1.74	0.47	0.47	-232.82	-232.82
2540.00	51.24	73.49	1.74	0.47	0.47	-233.39	-233.39
2545.00	51.27	73.52	1.73	0.47	0.47	-233.96	-233.96
2550.00	51.30	73.55	1.73	0.47	0.47	-234.53	-234.53
2555.00	51.33	73.59	1.73	0.47	0.47	-235.09	-235.09
2560.00	51.35	73.62	1.73	0.47	0.47	-235.66	-235.66
2565.00	51.38	73.65	1.72	0.47	0.47	-236.23	-236.23
2570.00	51.41	73.69	1.72	0.46	0.46	-236.79	-236.79
2575.00	51.43	73.72	1.72	0.46	0.46	-237.36	-237.36
2580.00	51.46	73.75	1.72	0.46	0.46	-237.93	-237.93
2585.00	51.49	73.79	1.71	0.46	0.46	-238.50	-238.50
2590.00	51.51	73.82	1.71	0.46	0.46	-239.06	-239.06
2595.00	51.54	73.86	1.71	0.46	0.46	-239.63	-239.63
2600.00	51.57	73.89	1.71	0.46	0.46	-240.20	-240.20
2605.00	51.59	73.92	1.70	0.46	0.46	-240.77	-240.77
2610.00	51.62	73.95	1.70	0.46	0.46	-241.34	-241.34
2615.00	51.65	73.99	1.70	0.46	0.46	-241.90	-241.90
2620.00	51.67	74.02	1.70	0.46	0.46	-242.47	-242.47
2625.00	51.70	74.05	1.69	0.46	0.46	-243.04	-243.04
2630.00	51.73	74.09	1.69	0.46	0.46	-243.61	-243.61
2635.00	51.75	74.12	1.69	0.46	0.46	-244.17	-244.17
2640.00	51.78	74.15	1.69	0.45	0.45	-244.74	-244.74
2645.00	51.80	74.19	1.68	0.45	0.45	-245.31	-245.31
2650.00	51.83	74.22	1.68	0.45	0.45	-245.88	-245.88
2655.00	51.86	74.25	1.68	0.45	0.45	-246.45	-246.45
2660.00	51.88	74.28	1.68	0.45	0.45	-247.02	-247.02
2665.00	51.91	74.32	1.67	0.45	0.45	-247.58	-247.58
2670.00	51.94	74.35	1.67	0.45	0.45	-248.15	-248.15
2675.00	51.96	74.38	1.67	0.45	0.45	-248.72	-248.72
2680.00	51.99	74.41	1.67	0.45	0.45	-249.29	-249.29
2685.00	52.01	74.45	1.66	0.45	0.45	-249.86	-249.86
2690.00	52.04	74.48	1.66	0.45	0.45	-250.43	-250.43
2695.00	52.07	74.51	1.66	0.45	0.45	-250.99	-250.99
2700.00	52.09	74.54	1.66	0.45	0.45	-251.56	-251.56

2705.00	52.12	74.58	1.65	0.45	0.45	-252.13	-252.13
2710.00	52.14	74.61	1.65	0.45	0.45	-252.70	-252.70
2715.00	52.17	74.64	1.65	0.45	0.45	-253.27	-253.27
2720.00	52.19	74.67	1.65	0.44	0.44	-253.84	-253.84
2725.00	52.22	74.70	1.64	0.44	0.44	-254.41	-254.41
2730.00	52.25	74.74	1.64	0.44	0.44	-254.98	-254.98
2735.00	52.27	74.77	1.64	0.44	0.44	-255.54	-255.54
2740.00	52.30	74.80	1.64	0.44	0.44	-256.11	-256.11
2745.00	52.32	74.83	1.64	0.44	0.44	-256.68	-256.68
2750.00	52.35	74.86	1.63	0.44	0.44	-257.25	-257.25
2755.00	52.37	74.90	1.63	0.44	0.44	-257.82	-257.82
2760.00	52.40	74.93	1.63	0.44	0.44	-258.39	-258.39
2765.00	52.42	74.96	1.63	0.44	0.44	-258.96	-258.96
2770.00	52.45	74.99	1.62	0.44	0.44	-259.53	-259.53
2775.00	52.48	75.02	1.62	0.44	0.44	-260.10	-260.10
2780.00	52.50	75.05	1.62	0.44	0.44	-260.67	-260.67
2785.00	52.53	75.09	1.62	0.44	0.44	-261.24	-261.24
2790.00	52.55	75.12	1.62	0.44	0.44	-261.81	-261.81
2795.00	52.58	75.15	1.61	0.44	0.44	-262.38	-262.38
2800.00	52.60	75.18	1.61	0.43	0.43	-262.94	-262.94
2805.00	52.63	75.21	1.61	0.43	0.43	-263.51	-263.51
2810.00	52.65	75.24	1.61	0.43	0.43	-264.08	-264.08
2815.00	52.68	75.27	1.60	0.43	0.43	-264.65	-264.65
2820.00	52.70	75.30	1.60	0.43	0.43	-265.22	-265.22
2825.00	52.73	75.34	1.60	0.43	0.43	-265.79	-265.79
2830.00	52.75	75.37	1.60	0.43	0.43	-266.36	-266.36
2835.00	52.78	75.40	1.60	0.43	0.43	-266.93	-266.93
2840.00	52.80	75.43	1.59	0.43	0.43	-267.50	-267.50
2845.00	52.83	75.46	1.59	0.43	0.43	-268.07	-268.07
2850.00	52.85	75.49	1.59	0.43	0.43	-268.64	-268.64
2855.00	52.88	75.52	1.59	0.43	0.43	-269.21	-269.21
2860.00	52.90	75.55	1.59	0.43	0.43	-269.78	-269.78
2865.00	52.93	75.58	1.58	0.43	0.43	-270.35	-270.35
2870.00	52.95	75.61	1.58	0.43	0.43	-270.92	-270.92
2875.00	52.98	75.64	1.58	0.43	0.43	-271.49	-271.49
2880.00	53.00	75.68	1.58	0.43	0.43	-272.06	-272.06

Notes to User

Only values shown blue to be edited

Sheet only for england and wales

In M5-D	J0	J1	J2	Cr	In (MT-D/M5-D)	MT-D/M5-D
2.21	0.1699	0.0028	0.000114	0.205014	0.389773	1.476645
2.39	0.1699	0.0028	0.000114	0.214282	0.407393	1.502894
2.51	0.1644	0.005831	-0.00013	0.215837	0.410349	1.507344
2.60	0.1644	0.005831	-0.00013	0.218417	0.415254	1.514755
2.66	0.1644	0.005831	-0.00013	0.220337	0.418905	1.520296
2.71	0.1644	0.005831	-0.00013	0.22182	0.421723	1.524586
2.76	0.1644	0.005831	-0.00013	0.222992	0.423951	1.527987
2.80	0.1644	0.005831	-0.00013	0.223934	0.425743	1.530728
2.83	0.1644	0.005831	-0.00013	0.224701	0.427201	1.53296
2.86	0.1644	0.005831	-0.00013	0.225329	0.428394	1.534791
2.89	0.1644	0.005831	-0.00013	0.225845	0.429376	1.536298
2.92	0.1644	0.005831	-0.00013	0.226269	0.430183	1.537538
2.94	0.1644	0.005831	-0.00013	0.226617	0.430845	1.538556
2.96	0.1644	0.005831	-0.00013	0.226901	0.431384	1.539387
2.98	0.1644	0.005831	-0.00013	0.22713	0.431819	1.540056
3.00	0.1644	0.005831	-0.00013	0.227311	0.432164	1.540587
3.01	0.1644	0.005831	-0.00013	0.227451	0.43243	1.540998
3.03	0.1644	0.005831	-0.00013	0.227556	0.432628	1.541303
3.05	0.1644	0.005831	-0.00013	0.227628	0.432765	1.541515
3.06	0.1644	0.005831	-0.00013	0.227672	0.432849	1.541644
3.07	0.1644	0.005831	-0.00013	0.227691	0.432885	1.5417
3.09	0.1644	0.005831	-0.00013	0.227687	0.432879	1.541689
3.10	0.1644	0.005831	-0.00013	0.227664	0.432834	1.54162
3.11	0.1644	0.005831	-0.00013	0.227622	0.432754	1.541496
3.12	0.1644	0.005831	-0.00013	0.227563	0.432642	1.541325
3.13	0.1644	0.005831	-0.00013	0.227489	0.432502	1.541109
3.14	0.1644	0.005831	-0.00013	0.227402	0.432336	1.540852
3.15	0.1644	0.005831	-0.00013	0.227302	0.432145	1.540559
3.16	0.1644	0.005831	-0.00013	0.22719	0.431933	1.540232
3.17	0.1644	0.005831	-0.00013	0.227068	0.431701	1.539874
3.18	0.1644	0.005831	-0.00013	0.226936	0.43145	1.539488
3.19	0.1644	0.005831	-0.00013	0.226795	0.431182	1.539075
3.20	0.1644	0.005831	-0.00013	0.226645	0.430898	1.538638
3.21	0.1644	0.005831	-0.00013	0.226488	0.430599	1.538178
3.21	0.1644	0.005831	-0.00013	0.226324	0.430286	1.537698
3.22	0.1644	0.005831	-0.00013	0.226153	0.429961	1.537198
3.23	0.1644	0.005831	-0.00013	0.225975	0.429624	1.53668
3.24	0.1644	0.005831	-0.00013	0.225792	0.429276	1.536145
3.24	0.1644	0.005831	-0.00013	0.225604	0.428917	1.535594

3.25	0.1644	0.005831	-0.00013	0.22541	0.428549	1.535029
3.26	0.1644	0.005831	-0.00013	0.225212	0.428172	1.53445
3.26	0.1644	0.005831	-0.00013	0.225009	0.427787	1.533859
3.27	0.1644	0.005831	-0.00013	0.224802	0.427393	1.533255
3.28	0.1644	0.005831	-0.00013	0.224591	0.426992	1.53264
3.28	0.1644	0.005831	-0.00013	0.224377	0.426584	1.532015
3.29	0.1644	0.005831	-0.00013	0.224158	0.42617	1.53138
3.30	0.1644	0.005831	-0.00013	0.223937	0.425749	1.530736
3.30	0.1644	0.005831	-0.00013	0.223713	0.425322	1.530083
3.31	0.1644	0.005831	-0.00013	0.223485	0.42489	1.529422
3.31	0.1644	0.005831	-0.00013	0.223255	0.424453	1.528754
3.32	0.1644	0.005831	-0.00013	0.223023	0.424011	1.528078
3.32	0.1644	0.005831	-0.00013	0.222788	0.423564	1.527395
3.33	0.1644	0.005831	-0.00013	0.222551	0.423112	1.526706
3.33	0.1644	0.005831	-0.00013	0.222311	0.422657	1.526011
3.34	0.1644	0.005831	-0.00013	0.222069	0.422198	1.52531
3.34	0.1644	0.005831	-0.00013	0.221826	0.421735	1.524604
3.35	0.1644	0.005831	-0.00013	0.221581	0.421269	1.523894
3.35	0.1644	0.005831	-0.00013	0.221334	0.420799	1.523178
3.36	0.1644	0.005831	-0.00013	0.221085	0.420326	1.522458
3.36	0.1644	0.005831	-0.00013	0.220835	0.41985	1.521734
3.37	0.1644	0.005831	-0.00013	0.220583	0.419372	1.521005
3.37	0.1644	0.005831	-0.00013	0.22033	0.41889	1.520273
3.38	0.1644	0.005831	-0.00013	0.220075	0.418406	1.519538
3.38	0.1644	0.005831	-0.00013	0.219819	0.41792	1.518799
3.38	0.1644	0.005831	-0.00013	0.219563	0.417432	1.518058
3.39	0.1644	0.005831	-0.00013	0.219304	0.416941	1.517313
3.39	0.1644	0.005831	-0.00013	0.219045	0.416448	1.516566
3.40	0.1644	0.005831	-0.00013	0.218785	0.415954	1.515816
3.40	0.1644	0.005831	-0.00013	0.218524	0.415457	1.515064
3.40	0.1644	0.005831	-0.00013	0.218262	0.414959	1.514309
3.41	0.1644	0.005831	-0.00013	0.217999	0.414459	1.513552
3.41	0.1644	0.005831	-0.00013	0.217735	0.413958	1.512794
3.42	0.1644	0.005831	-0.00013	0.217471	0.413455	1.512033
3.42	0.1644	0.005831	-0.00013	0.217206	0.412951	1.511271
3.42	0.1644	0.005831	-0.00013	0.21694	0.412445	1.510507
3.43	0.1644	0.005831	-0.00013	0.216673	0.411939	1.509742
3.43	0.1644	0.005831	-0.00013	0.216406	0.411431	1.508975
3.43	0.1644	0.005831	-0.00013	0.216138	0.410922	1.508207
3.44	0.2644	-0.00162	3.15E-06	0.217046	0.412648	1.510812
3.44	0.2644	-0.00162	3.15E-06	0.216895	0.41236	1.510378
3.44	0.2644	-0.00162	3.15E-06	0.216745	0.412076	1.509948
3.45	0.2644	-0.00162	3.15E-06	0.216597	0.411794	1.509523
3.45	0.2644	-0.00162	3.15E-06	0.21645	0.411514	1.509102
3.45	0.2644	-0.00162	3.15E-06	0.216305	0.411238	1.508684
3.46	0.2644	-0.00162	3.15E-06	0.216161	0.410964	1.508271
3.46	0.2644	-0.00162	3.15E-06	0.216018	0.410692	1.507861
3.46	0.2644	-0.00162	3.15E-06	0.215876	0.410423	1.507456
3.47	0.2644	-0.00162	3.15E-06	0.215736	0.410157	1.507054
3.47	0.2644	-0.00162	3.15E-06	0.215597	0.409892	1.506655

3.47	0.2644	-0.00162	3.15E-06	0.215459	0.40963	1.506261
3.48	0.2644	-0.00162	3.15E-06	0.215322	0.40937	1.505869
3.48	0.2644	-0.00162	3.15E-06	0.215187	0.409113	1.505482
3.48	0.2644	-0.00162	3.15E-06	0.215053	0.408858	1.505097
3.48	0.2644	-0.00162	3.15E-06	0.214919	0.408604	1.504716
3.49	0.2644	-0.00162	3.15E-06	0.214787	0.408353	1.504338
3.49	0.2644	-0.00162	3.15E-06	0.214656	0.408104	1.503964
3.49	0.2644	-0.00162	3.15E-06	0.214526	0.407857	1.503592
3.50	0.2644	-0.00162	3.15E-06	0.214398	0.407612	1.503224
3.50	0.2644	-0.00162	3.15E-06	0.21427	0.407369	1.502858
3.50	0.2644	-0.00162	3.15E-06	0.214143	0.407128	1.502496
3.50	0.2644	-0.00162	3.15E-06	0.214017	0.406888	1.502136
3.51	0.2644	-0.00162	3.15E-06	0.213892	0.406651	1.50178
3.51	0.2644	-0.00162	3.15E-06	0.213768	0.406415	1.501426
3.51	0.2644	-0.00162	3.15E-06	0.213645	0.406181	1.501074
3.51	0.2644	-0.00162	3.15E-06	0.213523	0.405949	1.500726
3.52	0.2644	-0.00162	3.15E-06	0.213402	0.405719	1.50038
3.52	0.2644	-0.00162	3.15E-06	0.213281	0.40549	1.500037
3.52	0.2644	-0.00162	3.15E-06	0.213162	0.405263	1.499696
3.52	0.2644	-0.00162	3.15E-06	0.213043	0.405037	1.499358
3.53	0.2644	-0.00162	3.15E-06	0.212925	0.404813	1.499023
3.53	0.2644	-0.00162	3.15E-06	0.212809	0.404591	1.49869
3.53	0.2644	-0.00162	3.15E-06	0.212692	0.40437	1.498359
3.53	0.2644	-0.00162	3.15E-06	0.212577	0.404151	1.498031
3.54	0.2644	-0.00162	3.15E-06	0.212463	0.403934	1.497704
3.54	0.2644	-0.00162	3.15E-06	0.212349	0.403717	1.497381
3.54	0.2644	-0.00162	3.15E-06	0.212236	0.403503	1.497059
3.54	0.2644	-0.00162	3.15E-06	0.212124	0.403289	1.49674
3.55	0.2644	-0.00162	3.15E-06	0.212013	0.403078	1.496423
3.55	0.2644	-0.00162	3.15E-06	0.211902	0.402867	1.496108
3.55	0.2644	-0.00162	3.15E-06	0.211792	0.402658	1.495795
3.55	0.2644	-0.00162	3.15E-06	0.211683	0.40245	1.495485
3.55	0.2644	-0.00162	3.15E-06	0.211574	0.402244	1.495176
3.56	0.2644	-0.00162	3.15E-06	0.211466	0.402039	1.49487
3.56	0.2644	-0.00162	3.15E-06	0.211359	0.401835	1.494565
3.56	0.2644	-0.00162	3.15E-06	0.211253	0.401633	1.494262
3.56	0.2644	-0.00162	3.15E-06	0.211147	0.401432	1.493962
3.57	0.2644	-0.00162	3.15E-06	0.211042	0.401232	1.493663
3.57	0.2644	-0.00162	3.15E-06	0.210937	0.401033	1.493366
3.57	0.2644	-0.00162	3.15E-06	0.210833	0.400835	1.493071
3.57	0.2644	-0.00162	3.15E-06	0.21073	0.400639	1.492778
3.57	0.2644	-0.00162	3.15E-06	0.210627	0.400444	1.492487
3.58	0.2644	-0.00162	3.15E-06	0.210525	0.40025	1.492197
3.58	0.2644	-0.00162	3.15E-06	0.210424	0.400057	1.49191
3.58	0.2644	-0.00162	3.15E-06	0.210323	0.399865	1.491624
3.58	0.2644	-0.00162	3.15E-06	0.210223	0.399675	1.491339
3.58	0.2644	-0.00162	3.15E-06	0.210123	0.399485	1.491057
3.59	0.2644	-0.00162	3.15E-06	0.210024	0.399297	1.490776
3.59	0.2644	-0.00162	3.15E-06	0.209925	0.399109	1.490497
3.59	0.2644	-0.00162	3.15E-06	0.209827	0.398923	1.490219

3.59	0.2644	-0.00162	3.15E-06	0.20973	0.398738	1.489943
3.59	0.2644	-0.00162	3.15E-06	0.209633	0.398554	1.489669
3.60	0.2644	-0.00162	3.15E-06	0.209537	0.398371	1.489396
3.60	0.2644	-0.00162	3.15E-06	0.209441	0.398188	1.489125
3.60	0.2644	-0.00162	3.15E-06	0.209346	0.398007	1.488855
3.60	0.2644	-0.00162	3.15E-06	0.209251	0.397827	1.488587
3.60	0.2644	-0.00162	3.15E-06	0.209157	0.397648	1.48832
3.60	0.2644	-0.00162	3.15E-06	0.209063	0.39747	1.488054
3.61	0.2644	-0.00162	3.15E-06	0.208969	0.397292	1.487791
3.61	0.2644	-0.00162	3.15E-06	0.208877	0.397116	1.487528
3.61	0.2644	-0.00162	3.15E-06	0.208784	0.39694	1.487267
3.61	0.2644	-0.00162	3.15E-06	0.208693	0.396766	1.487008
3.61	0.2644	-0.00162	3.15E-06	0.208601	0.396592	1.48675
3.62	0.2644	-0.00162	3.15E-06	0.20851	0.396419	1.486493
3.62	0.2644	-0.00162	3.15E-06	0.20842	0.396248	1.486237
3.62	0.2644	-0.00162	3.15E-06	0.20833	0.396077	1.485983
3.62	0.2644	-0.00162	3.15E-06	0.208241	0.395907	1.48573
3.62	0.2644	-0.00162	3.15E-06	0.208152	0.395737	1.485479
3.62	0.2644	-0.00162	3.15E-06	0.208063	0.395569	1.485229
3.63	0.2644	-0.00162	3.15E-06	0.207975	0.395401	1.48498
3.63	0.2644	-0.00162	3.15E-06	0.207887	0.395234	1.484732
3.63	0.2644	-0.00162	3.15E-06	0.2078	0.395068	1.484486
3.63	0.2644	-0.00162	3.15E-06	0.207713	0.394903	1.484241
3.63	0.2644	-0.00162	3.15E-06	0.207627	0.394739	1.483997
3.63	0.2644	-0.00162	3.15E-06	0.20754	0.394575	1.483754
3.64	0.2644	-0.00162	3.15E-06	0.207455	0.394413	1.483513
3.64	0.2644	-0.00162	3.15E-06	0.20737	0.394251	1.483272
3.64	0.2644	-0.00162	3.15E-06	0.207285	0.394089	1.483033
3.64	0.2644	-0.00162	3.15E-06	0.2072	0.393929	1.482795
3.64	0.2644	-0.00162	3.15E-06	0.207116	0.393769	1.482558
3.64	0.2644	-0.00162	3.15E-06	0.207033	0.39361	1.482323
3.65	0.2644	-0.00162	3.15E-06	0.20695	0.393452	1.482088
3.65	0.2644	-0.00162	3.15E-06	0.206867	0.393294	1.481854
3.65	0.2644	-0.00162	3.15E-06	0.206784	0.393137	1.481622
3.65	0.2644	-0.00162	3.15E-06	0.206702	0.392981	1.481391
3.65	0.2644	-0.00162	3.15E-06	0.20662	0.392826	1.481161
3.65	0.2644	-0.00162	3.15E-06	0.206539	0.392671	1.480931
3.65	0.2644	-0.00162	3.15E-06	0.206458	0.392517	1.480703
3.66	0.2644	-0.00162	3.15E-06	0.206377	0.392364	1.480476
3.66	0.2644	-0.00162	3.15E-06	0.206297	0.392211	1.48025
3.66	0.2644	-0.00162	3.15E-06	0.206217	0.392059	1.480025
3.66	0.2644	-0.00162	3.15E-06	0.206137	0.391908	1.479801
3.66	0.2644	-0.00162	3.15E-06	0.206058	0.391757	1.479578
3.66	0.2644	-0.00162	3.15E-06	0.205979	0.391607	1.479356
3.66	0.2644	-0.00162	3.15E-06	0.205901	0.391458	1.479135
3.67	0.2644	-0.00162	3.15E-06	0.205822	0.391309	1.478915
3.67	0.2644	-0.00162	3.15E-06	0.205744	0.391161	1.478696
3.67	0.2644	-0.00162	3.15E-06	0.205667	0.391013	1.478478
3.67	0.2644	-0.00162	3.15E-06	0.20559	0.390866	1.478261
3.67	0.2644	-0.00162	3.15E-06	0.205513	0.39072	1.478045

3.67	0.2644	-0.00162	3.15E-06	0.205436	0.390574	1.47783
3.67	0.2644	-0.00162	3.15E-06	0.20536	0.390429	1.477615
3.68	0.2644	-0.00162	3.15E-06	0.205284	0.390285	1.477402
3.68	0.2644	-0.00162	3.15E-06	0.205208	0.390141	1.477189
3.68	0.2644	-0.00162	3.15E-06	0.205133	0.389998	1.476977
3.68	0.2644	-0.00162	3.15E-06	0.205058	0.389855	1.476767
3.68	0.2644	-0.00162	3.15E-06	0.204983	0.389713	1.476557
3.68	0.2644	-0.00162	3.15E-06	0.204908	0.389571	1.476348
3.68	0.2644	-0.00162	3.15E-06	0.204834	0.38943	1.47614
3.69	0.2644	-0.00162	3.15E-06	0.20476	0.38929	1.475932
3.69	0.2644	-0.00162	3.15E-06	0.204687	0.38915	1.475726
3.69	0.2644	-0.00162	3.15E-06	0.204613	0.389011	1.47552
3.69	0.2644	-0.00162	3.15E-06	0.20454	0.388872	1.475315
3.69	0.2644	-0.00162	3.15E-06	0.204468	0.388734	1.475111
3.69	0.2644	-0.00162	3.15E-06	0.204395	0.388596	1.474908
3.69	0.2644	-0.00162	3.15E-06	0.204323	0.388459	1.474706
3.70	0.2644	-0.00162	3.15E-06	0.204251	0.388322	1.474504
3.70	0.2644	-0.00162	3.15E-06	0.20418	0.388186	1.474304
3.70	0.2644	-0.00162	3.15E-06	0.204108	0.38805	1.474104
3.70	0.2644	-0.00162	3.15E-06	0.204037	0.387915	1.473905
3.70	0.2644	-0.00162	3.15E-06	0.203966	0.38778	1.473706
3.70	0.2644	-0.00162	3.15E-06	0.203896	0.387646	1.473509
3.70	0.2644	-0.00162	3.15E-06	0.203826	0.387513	1.473312
3.70	0.2644	-0.00162	3.15E-06	0.203756	0.38738	1.473116
3.71	0.2644	-0.00162	3.15E-06	0.203686	0.387247	1.47292
3.71	0.2644	-0.00162	3.15E-06	0.203616	0.387115	1.472726
3.71	0.2644	-0.00162	3.15E-06	0.203547	0.386983	1.472532
3.71	0.2644	-0.00162	3.15E-06	0.203478	0.386852	1.472339
3.71	0.2644	-0.00162	3.15E-06	0.203409	0.386721	1.472146
3.71	0.2644	-0.00162	3.15E-06	0.203341	0.386591	1.471954
3.71	0.2644	-0.00162	3.15E-06	0.203273	0.386461	1.471763
3.71	0.2644	-0.00162	3.15E-06	0.203205	0.386332	1.471573
3.72	0.2644	-0.00162	3.15E-06	0.203137	0.386203	1.471384
3.72	0.2644	-0.00162	3.15E-06	0.203069	0.386075	1.471195
3.72	0.2644	-0.00162	3.15E-06	0.203002	0.385947	1.471006
3.72	0.2644	-0.00162	3.15E-06	0.202935	0.385819	1.470819
3.72	0.2644	-0.00162	3.15E-06	0.202868	0.385692	1.470632
3.72	0.2644	-0.00162	3.15E-06	0.202802	0.385566	1.470446
3.72	0.2644	-0.00162	3.15E-06	0.202735	0.38544	1.47026
3.72	0.2644	-0.00162	3.15E-06	0.202669	0.385314	1.470076
3.72	0.2644	-0.00162	3.15E-06	0.202603	0.385189	1.469891
3.73	0.2644	-0.00162	3.15E-06	0.202537	0.385064	1.469708
3.73	0.2644	-0.00162	3.15E-06	0.202472	0.384939	1.469525
3.73	0.2644	-0.00162	3.15E-06	0.202407	0.384815	1.469343
3.73	0.2644	-0.00162	3.15E-06	0.202342	0.384692	1.469161
3.73	0.2644	-0.00162	3.15E-06	0.202277	0.384568	1.46898
3.73	0.2644	-0.00162	3.15E-06	0.202212	0.384446	1.4688
3.73	0.2644	-0.00162	3.15E-06	0.202148	0.384323	1.46862
3.73	0.2644	-0.00162	3.15E-06	0.202084	0.384201	1.468441
3.74	0.2644	-0.00162	3.15E-06	0.20202	0.38408	1.468263

3.74	0.2644	-0.00162	3.15E-06	0.201956	0.383959	1.468085
3.74	0.2644	-0.00162	3.15E-06	0.201893	0.383838	1.467908
3.74	0.2644	-0.00162	3.15E-06	0.201829	0.383718	1.467731
3.74	0.2644	-0.00162	3.15E-06	0.201766	0.383598	1.467555
3.74	0.2644	-0.00162	3.15E-06	0.201703	0.383478	1.467379
3.74	0.2644	-0.00162	3.15E-06	0.201641	0.383359	1.467204
3.74	0.2644	-0.00162	3.15E-06	0.201578	0.38324	1.46703
3.74	0.2644	-0.00162	3.15E-06	0.201516	0.383122	1.466856
3.75	0.2644	-0.00162	3.15E-06	0.201454	0.383004	1.466683
3.75	0.2644	-0.00162	3.15E-06	0.201392	0.382886	1.466511
3.75	0.2644	-0.00162	3.15E-06	0.20133	0.382769	1.466339
3.75	0.2644	-0.00162	3.15E-06	0.201269	0.382652	1.466167
3.75	0.2644	-0.00162	3.15E-06	0.201207	0.382535	1.465996
3.75	0.2644	-0.00162	3.15E-06	0.201146	0.382419	1.465826
3.75	0.2644	-0.00162	3.15E-06	0.201085	0.382303	1.465656
3.75	0.2644	-0.00162	3.15E-06	0.201025	0.382188	1.465487
3.75	0.2644	-0.00162	3.15E-06	0.200964	0.382073	1.465318
3.75	0.2644	-0.00162	3.15E-06	0.200904	0.381958	1.46515
3.76	0.2644	-0.00162	3.15E-06	0.200844	0.381843	1.464983
3.76	0.2644	-0.00162	3.15E-06	0.200784	0.381729	1.464815
3.76	0.2644	-0.00162	3.15E-06	0.200724	0.381616	1.464649
3.76	0.2644	-0.00162	3.15E-06	0.200664	0.381502	1.464483
3.76	0.2644	-0.00162	3.15E-06	0.200605	0.381389	1.464317
3.76	0.2644	-0.00162	3.15E-06	0.200545	0.381276	1.464152
3.76	0.2644	-0.00162	3.15E-06	0.200486	0.381164	1.463988
3.76	0.2644	-0.00162	3.15E-06	0.200427	0.381052	1.463824
3.76	0.2644	-0.00162	3.15E-06	0.200369	0.38094	1.46366
3.76	0.2644	-0.00162	3.15E-06	0.20031	0.380829	1.463497
3.77	0.2644	-0.00162	3.15E-06	0.200252	0.380718	1.463335
3.77	0.2644	-0.00162	3.15E-06	0.200194	0.380607	1.463173
3.77	0.2644	-0.00162	3.15E-06	0.200135	0.380497	1.463012
3.77	0.2644	-0.00162	3.15E-06	0.200078	0.380387	1.462851
3.77	0.2644	-0.00162	3.15E-06	0.20002	0.380277	1.46269
3.77	0.2644	-0.00162	3.15E-06	0.199962	0.380168	1.46253
3.77	0.2644	-0.00162	3.15E-06	0.199905	0.380059	1.46237
3.77	0.2644	-0.00162	3.15E-06	0.199848	0.37995	1.462211
3.77	0.2644	-0.00162	3.15E-06	0.199791	0.379842	1.462053
3.77	0.2644	-0.00162	3.15E-06	0.199734	0.379733	1.461895
3.78	0.2644	-0.00162	3.15E-06	0.199677	0.379626	1.461737
3.78	0.2644	-0.00162	3.15E-06	0.19962	0.379518	1.46158
3.78	0.2644	-0.00162	3.15E-06	0.199564	0.379411	1.461423
3.78	0.2644	-0.00162	3.15E-06	0.199508	0.379304	1.461267
3.78	0.2644	-0.00162	3.15E-06	0.199452	0.379197	1.461111
3.78	0.2644	-0.00162	3.15E-06	0.199396	0.379091	1.460956
3.78	0.2644	-0.00162	3.15E-06	0.19934	0.378985	1.460801
3.78	0.2644	-0.00162	3.15E-06	0.199284	0.378879	1.460646
3.78	0.2644	-0.00162	3.15E-06	0.199229	0.378774	1.460492
3.78	0.2644	-0.00162	3.15E-06	0.199174	0.378668	1.460339
3.79	0.2644	-0.00162	3.15E-06	0.199119	0.378564	1.460186
3.79	0.2644	-0.00162	3.15E-06	0.199064	0.378459	1.460033

3.79	0.2644	-0.00162	3.15E-06	0.199009	0.378355	1.459881
3.79	0.2644	-0.00162	3.15E-06	0.198954	0.378251	1.459729
3.79	0.2644	-0.00162	3.15E-06	0.198899	0.378147	1.459577
3.79	0.2644	-0.00162	3.15E-06	0.198845	0.378044	1.459426
3.79	0.2644	-0.00162	3.15E-06	0.198791	0.37794	1.459276
3.79	0.2644	-0.00162	3.15E-06	0.198737	0.377837	1.459126
3.79	0.2644	-0.00162	3.15E-06	0.198683	0.377735	1.458976
3.79	0.2644	-0.00162	3.15E-06	0.198629	0.377633	1.458827
3.79	0.2644	-0.00162	3.15E-06	0.198575	0.37753	1.458678
3.80	0.2644	-0.00162	3.15E-06	0.198522	0.377429	1.458529
3.80	0.2644	-0.00162	3.15E-06	0.198468	0.377327	1.458381
3.80	0.2644	-0.00162	3.15E-06	0.198415	0.377226	1.458234
3.80	0.2644	-0.00162	3.15E-06	0.198362	0.377125	1.458086
3.80	0.2644	-0.00162	3.15E-06	0.198309	0.377024	1.45794
3.80	0.2644	-0.00162	3.15E-06	0.198256	0.376924	1.457793
3.80	0.2644	-0.00162	3.15E-06	0.198203	0.376823	1.457647
3.80	0.2644	-0.00162	3.15E-06	0.198151	0.376724	1.457501
3.80	0.2644	-0.00162	3.15E-06	0.198098	0.376624	1.457356
3.80	0.2644	-0.00162	3.15E-06	0.198046	0.376524	1.457211
3.80	0.2644	-0.00162	3.15E-06	0.197994	0.376425	1.457067
3.80	0.2644	-0.00162	3.15E-06	0.197942	0.376326	1.456922
3.81	0.2644	-0.00162	3.15E-06	0.19789	0.376228	1.456779
3.81	0.2644	-0.00162	3.15E-06	0.197838	0.376129	1.456635
3.81	0.2644	-0.00162	3.15E-06	0.197786	0.376031	1.456492
3.81	0.2644	-0.00162	3.15E-06	0.197735	0.375933	1.45635
3.81	0.2644	-0.00162	3.15E-06	0.197684	0.375835	1.456208
3.81	0.2644	-0.00162	3.15E-06	0.197632	0.375738	1.456066
3.81	0.2644	-0.00162	3.15E-06	0.197581	0.375641	1.455924
3.81	0.2644	-0.00162	3.15E-06	0.19753	0.375544	1.455783
3.81	0.2644	-0.00162	3.15E-06	0.197479	0.375447	1.455642
3.81	0.2644	-0.00162	3.15E-06	0.197429	0.375351	1.455502
3.81	0.2644	-0.00162	3.15E-06	0.197378	0.375255	1.455362
3.82	0.2644	-0.00162	3.15E-06	0.197328	0.375159	1.455222
3.82	0.2644	-0.00162	3.15E-06	0.197277	0.375063	1.455083
3.82	0.2644	-0.00162	3.15E-06	0.197227	0.374967	1.454944
3.82	0.2644	-0.00162	3.15E-06	0.197177	0.374872	1.454805
3.82	0.2644	-0.00162	3.15E-06	0.197127	0.374777	1.454667
3.82	0.2644	-0.00162	3.15E-06	0.197077	0.374682	1.454529
3.82	0.2644	-0.00162	3.15E-06	0.197027	0.374588	1.454392
3.82	0.2644	-0.00162	3.15E-06	0.196978	0.374493	1.454254
3.82	0.2644	-0.00162	3.15E-06	0.196928	0.374399	1.454117
3.82	0.2644	-0.00162	3.15E-06	0.196879	0.374305	1.453981
3.82	0.2644	-0.00162	3.15E-06	0.196829	0.374212	1.453845
3.82	0.2644	-0.00162	3.15E-06	0.19678	0.374118	1.453709
3.82	0.2644	-0.00162	3.15E-06	0.196731	0.374025	1.453573
3.83	0.2644	-0.00162	3.15E-06	0.196682	0.373932	1.453438
3.83	0.2644	-0.00162	3.15E-06	0.196633	0.373839	1.453303
3.83	0.2644	-0.00162	3.15E-06	0.196585	0.373746	1.453169
3.83	0.2644	-0.00162	3.15E-06	0.196536	0.373654	1.453035
3.83	0.2644	-0.00162	3.15E-06	0.196488	0.373562	1.452901

3.83	0.2644	-0.00162	3.15E-06	0.196439	0.37347	1.452767
3.83	0.2644	-0.00162	3.15E-06	0.196391	0.373378	1.452634
3.83	0.2644	-0.00162	3.15E-06	0.196343	0.373287	1.452501
3.83	0.2644	-0.00162	3.15E-06	0.196295	0.373196	1.452368
3.83	0.2644	-0.00162	3.15E-06	0.196247	0.373105	1.452236
3.83	0.2644	-0.00162	3.15E-06	0.196199	0.373014	1.452104
3.83	0.2644	-0.00162	3.15E-06	0.196152	0.372923	1.451973
3.84	0.2644	-0.00162	3.15E-06	0.196104	0.372833	1.451841
3.84	0.2644	-0.00162	3.15E-06	0.196057	0.372742	1.45171
3.84	0.2644	-0.00162	3.15E-06	0.196009	0.372652	1.45158
3.84	0.2644	-0.00162	3.15E-06	0.195962	0.372562	1.451449
3.84	0.2644	-0.00162	3.15E-06	0.195915	0.372473	1.451319
3.84	0.2644	-0.00162	3.15E-06	0.195868	0.372383	1.451189
3.84	0.2644	-0.00162	3.15E-06	0.195821	0.372294	1.45106
3.84	0.2644	-0.00162	3.15E-06	0.195774	0.372205	1.450931
3.84	0.2644	-0.00162	3.15E-06	0.195727	0.372116	1.450802
3.84	0.2644	-0.00162	3.15E-06	0.195681	0.372028	1.450673
3.84	0.2644	-0.00162	3.15E-06	0.195634	0.371939	1.450545
3.84	0.2644	-0.00162	3.15E-06	0.195588	0.371851	1.450417
3.84	0.2644	-0.00162	3.15E-06	0.195542	0.371763	1.450289
3.84	0.2644	-0.00162	3.15E-06	0.195495	0.371675	1.450162
3.85	0.2644	-0.00162	3.15E-06	0.195449	0.371588	1.450035
3.85	0.2644	-0.00162	3.15E-06	0.195403	0.3715	1.449908
3.85	0.2644	-0.00162	3.15E-06	0.195357	0.371413	1.449782
3.85	0.2644	-0.00162	3.15E-06	0.195312	0.371326	1.449655
3.85	0.2644	-0.00162	3.15E-06	0.195266	0.371239	1.449529
3.85	0.2644	-0.00162	3.15E-06	0.19522	0.371152	1.449404
3.85	0.2644	-0.00162	3.15E-06	0.195175	0.371066	1.449278
3.85	0.2644	-0.00162	3.15E-06	0.195129	0.370979	1.449153
3.85	0.2644	-0.00162	3.15E-06	0.195084	0.370893	1.449029
3.85	0.2644	-0.00162	3.15E-06	0.195039	0.370807	1.448904
3.85	0.2644	-0.00162	3.15E-06	0.194994	0.370722	1.44878
3.85	0.2644	-0.00162	3.15E-06	0.194949	0.370636	1.448656
3.85	0.2644	-0.00162	3.15E-06	0.194904	0.370551	1.448532
3.86	0.2644	-0.00162	3.15E-06	0.194859	0.370465	1.448409
3.86	0.2644	-0.00162	3.15E-06	0.194814	0.37038	1.448286
3.86	0.2644	-0.00162	3.15E-06	0.19477	0.370296	1.448163
3.86	0.2644	-0.00162	3.15E-06	0.194725	0.370211	1.44804
3.86	0.2644	-0.00162	3.15E-06	0.194681	0.370126	1.447918
3.86	0.2644	-0.00162	3.15E-06	0.194636	0.370042	1.447796
3.86	0.2644	-0.00162	3.15E-06	0.194592	0.369958	1.447674
3.86	0.2644	-0.00162	3.15E-06	0.194548	0.369874	1.447552
3.86	0.2644	-0.00162	3.15E-06	0.194504	0.36979	1.447431
3.86	0.2644	-0.00162	3.15E-06	0.19446	0.369707	1.44731
3.86	0.2644	-0.00162	3.15E-06	0.194416	0.369623	1.447189
3.86	0.2644	-0.00162	3.15E-06	0.194372	0.36954	1.447069
3.86	0.2644	-0.00162	3.15E-06	0.194329	0.369457	1.446949
3.86	0.2644	-0.00162	3.15E-06	0.194285	0.369374	1.446829
3.86	0.2644	-0.00162	3.15E-06	0.194241	0.369291	1.446709
3.87	0.2644	-0.00162	3.15E-06	0.194198	0.369209	1.446589

3.87	0.2644	-0.00162	3.15E-06	0.194155	0.369126	1.44647
3.87	0.2644	-0.00162	3.15E-06	0.194111	0.369044	1.446351
3.87	0.2644	-0.00162	3.15E-06	0.194068	0.368962	1.446232
3.87	0.2644	-0.00162	3.15E-06	0.194025	0.36888	1.446114
3.87	0.2644	-0.00162	3.15E-06	0.193982	0.368798	1.445996
3.87	0.2644	-0.00162	3.15E-06	0.193939	0.368717	1.445878
3.87	0.2644	-0.00162	3.15E-06	0.193896	0.368635	1.44576
3.87	0.2644	-0.00162	3.15E-06	0.193854	0.368554	1.445643
3.87	0.2644	-0.00162	3.15E-06	0.193811	0.368473	1.445526
3.87	0.2644	-0.00162	3.15E-06	0.193768	0.368392	1.445409
3.87	0.2644	-0.00162	3.15E-06	0.193726	0.368311	1.445292
3.87	0.2644	-0.00162	3.15E-06	0.193684	0.368231	1.445175
3.87	0.2644	-0.00162	3.15E-06	0.193641	0.36815	1.445059
3.88	0.2644	-0.00162	3.15E-06	0.193599	0.36807	1.444943
3.88	0.2644	-0.00162	3.15E-06	0.193557	0.36799	1.444827
3.88	0.2644	-0.00162	3.15E-06	0.193515	0.36791	1.444712
3.88	0.2644	-0.00162	3.15E-06	0.193473	0.36783	1.444596
3.88	0.2644	-0.00162	3.15E-06	0.193431	0.36775	1.444481
3.88	0.2644	-0.00162	3.15E-06	0.193389	0.367671	1.444367
3.88	0.2644	-0.00162	3.15E-06	0.193347	0.367592	1.444252
3.88	0.2644	-0.00162	3.15E-06	0.193306	0.367512	1.444138
3.88	0.2644	-0.00162	3.15E-06	0.193264	0.367433	1.444023
3.88	0.2644	-0.00162	3.15E-06	0.193223	0.367354	1.44391
3.88	0.2644	-0.00162	3.15E-06	0.193181	0.367276	1.443796
3.88	0.2644	-0.00162	3.15E-06	0.19314	0.367197	1.443682
3.88	0.2644	-0.00162	3.15E-06	0.193099	0.367119	1.443569
3.88	0.2644	-0.00162	3.15E-06	0.193058	0.36704	1.443456
3.88	0.2644	-0.00162	3.15E-06	0.193016	0.366962	1.443343
3.88	0.2644	-0.00162	3.15E-06	0.192975	0.366884	1.443231
3.89	0.2644	-0.00162	3.15E-06	0.192934	0.366806	1.443119
3.89	0.2644	-0.00162	3.15E-06	0.192894	0.366729	1.443007
3.89	0.2644	-0.00162	3.15E-06	0.192853	0.366651	1.442895
3.89	0.2644	-0.00162	3.15E-06	0.192812	0.366574	1.442783
3.89	0.2644	-0.00162	3.15E-06	0.192771	0.366497	1.442672
3.89	0.2644	-0.00162	3.15E-06	0.192731	0.36642	1.44256
3.89	0.2644	-0.00162	3.15E-06	0.19269	0.366343	1.442449
3.89	0.2644	-0.00162	3.15E-06	0.19265	0.366266	1.442339
3.89	0.2644	-0.00162	3.15E-06	0.19261	0.366189	1.442228
3.89	0.2644	-0.00162	3.15E-06	0.19257	0.366113	1.442118
3.89	0.2644	-0.00162	3.15E-06	0.192529	0.366036	1.442008
3.89	0.2644	-0.00162	3.15E-06	0.192489	0.36596	1.441898
3.89	0.2644	-0.00162	3.15E-06	0.192449	0.365884	1.441788
3.89	0.2644	-0.00162	3.15E-06	0.192409	0.365808	1.441678
3.89	0.2644	-0.00162	3.15E-06	0.192369	0.365732	1.441569
3.89	0.2644	-0.00162	3.15E-06	0.19233	0.365657	1.44146
3.90	0.2644	-0.00162	3.15E-06	0.19229	0.365581	1.441351
3.90	0.2644	-0.00162	3.15E-06	0.19225	0.365506	1.441243
3.90	0.2644	-0.00162	3.15E-06	0.192211	0.36543	1.441134
3.90	0.2644	-0.00162	3.15E-06	0.192171	0.365355	1.441026
3.90	0.2644	-0.00162	3.15E-06	0.192132	0.36528	1.440918

3.90	0.2644	-0.00162	3.15E-06	0.192092	0.365205	1.44081
3.90	0.2644	-0.00162	3.15E-06	0.192053	0.365131	1.440702
3.90	0.2644	-0.00162	3.15E-06	0.192014	0.365056	1.440595
3.90	0.2644	-0.00162	3.15E-06	0.191975	0.364982	1.440488
3.90	0.2644	-0.00162	3.15E-06	0.191936	0.364907	1.440381
3.90	0.2644	-0.00162	3.15E-06	0.191897	0.364833	1.440274
3.90	0.2644	-0.00162	3.15E-06	0.191858	0.364759	1.440167
3.90	0.2644	-0.00162	3.15E-06	0.191819	0.364685	1.440061
3.90	0.2644	-0.00162	3.15E-06	0.19178	0.364611	1.439954
3.90	0.2644	-0.00162	3.15E-06	0.191741	0.364538	1.439848
3.90	0.2644	-0.00162	3.15E-06	0.191703	0.364464	1.439743
3.91	0.2644	-0.00162	3.15E-06	0.191664	0.364391	1.439637
3.91	0.2644	-0.00162	3.15E-06	0.191625	0.364318	1.439531
3.91	0.2644	-0.00162	3.15E-06	0.191587	0.364245	1.439426
3.91	0.2644	-0.00162	3.15E-06	0.191549	0.364172	1.439321
3.91	0.2644	-0.00162	3.15E-06	0.19151	0.364099	1.439216
3.91	0.2644	-0.00162	3.15E-06	0.191472	0.364026	1.439112
3.91	0.2644	-0.00162	3.15E-06	0.191434	0.363953	1.439007
3.91	0.2644	-0.00162	3.15E-06	0.191396	0.363881	1.438903
3.91	0.2644	-0.00162	3.15E-06	0.191358	0.363809	1.438799
3.91	0.2644	-0.00162	3.15E-06	0.19132	0.363736	1.438695
3.91	0.2644	-0.00162	3.15E-06	0.191282	0.363664	1.438591
3.91	0.2644	-0.00162	3.15E-06	0.191244	0.363592	1.438487
3.91	0.2644	-0.00162	3.15E-06	0.191206	0.36352	1.438384
3.91	0.2644	-0.00162	3.15E-06	0.191168	0.363449	1.438281
3.91	0.2644	-0.00162	3.15E-06	0.191131	0.363377	1.438178
3.91	0.2644	-0.00162	3.15E-06	0.191093	0.363306	1.438075
3.91	0.2644	-0.00162	3.15E-06	0.191055	0.363234	1.437973
3.92	0.2644	-0.00162	3.15E-06	0.191018	0.363163	1.43787
3.92	0.2644	-0.00162	3.15E-06	0.190981	0.363092	1.437768
3.92	0.2644	-0.00162	3.15E-06	0.190943	0.363021	1.437666
3.92	0.2644	-0.00162	3.15E-06	0.190906	0.36295	1.437564
3.92	0.2644	-0.00162	3.15E-06	0.190869	0.362879	1.437462
3.92	0.2644	-0.00162	3.15E-06	0.190832	0.362809	1.437361
3.92	0.2644	-0.00162	3.15E-06	0.190795	0.362738	1.437259
3.92	0.2644	-0.00162	3.15E-06	0.190757	0.362668	1.437158
3.92	0.2644	-0.00162	3.15E-06	0.190721	0.362597	1.437057
3.92	0.2644	-0.00162	3.15E-06	0.190684	0.362527	1.436956
3.92	0.2644	-0.00162	3.15E-06	0.190647	0.362457	1.436856
3.92	0.2644	-0.00162	3.15E-06	0.19061	0.362387	1.436755
3.92	0.2644	-0.00162	3.15E-06	0.190573	0.362317	1.436655
3.92	0.2644	-0.00162	3.15E-06	0.190537	0.362248	1.436555
3.92	0.2644	-0.00162	3.15E-06	0.1905	0.362178	1.436455
3.92	0.2644	-0.00162	3.15E-06	0.190463	0.362109	1.436355
3.92	0.2644	-0.00162	3.15E-06	0.190427	0.362039	1.436255
3.92	0.2644	-0.00162	3.15E-06	0.190391	0.36197	1.436156
3.93	0.2644	-0.00162	3.15E-06	0.190354	0.361901	1.436057
3.93	0.2644	-0.00162	3.15E-06	0.190318	0.361832	1.435958
3.93	0.2644	-0.00162	3.15E-06	0.190282	0.361763	1.435859
3.93	0.2644	-0.00162	3.15E-06	0.190246	0.361694	1.43576

3.93	0.2644	-0.00162	3.15E-06	0.190209	0.361626	1.435661
3.93	0.2644	-0.00162	3.15E-06	0.190173	0.361557	1.435563
3.93	0.2644	-0.00162	3.15E-06	0.190137	0.361489	1.435465
3.93	0.2644	-0.00162	3.15E-06	0.190101	0.36142	1.435367
3.93	0.2644	-0.00162	3.15E-06	0.190066	0.361352	1.435269
3.93	0.2644	-0.00162	3.15E-06	0.19003	0.361284	1.435171
3.93	0.2644	-0.00162	3.15E-06	0.189994	0.361216	1.435073
3.93	0.2644	-0.00162	3.15E-06	0.189958	0.361148	1.434976
3.93	0.2644	-0.00162	3.15E-06	0.189923	0.36108	1.434879
3.93	0.2644	-0.00162	3.15E-06	0.189887	0.361013	1.434782
3.93	0.2644	-0.00162	3.15E-06	0.189851	0.360945	1.434685
3.93	0.2644	-0.00162	3.15E-06	0.189816	0.360878	1.434588
3.93	0.2644	-0.00162	3.15E-06	0.189781	0.36081	1.434491
3.93	0.2644	-0.00162	3.15E-06	0.189745	0.360743	1.434395
3.94	0.2644	-0.00162	3.15E-06	0.18971	0.360676	1.434298
3.94	0.2644	-0.00162	3.15E-06	0.189675	0.360609	1.434202
3.94	0.2644	-0.00162	3.15E-06	0.189639	0.360542	1.434106
3.94	0.2644	-0.00162	3.15E-06	0.189604	0.360475	1.434011
3.94	0.2644	-0.00162	3.15E-06	0.189569	0.360408	1.433915
3.94	0.2644	-0.00162	3.15E-06	0.189534	0.360342	1.433819
3.94	0.2644	-0.00162	3.15E-06	0.189499	0.360275	1.433724
3.94	0.2644	-0.00162	3.15E-06	0.189464	0.360209	1.433629
3.94	0.2644	-0.00162	3.15E-06	0.189429	0.360143	1.433534
3.94	0.2644	-0.00162	3.15E-06	0.189395	0.360076	1.433439
3.94	0.2644	-0.00162	3.15E-06	0.18936	0.36001	1.433344
3.94	0.2644	-0.00162	3.15E-06	0.189325	0.359944	1.43325
3.94	0.2644	-0.00162	3.15E-06	0.18929	0.359878	1.433155
3.94	0.2644	-0.00162	3.15E-06	0.189256	0.359813	1.433061
3.94	0.2644	-0.00162	3.15E-06	0.189221	0.359747	1.432967
3.94	0.2644	-0.00162	3.15E-06	0.189187	0.359681	1.432873
3.94	0.2644	-0.00162	3.15E-06	0.189152	0.359616	1.432779
3.94	0.2644	-0.00162	3.15E-06	0.189118	0.359551	1.432685
3.94	0.2644	-0.00162	3.15E-06	0.189084	0.359485	1.432592
3.94	0.2644	-0.00162	3.15E-06	0.189049	0.35942	1.432499
3.95	0.2644	-0.00162	3.15E-06	0.189015	0.359355	1.432405
3.95	0.2644	-0.00162	3.15E-06	0.188981	0.35929	1.432312
3.95	0.2644	-0.00162	3.15E-06	0.188947	0.359225	1.432219
3.95	0.2644	-0.00162	3.15E-06	0.188913	0.35916	1.432127
3.95	0.2644	-0.00162	3.15E-06	0.188879	0.359096	1.432034
3.95	0.2644	-0.00162	3.15E-06	0.188845	0.359031	1.431942
3.95	0.2644	-0.00162	3.15E-06	0.188811	0.358967	1.431849
3.95	0.2644	-0.00162	3.15E-06	0.188777	0.358902	1.431757
3.95	0.2644	-0.00162	3.15E-06	0.188743	0.358838	1.431665
3.95	0.2644	-0.00162	3.15E-06	0.188709	0.358774	1.431573
3.95	0.2644	-0.00162	3.15E-06	0.188676	0.35871	1.431481
3.95	0.2644	-0.00162	3.15E-06	0.188642	0.358646	1.43139
3.95	0.2644	-0.00162	3.15E-06	0.188608	0.358582	1.431298
3.95	0.2644	-0.00162	3.15E-06	0.188575	0.358518	1.431207
3.95	0.2644	-0.00162	3.15E-06	0.188541	0.358454	1.431116
3.95	0.2644	-0.00162	3.15E-06	0.188508	0.358391	1.431025

3.95	0.2644	-0.00162	3.15E-06	0.188475	0.358327	1.430934
3.95	0.2644	-0.00162	3.15E-06	0.188441	0.358264	1.430843
3.95	0.2644	-0.00162	3.15E-06	0.188408	0.358201	1.430752
3.95	0.2644	-0.00162	3.15E-06	0.188375	0.358137	1.430662
3.96	0.2644	-0.00162	3.15E-06	0.188341	0.358074	1.430572
3.96	0.2644	-0.00162	3.15E-06	0.188308	0.358011	1.430482
3.96	0.2644	-0.00162	3.15E-06	0.188275	0.357948	1.430391
3.96	0.2644	-0.00162	3.15E-06	0.188242	0.357885	1.430302
3.96	0.2644	-0.00162	3.15E-06	0.188209	0.357823	1.430212
3.96	0.2644	-0.00162	3.15E-06	0.188176	0.35776	1.430122
3.96	0.2644	-0.00162	3.15E-06	0.188143	0.357697	1.430033
3.96	0.2644	-0.00162	3.15E-06	0.18811	0.357635	1.429943
3.96	0.2644	-0.00162	3.15E-06	0.188077	0.357572	1.429854
3.96	0.2644	-0.00162	3.15E-06	0.188045	0.35751	1.429765
3.96	0.2644	-0.00162	3.15E-06	0.188012	0.357448	1.429676
3.96	0.2644	-0.00162	3.15E-06	0.187979	0.357386	1.429587
3.96	0.2644	-0.00162	3.15E-06	0.187947	0.357324	1.429498
3.96	0.2644	-0.00162	3.15E-06	0.187914	0.357262	1.42941
3.96	0.2644	-0.00162	3.15E-06	0.187881	0.3572	1.429321
3.96	0.2644	-0.00162	3.15E-06	0.187849	0.357138	1.429233
3.96	0.2644	-0.00162	3.15E-06	0.187817	0.357076	1.429145
3.96	0.2644	-0.00162	3.15E-06	0.187784	0.357015	1.429057
3.96	0.2644	-0.00162	3.15E-06	0.187752	0.356953	1.428969
3.96	0.2644	-0.00162	3.15E-06	0.187719	0.356892	1.428881
3.97	0.2644	-0.00162	3.15E-06	0.187687	0.35683	1.428794
3.97	0.2644	-0.00162	3.15E-06	0.187655	0.356769	1.428706
3.97	0.2644	-0.00162	3.15E-06	0.187623	0.356708	1.428619
3.97	0.2644	-0.00162	3.15E-06	0.187591	0.356647	1.428531
3.97	0.2644	-0.00162	3.15E-06	0.187559	0.356586	1.428444
3.97	0.2644	-0.00162	3.15E-06	0.187527	0.356525	1.428357
3.97	0.2644	-0.00162	3.15E-06	0.187495	0.356464	1.428271
3.97	0.2644	-0.00162	3.15E-06	0.187463	0.356404	1.428184
3.97	0.2644	-0.00162	3.15E-06	0.187431	0.356343	1.428097
3.97	0.2644	-0.00162	3.15E-06	0.187399	0.356282	1.428011
3.97	0.2644	-0.00162	3.15E-06	0.187367	0.356222	1.427924
3.97	0.2644	-0.00162	3.15E-06	0.187335	0.356161	1.427838

Location Index	
England and Wales	1
Scotland and Ireland	2

From Design and Analysis of Urban Storm Drainage, The Wallingford Procedure, Vol 1

Table 6.1 Values of Constants to calculate Cr

Geographic Location	Range of M5-D	Location Index	J0	J1	J2
England and Wales	0-10	1	0.1699	0.0028	0.000114
	11-30		0.1644	0.005831	-0.00013
	31-75		0.2644	-0.00162	3.15E-06
	76-150		0.2718	-0.00195	6.19E-06
	>150		0.1454	-0.00019	1.14E-07

Integra Consulting Calculations						Job No	Date
						3301	10.02.2022
						Sheet 01	By JS
Job Title Withington							
Storm Water Flood Model M5-60 = 18.00 r = 0.36 Return, T = 100 Area (m²) = 978 CC Factor = 0.00 Limit (l/s) = 2.0 Totals 29 29							
D (mins)	M5-D (mm)	MT-D (mm)	Rate (mm/hr)	Flow (l/s)	CC Flow (l/s)	Storage (m ³)	CC Storage (m ³)
10.00	9.14	17.27	103.65	27.98	27.98	15.59	15.59
15.00	10.96	21.32	85.28	23.02	23.02	18.92	18.92
20.00	12.31	24.07	72.21	19.49	19.49	20.99	20.99
25.00	13.40	26.40	63.36	17.10	17.10	22.65	22.65
30.00	14.31	28.36	56.72	15.31	15.31	23.96	23.96
35.00	15.10	30.06	51.53	13.91	13.91	25.01	25.01
40.00	15.79	31.56	47.34	12.78	12.78	25.87	25.87
45.00	16.42	32.91	43.88	11.84	11.84	26.58	26.58
50.00	16.99	34.13	40.96	11.06	11.06	27.17	27.17
55.00	17.51	35.26	38.46	10.38	10.38	27.66	27.66
60.00	18.00	36.29	36.29	9.80	9.80	28.07	28.07
65.00	18.45	37.26	34.39	9.28	9.28	28.41	28.41
70.00	18.88	38.16	32.71	8.83	8.83	28.68	28.68
75.00	19.28	39.01	31.21	8.42	8.42	28.90	28.90
80.00	19.66	39.81	29.85	8.06	8.06	29.08	29.08
85.00	20.02	40.56	28.63	7.73	7.73	29.21	29.21
90.00	20.37	41.28	27.52	7.43	7.43	29.31	29.31
95.00	20.70	41.96	26.50	7.15	7.15	29.38	29.38
100.00	21.02	42.61	25.57	6.90	6.90	29.41	29.41
105.00	21.32	43.24	24.71	6.67	6.67	29.41	29.41
110.00	21.61	43.83	23.91	6.45	6.45	29.39	29.39
115.00	21.90	44.40	23.17	6.25	6.25	29.35	29.35
120.00	22.17	44.95	22.48	6.07	6.07	29.28	29.28
125.00	22.43	45.48	21.83	5.89	5.89	29.20	29.20
130.00	22.69	45.99	21.23	5.73	5.73	29.10	29.10
135.00	22.94	46.49	20.66	5.58	5.58	28.97	28.97
140.00	23.18	46.96	20.13	5.43	5.43	28.84	28.84
145.00	23.41	47.42	19.62	5.30	5.30	28.68	28.68
150.00	23.64	47.87	19.15	5.17	5.17	28.52	28.52
155.00	23.86	48.30	18.70	5.05	5.05	28.34	28.34
160.00	24.08	48.72	18.27	4.93	4.93	28.15	28.15
165.00	24.29	49.13	17.87	4.82	4.82	27.94	27.94
170.00	24.50	49.52	17.48	4.72	4.72	27.73	27.73
175.00	24.70	49.91	17.11	4.62	4.62	27.50	27.50
180.00	24.90	50.28	16.76	4.52	4.52	27.26	27.26
185.00	25.09	50.65	16.43	4.43	4.43	27.02	27.02
190.00	25.28	51.00	16.11	4.35	4.35	26.76	26.76
195.00	25.47	51.35	15.80	4.26	4.26	26.50	26.50
200.00	25.65	51.69	15.51	4.19	4.19	26.22	26.22

205.00	25.83	52.01	15.22	4.11	4.11	25.94	25.94
210.00	26.01	52.33	14.95	4.04	4.04	25.66	25.66
215.00	26.18	52.65	14.69	3.97	3.97	25.36	25.36
220.00	26.35	52.95	14.44	3.90	3.90	25.06	25.06
225.00	26.51	53.25	14.20	3.83	3.83	24.75	24.75
230.00	26.68	53.55	13.97	3.77	3.77	24.43	24.43
235.00	26.84	53.83	13.74	3.71	3.71	24.11	24.11
240.00	27.00	54.11	13.53	3.65	3.65	23.78	23.78
245.00	27.15	54.39	13.32	3.60	3.60	23.45	23.45
250.00	27.31	54.66	13.12	3.54	3.54	23.11	23.11
255.00	27.46	54.92	12.92	3.49	3.49	22.77	22.77
260.00	27.61	55.18	12.73	3.44	3.44	22.42	22.42
265.00	27.75	55.43	12.55	3.39	3.39	22.06	22.06
270.00	27.90	55.68	12.37	3.34	3.34	21.70	21.70
275.00	28.04	55.92	12.20	3.29	3.29	21.34	21.34
280.00	28.18	56.16	12.03	3.25	3.25	20.97	20.97
285.00	28.32	56.39	11.87	3.20	3.20	20.60	20.60
290.00	28.45	56.62	11.71	3.16	3.16	20.22	20.22
295.00	28.59	56.84	11.56	3.12	3.12	19.84	19.84
300.00	28.72	57.07	11.41	3.08	3.08	19.45	19.45
305.00	28.85	57.28	11.27	3.04	3.04	19.06	19.06
310.00	28.98	57.50	11.13	3.00	3.00	18.67	18.67
315.00	29.11	57.71	10.99	2.97	2.97	18.27	18.27
320.00	29.24	57.91	10.86	2.93	2.93	17.87	17.87
325.00	29.37	58.11	10.73	2.90	2.90	17.47	17.47
330.00	29.49	58.31	10.60	2.86	2.86	17.06	17.06
335.00	29.61	58.51	10.48	2.83	2.83	16.65	16.65
340.00	29.73	58.70	10.36	2.80	2.80	16.24	16.24
345.00	29.85	58.89	10.24	2.76	2.76	15.82	15.82
350.00	29.97	59.07	10.13	2.73	2.73	15.40	15.40
355.00	30.09	59.26	10.02	2.70	2.70	14.98	14.98
360.00	30.20	59.44	9.91	2.67	2.67	14.56	14.56
365.00	30.32	59.61	9.80	2.65	2.65	14.13	14.13
370.00	30.43	59.79	9.70	2.62	2.62	13.70	13.70
375.00	30.55	59.96	9.59	2.59	2.59	13.27	13.27
380.00	30.66	60.13	9.49	2.56	2.56	12.83	12.83
385.00	30.77	60.29	9.40	2.54	2.54	12.39	12.39
390.00	30.88	60.46	9.30	2.51	2.51	11.95	11.95
395.00	30.98	60.62	9.21	2.49	2.49	11.51	11.51
400.00	31.09	61.00	9.15	2.47	2.47	11.28	11.28
405.00	31.20	61.18	9.06	2.45	2.45	10.85	10.85
410.00	31.30	61.36	8.98	2.42	2.42	10.42	10.42
415.00	31.41	61.53	8.90	2.40	2.40	9.99	9.99
420.00	31.51	61.71	8.82	2.38	2.38	9.56	9.56
425.00	31.61	61.88	8.74	2.36	2.36	9.13	9.13
430.00	31.71	62.05	8.66	2.34	2.34	8.70	8.70
435.00	31.81	62.22	8.58	2.32	2.32	8.26	8.26
440.00	31.91	62.39	8.51	2.30	2.30	7.82	7.82
445.00	32.01	62.55	8.43	2.28	2.28	7.39	7.39
450.00	32.11	62.72	8.36	2.26	2.26	6.95	6.95

455.00	32.21	62.88	8.29	2.24	2.24	6.50	6.50
460.00	32.30	63.04	8.22	2.22	2.22	6.06	6.06
465.00	32.40	63.20	8.16	2.20	2.20	5.62	5.62
470.00	32.49	63.36	8.09	2.18	2.18	5.17	5.17
475.00	32.59	63.52	8.02	2.17	2.17	4.72	4.72
480.00	32.68	63.67	7.96	2.15	2.15	4.27	4.27
485.00	32.77	63.83	7.90	2.13	2.13	3.82	3.82
490.00	32.87	63.98	7.83	2.11	2.11	3.37	3.37
495.00	32.96	64.13	7.77	2.10	2.10	2.92	2.92
500.00	33.05	64.28	7.71	2.08	2.08	2.47	2.47
505.00	33.14	64.43	7.66	2.07	2.07	2.01	2.01
510.00	33.23	64.58	7.60	2.05	2.05	1.56	1.56
515.00	33.32	64.73	7.54	2.04	2.04	1.10	1.10
520.00	33.40	64.87	7.49	2.02	2.02	0.64	0.64
525.00	33.49	65.02	7.43	2.01	2.01	0.18	0.18
530.00	33.58	65.16	7.38	1.99	1.99	-0.28	-0.28
535.00	33.66	65.30	7.32	1.98	1.98	-0.74	-0.74
540.00	33.75	65.45	7.27	1.96	1.96	-1.20	-1.20
545.00	33.83	65.59	7.22	1.95	1.95	-1.67	-1.67
550.00	33.92	65.72	7.17	1.94	1.94	-2.13	-2.13
555.00	34.00	65.86	7.12	1.92	1.92	-2.60	-2.60
560.00	34.08	66.00	7.07	1.91	1.91	-3.07	-3.07
565.00	34.17	66.14	7.02	1.90	1.90	-3.53	-3.53
570.00	34.25	66.27	6.98	1.88	1.88	-4.00	-4.00
575.00	34.33	66.40	6.93	1.87	1.87	-4.47	-4.47
580.00	34.41	66.54	6.88	1.86	1.86	-4.94	-4.94
585.00	34.49	66.67	6.84	1.85	1.85	-5.41	-5.41
590.00	34.57	66.80	6.79	1.83	1.83	-5.89	-5.89
595.00	34.65	66.93	6.75	1.82	1.82	-6.36	-6.36
600.00	34.73	67.06	6.71	1.81	1.81	-6.83	-6.83
605.00	34.81	67.19	6.66	1.80	1.80	-7.31	-7.31
610.00	34.89	67.32	6.62	1.79	1.79	-7.79	-7.79
615.00	34.96	67.44	6.58	1.78	1.78	-8.26	-8.26
620.00	35.04	67.57	6.54	1.77	1.77	-8.74	-8.74
625.00	35.12	67.69	6.50	1.75	1.75	-9.22	-9.22
630.00	35.19	67.82	6.46	1.74	1.74	-9.70	-9.70
635.00	35.27	67.94	6.42	1.73	1.73	-10.18	-10.18
640.00	35.34	68.07	6.38	1.72	1.72	-10.66	-10.66
645.00	35.42	68.19	6.34	1.71	1.71	-11.14	-11.14
650.00	35.49	68.31	6.31	1.70	1.70	-11.62	-11.62
655.00	35.57	68.43	6.27	1.69	1.69	-12.11	-12.11
660.00	35.64	68.55	6.23	1.68	1.68	-12.59	-12.59
665.00	35.71	68.67	6.20	1.67	1.67	-13.07	-13.07
670.00	35.79	68.78	6.16	1.66	1.66	-13.56	-13.56
675.00	35.86	68.90	6.12	1.65	1.65	-14.05	-14.05
680.00	35.93	69.02	6.09	1.64	1.64	-14.53	-14.53
685.00	36.00	69.13	6.06	1.63	1.63	-15.02	-15.02
690.00	36.07	69.25	6.02	1.63	1.63	-15.51	-15.51
695.00	36.14	69.36	5.99	1.62	1.62	-16.00	-16.00
700.00	36.21	69.48	5.96	1.61	1.61	-16.49	-16.49

705.00	36.28	69.59	5.92	1.60	1.60	-16.98	-16.98
710.00	36.35	69.70	5.89	1.59	1.59	-17.47	-17.47
715.00	36.42	69.82	5.86	1.58	1.58	-17.96	-17.96
720.00	36.49	69.93	5.83	1.57	1.57	-18.45	-18.45
725.00	36.56	70.04	5.80	1.56	1.56	-18.94	-18.94
730.00	36.63	70.15	5.77	1.56	1.56	-19.43	-19.43
735.00	36.70	70.26	5.74	1.55	1.55	-19.93	-19.93
740.00	36.76	70.37	5.71	1.54	1.54	-20.42	-20.42
745.00	36.83	70.47	5.68	1.53	1.53	-20.92	-20.92
750.00	36.90	70.58	5.65	1.52	1.52	-21.41	-21.41
755.00	36.96	70.69	5.62	1.52	1.52	-21.91	-21.91
760.00	37.03	70.79	5.59	1.51	1.51	-22.41	-22.41
765.00	37.10	70.90	5.56	1.50	1.50	-22.90	-22.90
770.00	37.16	71.01	5.53	1.49	1.49	-23.40	-23.40
775.00	37.23	71.11	5.51	1.49	1.49	-23.90	-23.90
780.00	37.29	71.21	5.48	1.48	1.48	-24.40	-24.40
785.00	37.36	71.32	5.45	1.47	1.47	-24.90	-24.90
790.00	37.42	71.42	5.42	1.46	1.46	-25.40	-25.40
795.00	37.48	71.52	5.40	1.46	1.46	-25.90	-25.90
800.00	37.55	71.62	5.37	1.45	1.45	-26.40	-26.40
805.00	37.61	71.73	5.35	1.44	1.44	-26.90	-26.90
810.00	37.68	71.83	5.32	1.44	1.44	-27.40	-27.40
815.00	37.74	71.93	5.30	1.43	1.43	-27.91	-27.91
820.00	37.80	72.03	5.27	1.42	1.42	-28.41	-28.41
825.00	37.86	72.13	5.25	1.42	1.42	-28.91	-28.91
830.00	37.92	72.22	5.22	1.41	1.41	-29.42	-29.42
835.00	37.99	72.32	5.20	1.40	1.40	-29.92	-29.92
840.00	38.05	72.42	5.17	1.40	1.40	-30.43	-30.43
845.00	38.11	72.52	5.15	1.39	1.39	-30.93	-30.93
850.00	38.17	72.61	5.13	1.38	1.38	-31.44	-31.44
855.00	38.23	72.71	5.10	1.38	1.38	-31.94	-31.94
860.00	38.29	72.81	5.08	1.37	1.37	-32.45	-32.45
865.00	38.35	72.90	5.06	1.36	1.36	-32.96	-32.96
870.00	38.41	73.00	5.03	1.36	1.36	-33.47	-33.47
875.00	38.47	73.09	5.01	1.35	1.35	-33.97	-33.97
880.00	38.53	73.19	4.99	1.35	1.35	-34.48	-34.48
885.00	38.59	73.28	4.97	1.34	1.34	-34.99	-34.99
890.00	38.65	73.37	4.95	1.34	1.34	-35.50	-35.50
895.00	38.71	73.47	4.93	1.33	1.33	-36.01	-36.01
900.00	38.76	73.56	4.90	1.32	1.32	-36.52	-36.52
905.00	38.82	73.65	4.88	1.32	1.32	-37.03	-37.03
910.00	38.88	73.74	4.86	1.31	1.31	-37.54	-37.54
915.00	38.94	73.83	4.84	1.31	1.31	-38.05	-38.05
920.00	38.99	73.92	4.82	1.30	1.30	-38.57	-38.57
925.00	39.05	74.01	4.80	1.30	1.30	-39.08	-39.08
930.00	39.11	74.10	4.78	1.29	1.29	-39.59	-39.59
935.00	39.17	74.19	4.76	1.29	1.29	-40.10	-40.10
940.00	39.22	74.28	4.74	1.28	1.28	-40.62	-40.62
945.00	39.28	74.37	4.72	1.27	1.27	-41.13	-41.13
950.00	39.33	74.46	4.70	1.27	1.27	-41.65	-41.65

955.00	39.39	74.55	4.68	1.26	1.26	-42.16	-42.16
960.00	39.45	74.63	4.66	1.26	1.26	-42.67	-42.67
965.00	39.50	74.72	4.65	1.25	1.25	-43.19	-43.19
970.00	39.56	74.81	4.63	1.25	1.25	-43.71	-43.71
975.00	39.61	74.89	4.61	1.24	1.24	-44.22	-44.22
980.00	39.67	74.98	4.59	1.24	1.24	-44.74	-44.74
985.00	39.72	75.07	4.57	1.23	1.23	-45.25	-45.25
990.00	39.77	75.15	4.55	1.23	1.23	-45.77	-45.77
995.00	39.83	75.24	4.54	1.22	1.22	-46.29	-46.29
1000.00	39.88	75.32	4.52	1.22	1.22	-46.81	-46.81
1005.00	39.94	75.41	4.50	1.22	1.22	-47.33	-47.33
1010.00	39.99	75.49	4.48	1.21	1.21	-47.84	-47.84
1015.00	40.04	75.57	4.47	1.21	1.21	-48.36	-48.36
1020.00	40.10	75.66	4.45	1.20	1.20	-48.88	-48.88
1025.00	40.15	75.74	4.43	1.20	1.20	-49.40	-49.40
1030.00	40.20	75.82	4.42	1.19	1.19	-49.92	-49.92
1035.00	40.25	75.90	4.40	1.19	1.19	-50.44	-50.44
1040.00	40.31	75.99	4.38	1.18	1.18	-50.96	-50.96
1045.00	40.36	76.07	4.37	1.18	1.18	-51.48	-51.48
1050.00	40.41	76.15	4.35	1.17	1.17	-52.00	-52.00
1055.00	40.46	76.23	4.34	1.17	1.17	-52.52	-52.52
1060.00	40.51	76.31	4.32	1.17	1.17	-53.05	-53.05
1065.00	40.57	76.39	4.30	1.16	1.16	-53.57	-53.57
1070.00	40.62	76.47	4.29	1.16	1.16	-54.09	-54.09
1075.00	40.67	76.55	4.27	1.15	1.15	-54.61	-54.61
1080.00	40.72	76.63	4.26	1.15	1.15	-55.14	-55.14
1085.00	40.77	76.71	4.24	1.15	1.15	-55.66	-55.66
1090.00	40.82	76.79	4.23	1.14	1.14	-56.18	-56.18
1095.00	40.87	76.87	4.21	1.14	1.14	-56.71	-56.71
1100.00	40.92	76.94	4.20	1.13	1.13	-57.23	-57.23
1105.00	40.97	77.02	4.18	1.13	1.13	-57.76	-57.76
1110.00	41.02	77.10	4.17	1.12	1.12	-58.28	-58.28
1115.00	41.07	77.18	4.15	1.12	1.12	-58.80	-58.80
1120.00	41.12	77.25	4.14	1.12	1.12	-59.33	-59.33
1125.00	41.17	77.33	4.12	1.11	1.11	-59.86	-59.86
1130.00	41.22	77.41	4.11	1.11	1.11	-60.38	-60.38
1135.00	41.27	77.48	4.10	1.11	1.11	-60.91	-60.91
1140.00	41.32	77.56	4.08	1.10	1.10	-61.43	-61.43
1145.00	41.37	77.63	4.07	1.10	1.10	-61.96	-61.96
1150.00	41.42	77.71	4.05	1.09	1.09	-62.49	-62.49
1155.00	41.46	77.78	4.04	1.09	1.09	-63.01	-63.01
1160.00	41.51	77.86	4.03	1.09	1.09	-63.54	-63.54
1165.00	41.56	77.93	4.01	1.08	1.08	-64.07	-64.07
1170.00	41.61	78.01	4.00	1.08	1.08	-64.60	-64.60
1175.00	41.66	78.08	3.99	1.08	1.08	-65.13	-65.13
1180.00	41.70	78.15	3.97	1.07	1.07	-65.65	-65.65
1185.00	41.75	78.23	3.96	1.07	1.07	-66.18	-66.18
1190.00	41.80	78.30	3.95	1.07	1.07	-66.71	-66.71
1195.00	41.85	78.37	3.94	1.06	1.06	-67.24	-67.24
1200.00	41.89	78.45	3.92	1.06	1.06	-67.77	-67.77

1205.00	41.94	78.52	3.91	1.06	1.06	-68.30	-68.30
1210.00	41.99	78.59	3.90	1.05	1.05	-68.83	-68.83
1215.00	42.03	78.66	3.88	1.05	1.05	-69.36	-69.36
1220.00	42.08	78.73	3.87	1.05	1.05	-69.89	-69.89
1225.00	42.13	78.81	3.86	1.04	1.04	-70.42	-70.42
1230.00	42.17	78.88	3.85	1.04	1.04	-70.95	-70.95
1235.00	42.22	78.95	3.84	1.04	1.04	-71.48	-71.48
1240.00	42.26	79.02	3.82	1.03	1.03	-72.01	-72.01
1245.00	42.31	79.09	3.81	1.03	1.03	-72.55	-72.55
1250.00	42.36	79.16	3.80	1.03	1.03	-73.08	-73.08
1255.00	42.40	79.23	3.79	1.02	1.02	-73.61	-73.61
1260.00	42.45	79.30	3.78	1.02	1.02	-74.14	-74.14
1265.00	42.49	79.37	3.76	1.02	1.02	-74.67	-74.67
1270.00	42.54	79.44	3.75	1.01	1.01	-75.21	-75.21
1275.00	42.58	79.51	3.74	1.01	1.01	-75.74	-75.74
1280.00	42.63	79.58	3.73	1.01	1.01	-76.27	-76.27
1285.00	42.67	79.64	3.72	1.00	1.00	-76.81	-76.81
1290.00	42.72	79.71	3.71	1.00	1.00	-77.34	-77.34
1295.00	42.76	79.78	3.70	1.00	1.00	-77.87	-77.87
1300.00	42.81	79.85	3.69	0.99	0.99	-78.41	-78.41
1305.00	42.85	79.92	3.67	0.99	0.99	-78.94	-78.94
1310.00	42.89	79.98	3.66	0.99	0.99	-79.48	-79.48
1315.00	42.94	80.05	3.65	0.99	0.99	-80.01	-80.01
1320.00	42.98	80.12	3.64	0.98	0.98	-80.55	-80.55
1325.00	43.03	80.19	3.63	0.98	0.98	-81.08	-81.08
1330.00	43.07	80.25	3.62	0.98	0.98	-81.62	-81.62
1335.00	43.11	80.32	3.61	0.97	0.97	-82.15	-82.15
1340.00	43.16	80.39	3.60	0.97	0.97	-82.69	-82.69
1345.00	43.20	80.45	3.59	0.97	0.97	-83.22	-83.22
1350.00	43.24	80.52	3.58	0.97	0.97	-83.76	-83.76
1355.00	43.29	80.58	3.57	0.96	0.96	-84.29	-84.29
1360.00	43.33	80.65	3.56	0.96	0.96	-84.83	-84.83
1365.00	43.37	80.71	3.55	0.96	0.96	-85.37	-85.37
1370.00	43.41	80.78	3.54	0.95	0.95	-85.90	-85.90
1375.00	43.46	80.84	3.53	0.95	0.95	-86.44	-86.44
1380.00	43.50	80.91	3.52	0.95	0.95	-86.98	-86.98
1385.00	43.54	80.97	3.51	0.95	0.95	-87.52	-87.52
1390.00	43.58	81.04	3.50	0.94	0.94	-88.05	-88.05
1395.00	43.63	81.10	3.49	0.94	0.94	-88.59	-88.59
1400.00	43.67	81.16	3.48	0.94	0.94	-89.13	-89.13
1405.00	43.71	81.23	3.47	0.94	0.94	-89.67	-89.67
1410.00	43.75	81.29	3.46	0.93	0.93	-90.21	-90.21
1415.00	43.79	81.35	3.45	0.93	0.93	-90.74	-90.74
1420.00	43.84	81.42	3.44	0.93	0.93	-91.28	-91.28
1425.00	43.88	81.48	3.43	0.93	0.93	-91.82	-91.82
1430.00	43.92	81.54	3.42	0.92	0.92	-92.36	-92.36
1435.00	43.96	81.61	3.41	0.92	0.92	-92.90	-92.90
1440.00	44.00	81.67	3.40	0.92	0.92	-93.44	-93.44
1445.00	44.04	81.73	3.39	0.92	0.92	-93.98	-93.98
1450.00	44.08	81.79	3.38	0.91	0.91	-94.52	-94.52

1455.00	44.12	81.85	3.38	0.91	0.91	-95.06	-95.06
1460.00	44.16	81.92	3.37	0.91	0.91	-95.60	-95.60
1465.00	44.20	81.98	3.36	0.91	0.91	-96.14	-96.14
1470.00	44.25	82.04	3.35	0.90	0.90	-96.68	-96.68
1475.00	44.29	82.10	3.34	0.90	0.90	-97.22	-97.22
1480.00	44.33	82.16	3.33	0.90	0.90	-97.76	-97.76
1485.00	44.37	82.22	3.32	0.90	0.90	-98.30	-98.30
1490.00	44.41	82.28	3.31	0.89	0.89	-98.84	-98.84
1495.00	44.45	82.34	3.30	0.89	0.89	-99.38	-99.38
1500.00	44.49	82.40	3.30	0.89	0.89	-99.93	-99.93
1505.00	44.53	82.46	3.29	0.89	0.89	-100.47	-100.47
1510.00	44.57	82.52	3.28	0.89	0.89	-101.01	-101.01
1515.00	44.61	82.58	3.27	0.88	0.88	-101.55	-101.55
1520.00	44.65	82.64	3.26	0.88	0.88	-102.09	-102.09
1525.00	44.68	82.70	3.25	0.88	0.88	-102.63	-102.63
1530.00	44.72	82.76	3.25	0.88	0.88	-103.18	-103.18
1535.00	44.76	82.82	3.24	0.87	0.87	-103.72	-103.72
1540.00	44.80	82.88	3.23	0.87	0.87	-104.26	-104.26
1545.00	44.84	82.94	3.22	0.87	0.87	-104.81	-104.81
1550.00	44.88	83.00	3.21	0.87	0.87	-105.35	-105.35
1555.00	44.92	83.06	3.20	0.87	0.87	-105.89	-105.89
1560.00	44.96	83.11	3.20	0.86	0.86	-106.43	-106.43
1565.00	45.00	83.17	3.19	0.86	0.86	-106.98	-106.98
1570.00	45.04	83.23	3.18	0.86	0.86	-107.52	-107.52
1575.00	45.07	83.29	3.17	0.86	0.86	-108.07	-108.07
1580.00	45.11	83.35	3.17	0.85	0.85	-108.61	-108.61
1585.00	45.15	83.40	3.16	0.85	0.85	-109.15	-109.15
1590.00	45.19	83.46	3.15	0.85	0.85	-109.70	-109.70
1595.00	45.23	83.52	3.14	0.85	0.85	-110.24	-110.24
1600.00	45.27	83.57	3.13	0.85	0.85	-110.79	-110.79
1605.00	45.30	83.63	3.13	0.84	0.84	-111.33	-111.33
1610.00	45.34	83.69	3.12	0.84	0.84	-111.88	-111.88
1615.00	45.38	83.75	3.11	0.84	0.84	-112.42	-112.42
1620.00	45.42	83.80	3.10	0.84	0.84	-112.97	-112.97
1625.00	45.45	83.86	3.10	0.84	0.84	-113.51	-113.51
1630.00	45.49	83.91	3.09	0.83	0.83	-114.06	-114.06
1635.00	45.53	83.97	3.08	0.83	0.83	-114.60	-114.60
1640.00	45.57	84.03	3.07	0.83	0.83	-115.15	-115.15
1645.00	45.60	84.08	3.07	0.83	0.83	-115.69	-115.69
1650.00	45.64	84.14	3.06	0.83	0.83	-116.24	-116.24
1655.00	45.68	84.19	3.05	0.82	0.82	-116.79	-116.79
1660.00	45.72	84.25	3.05	0.82	0.82	-117.33	-117.33
1665.00	45.75	84.30	3.04	0.82	0.82	-117.88	-117.88
1670.00	45.79	84.36	3.03	0.82	0.82	-118.42	-118.42
1675.00	45.83	84.41	3.02	0.82	0.82	-118.97	-118.97
1680.00	45.86	84.47	3.02	0.81	0.81	-119.52	-119.52
1685.00	45.90	84.52	3.01	0.81	0.81	-120.07	-120.07
1690.00	45.94	84.58	3.00	0.81	0.81	-120.61	-120.61
1695.00	45.97	84.63	3.00	0.81	0.81	-121.16	-121.16
1700.00	46.01	84.69	2.99	0.81	0.81	-121.71	-121.71

1705.00	46.05	84.74	2.98	0.80	0.80	-122.25	-122.25
1710.00	46.08	84.79	2.98	0.80	0.80	-122.80	-122.80
1715.00	46.12	84.85	2.97	0.80	0.80	-123.35	-123.35
1720.00	46.15	84.90	2.96	0.80	0.80	-123.90	-123.90
1725.00	46.19	84.96	2.95	0.80	0.80	-124.44	-124.44
1730.00	46.23	85.01	2.95	0.80	0.80	-124.99	-124.99
1735.00	46.26	85.06	2.94	0.79	0.79	-125.54	-125.54
1740.00	46.30	85.12	2.94	0.79	0.79	-126.09	-126.09
1745.00	46.33	85.17	2.93	0.79	0.79	-126.64	-126.64
1750.00	46.37	85.22	2.92	0.79	0.79	-127.19	-127.19
1755.00	46.40	85.28	2.92	0.79	0.79	-127.73	-127.73
1760.00	46.44	85.33	2.91	0.79	0.79	-128.28	-128.28
1765.00	46.47	85.38	2.90	0.78	0.78	-128.83	-128.83
1770.00	46.51	85.43	2.90	0.78	0.78	-129.38	-129.38
1775.00	46.55	85.49	2.89	0.78	0.78	-129.93	-129.93
1780.00	46.58	85.54	2.88	0.78	0.78	-130.48	-130.48
1785.00	46.62	85.59	2.88	0.78	0.78	-131.03	-131.03
1790.00	46.65	85.64	2.87	0.77	0.77	-131.58	-131.58
1795.00	46.69	85.69	2.86	0.77	0.77	-132.13	-132.13
1800.00	46.72	85.75	2.86	0.77	0.77	-132.68	-132.68
1805.00	46.76	85.80	2.85	0.77	0.77	-133.23	-133.23
1810.00	46.79	85.85	2.85	0.77	0.77	-133.78	-133.78
1815.00	46.83	85.90	2.84	0.77	0.77	-134.33	-134.33
1820.00	46.86	85.95	2.83	0.76	0.76	-134.88	-134.88
1825.00	46.89	86.00	2.83	0.76	0.76	-135.43	-135.43
1830.00	46.93	86.05	2.82	0.76	0.76	-135.98	-135.98
1835.00	46.96	86.10	2.82	0.76	0.76	-136.53	-136.53
1840.00	47.00	86.15	2.81	0.76	0.76	-137.08	-137.08
1845.00	47.03	86.21	2.80	0.76	0.76	-137.63	-137.63
1850.00	47.07	86.26	2.80	0.76	0.76	-138.18	-138.18
1855.00	47.10	86.31	2.79	0.75	0.75	-138.73	-138.73
1860.00	47.13	86.36	2.79	0.75	0.75	-139.28	-139.28
1865.00	47.17	86.41	2.78	0.75	0.75	-139.83	-139.83
1870.00	47.20	86.46	2.77	0.75	0.75	-140.39	-140.39
1875.00	47.24	86.51	2.77	0.75	0.75	-140.94	-140.94
1880.00	47.27	86.56	2.76	0.75	0.75	-141.49	-141.49
1885.00	47.30	86.61	2.76	0.74	0.74	-142.04	-142.04
1890.00	47.34	86.66	2.75	0.74	0.74	-142.59	-142.59
1895.00	47.37	86.71	2.75	0.74	0.74	-143.14	-143.14
1900.00	47.40	86.76	2.74	0.74	0.74	-143.70	-143.70
1905.00	47.44	86.80	2.73	0.74	0.74	-144.25	-144.25
1910.00	47.47	86.85	2.73	0.74	0.74	-144.80	-144.80
1915.00	47.50	86.90	2.72	0.73	0.73	-145.35	-145.35
1920.00	47.54	86.95	2.72	0.73	0.73	-145.91	-145.91
1925.00	47.57	87.00	2.71	0.73	0.73	-146.46	-146.46
1930.00	47.60	87.05	2.71	0.73	0.73	-147.01	-147.01
1935.00	47.64	87.10	2.70	0.73	0.73	-147.56	-147.56
1940.00	47.67	87.15	2.70	0.73	0.73	-148.12	-148.12
1945.00	47.70	87.20	2.69	0.73	0.73	-148.67	-148.67
1950.00	47.74	87.24	2.68	0.72	0.72	-149.22	-149.22

1955.00	47.77	87.29	2.68	0.72	0.72	-149.78	-149.78
1960.00	47.80	87.34	2.67	0.72	0.72	-150.33	-150.33
1965.00	47.83	87.39	2.67	0.72	0.72	-150.88	-150.88
1970.00	47.87	87.44	2.66	0.72	0.72	-151.43	-151.43
1975.00	47.90	87.48	2.66	0.72	0.72	-151.99	-151.99
1980.00	47.93	87.53	2.65	0.72	0.72	-152.54	-152.54
1985.00	47.96	87.58	2.65	0.71	0.71	-153.10	-153.10
1990.00	48.00	87.63	2.64	0.71	0.71	-153.65	-153.65
1995.00	48.03	87.67	2.64	0.71	0.71	-154.20	-154.20
2000.00	48.06	87.72	2.63	0.71	0.71	-154.76	-154.76
2005.00	48.09	87.77	2.63	0.71	0.71	-155.31	-155.31
2010.00	48.13	87.82	2.62	0.71	0.71	-155.87	-155.87
2015.00	48.16	87.86	2.62	0.71	0.71	-156.42	-156.42
2020.00	48.19	87.91	2.61	0.70	0.70	-156.97	-156.97
2025.00	48.22	87.96	2.61	0.70	0.70	-157.53	-157.53
2030.00	48.25	88.00	2.60	0.70	0.70	-158.08	-158.08
2035.00	48.29	88.05	2.60	0.70	0.70	-158.64	-158.64
2040.00	48.32	88.10	2.59	0.70	0.70	-159.19	-159.19
2045.00	48.35	88.14	2.59	0.70	0.70	-159.75	-159.75
2050.00	48.38	88.19	2.58	0.70	0.70	-160.30	-160.30
2055.00	48.41	88.24	2.58	0.70	0.70	-160.86	-160.86
2060.00	48.44	88.28	2.57	0.69	0.69	-161.41	-161.41
2065.00	48.48	88.33	2.57	0.69	0.69	-161.97	-161.97
2070.00	48.51	88.37	2.56	0.69	0.69	-162.52	-162.52
2075.00	48.54	88.42	2.56	0.69	0.69	-163.08	-163.08
2080.00	48.57	88.47	2.55	0.69	0.69	-163.63	-163.63
2085.00	48.60	88.51	2.55	0.69	0.69	-164.19	-164.19
2090.00	48.63	88.56	2.54	0.69	0.69	-164.75	-164.75
2095.00	48.66	88.60	2.54	0.68	0.68	-165.30	-165.30
2100.00	48.70	88.65	2.53	0.68	0.68	-165.86	-165.86
2105.00	48.73	88.69	2.53	0.68	0.68	-166.41	-166.41
2110.00	48.76	88.74	2.52	0.68	0.68	-166.97	-166.97
2115.00	48.79	88.78	2.52	0.68	0.68	-167.53	-167.53
2120.00	48.82	88.83	2.51	0.68	0.68	-168.08	-168.08
2125.00	48.85	88.87	2.51	0.68	0.68	-168.64	-168.64
2130.00	48.88	88.92	2.50	0.68	0.68	-169.19	-169.19
2135.00	48.91	88.96	2.50	0.67	0.67	-169.75	-169.75
2140.00	48.94	89.01	2.50	0.67	0.67	-170.31	-170.31
2145.00	48.97	89.05	2.49	0.67	0.67	-170.86	-170.86
2150.00	49.00	89.10	2.49	0.67	0.67	-171.42	-171.42
2155.00	49.03	89.14	2.48	0.67	0.67	-171.98	-171.98
2160.00	49.06	89.19	2.48	0.67	0.67	-172.53	-172.53
2165.00	49.10	89.23	2.47	0.67	0.67	-173.09	-173.09
2170.00	49.13	89.27	2.47	0.67	0.67	-173.65	-173.65
2175.00	49.16	89.32	2.46	0.67	0.67	-174.21	-174.21
2180.00	49.19	89.36	2.46	0.66	0.66	-174.76	-174.76
2185.00	49.22	89.41	2.46	0.66	0.66	-175.32	-175.32
2190.00	49.25	89.45	2.45	0.66	0.66	-175.88	-175.88
2195.00	49.28	89.49	2.45	0.66	0.66	-176.43	-176.43
2200.00	49.31	89.54	2.44	0.66	0.66	-176.99	-176.99

2205.00	49.34	89.58	2.44	0.66	0.66	-177.55	-177.55
2210.00	49.37	89.63	2.43	0.66	0.66	-178.11	-178.11
2215.00	49.40	89.67	2.43	0.66	0.66	-178.67	-178.67
2220.00	49.43	89.71	2.42	0.65	0.65	-179.22	-179.22
2225.00	49.46	89.76	2.42	0.65	0.65	-179.78	-179.78
2230.00	49.49	89.80	2.42	0.65	0.65	-180.34	-180.34
2235.00	49.52	89.84	2.41	0.65	0.65	-180.90	-180.90
2240.00	49.55	89.88	2.41	0.65	0.65	-181.46	-181.46
2245.00	49.58	89.93	2.40	0.65	0.65	-182.01	-182.01
2250.00	49.61	89.97	2.40	0.65	0.65	-182.57	-182.57
2255.00	49.63	90.01	2.40	0.65	0.65	-183.13	-183.13
2260.00	49.66	90.06	2.39	0.65	0.65	-183.69	-183.69
2265.00	49.69	90.10	2.39	0.64	0.64	-184.25	-184.25
2270.00	49.72	90.14	2.38	0.64	0.64	-184.81	-184.81
2275.00	49.75	90.18	2.38	0.64	0.64	-185.36	-185.36
2280.00	49.78	90.23	2.37	0.64	0.64	-185.92	-185.92
2285.00	49.81	90.27	2.37	0.64	0.64	-186.48	-186.48
2290.00	49.84	90.31	2.37	0.64	0.64	-187.04	-187.04
2295.00	49.87	90.35	2.36	0.64	0.64	-187.60	-187.60
2300.00	49.90	90.40	2.36	0.64	0.64	-188.16	-188.16
2305.00	49.93	90.44	2.35	0.64	0.64	-188.72	-188.72
2310.00	49.96	90.48	2.35	0.63	0.63	-189.28	-189.28
2315.00	49.99	90.52	2.35	0.63	0.63	-189.84	-189.84
2320.00	50.01	90.56	2.34	0.63	0.63	-190.40	-190.40
2325.00	50.04	90.60	2.34	0.63	0.63	-190.96	-190.96
2330.00	50.07	90.65	2.33	0.63	0.63	-191.52	-191.52
2335.00	50.10	90.69	2.33	0.63	0.63	-192.08	-192.08
2340.00	50.13	90.73	2.33	0.63	0.63	-192.63	-192.63
2345.00	50.16	90.77	2.32	0.63	0.63	-193.19	-193.19
2350.00	50.19	90.81	2.32	0.63	0.63	-193.75	-193.75
2355.00	50.22	90.85	2.31	0.62	0.62	-194.31	-194.31
2360.00	50.24	90.89	2.31	0.62	0.62	-194.87	-194.87
2365.00	50.27	90.94	2.31	0.62	0.62	-195.43	-195.43
2370.00	50.30	90.98	2.30	0.62	0.62	-195.99	-195.99
2375.00	50.33	91.02	2.30	0.62	0.62	-196.55	-196.55
2380.00	50.36	91.06	2.30	0.62	0.62	-197.12	-197.12
2385.00	50.39	91.10	2.29	0.62	0.62	-197.68	-197.68
2390.00	50.41	91.14	2.29	0.62	0.62	-198.24	-198.24
2395.00	50.44	91.18	2.28	0.62	0.62	-198.80	-198.80
2400.00	50.47	91.22	2.28	0.62	0.62	-199.36	-199.36
2405.00	50.50	91.26	2.28	0.61	0.61	-199.92	-199.92
2410.00	50.53	91.30	2.27	0.61	0.61	-200.48	-200.48
2415.00	50.56	91.34	2.27	0.61	0.61	-201.04	-201.04
2420.00	50.58	91.38	2.27	0.61	0.61	-201.60	-201.60
2425.00	50.61	91.42	2.26	0.61	0.61	-202.16	-202.16
2430.00	50.64	91.46	2.26	0.61	0.61	-202.72	-202.72
2435.00	50.67	91.50	2.25	0.61	0.61	-203.28	-203.28
2440.00	50.70	91.54	2.25	0.61	0.61	-203.84	-203.84
2445.00	50.72	91.58	2.25	0.61	0.61	-204.40	-204.40
2450.00	50.75	91.62	2.24	0.61	0.61	-204.97	-204.97

2455.00	50.78	91.66	2.24	0.60	0.60	-205.53	-205.53
2460.00	50.81	91.70	2.24	0.60	0.60	-206.09	-206.09
2465.00	50.83	91.74	2.23	0.60	0.60	-206.65	-206.65
2470.00	50.86	91.78	2.23	0.60	0.60	-207.21	-207.21
2475.00	50.89	91.82	2.23	0.60	0.60	-207.77	-207.77
2480.00	50.92	91.86	2.22	0.60	0.60	-208.33	-208.33
2485.00	50.94	91.90	2.22	0.60	0.60	-208.90	-208.90
2490.00	50.97	91.94	2.22	0.60	0.60	-209.46	-209.46
2495.00	51.00	91.98	2.21	0.60	0.60	-210.02	-210.02
2500.00	51.03	92.02	2.21	0.60	0.60	-210.58	-210.58
2505.00	51.05	92.06	2.20	0.60	0.60	-211.14	-211.14
2510.00	51.08	92.10	2.20	0.59	0.59	-211.71	-211.71
2515.00	51.11	92.14	2.20	0.59	0.59	-212.27	-212.27
2520.00	51.14	92.17	2.19	0.59	0.59	-212.83	-212.83
2525.00	51.16	92.21	2.19	0.59	0.59	-213.39	-213.39
2530.00	51.19	92.25	2.19	0.59	0.59	-213.95	-213.95
2535.00	51.22	92.29	2.18	0.59	0.59	-214.52	-214.52
2540.00	51.24	92.33	2.18	0.59	0.59	-215.08	-215.08
2545.00	51.27	92.37	2.18	0.59	0.59	-215.64	-215.64
2550.00	51.30	92.41	2.17	0.59	0.59	-216.20	-216.20
2555.00	51.33	92.45	2.17	0.59	0.59	-216.77	-216.77
2560.00	51.35	92.48	2.17	0.59	0.59	-217.33	-217.33
2565.00	51.38	92.52	2.16	0.58	0.58	-217.89	-217.89
2570.00	51.41	92.56	2.16	0.58	0.58	-218.46	-218.46
2575.00	51.43	92.60	2.16	0.58	0.58	-219.02	-219.02
2580.00	51.46	92.64	2.15	0.58	0.58	-219.58	-219.58
2585.00	51.49	92.68	2.15	0.58	0.58	-220.14	-220.14
2590.00	51.51	92.71	2.15	0.58	0.58	-220.71	-220.71
2595.00	51.54	92.75	2.14	0.58	0.58	-221.27	-221.27
2600.00	51.57	92.79	2.14	0.58	0.58	-221.83	-221.83
2605.00	51.59	92.83	2.14	0.58	0.58	-222.40	-222.40
2610.00	51.62	92.86	2.13	0.58	0.58	-222.96	-222.96
2615.00	51.65	92.90	2.13	0.58	0.58	-223.52	-223.52
2620.00	51.67	92.94	2.13	0.57	0.57	-224.09	-224.09
2625.00	51.70	92.98	2.13	0.57	0.57	-224.65	-224.65
2630.00	51.73	93.02	2.12	0.57	0.57	-225.21	-225.21
2635.00	51.75	93.05	2.12	0.57	0.57	-225.78	-225.78
2640.00	51.78	93.09	2.12	0.57	0.57	-226.34	-226.34
2645.00	51.80	93.13	2.11	0.57	0.57	-226.90	-226.90
2650.00	51.83	93.17	2.11	0.57	0.57	-227.47	-227.47
2655.00	51.86	93.20	2.11	0.57	0.57	-228.03	-228.03
2660.00	51.88	93.24	2.10	0.57	0.57	-228.60	-228.60
2665.00	51.91	93.28	2.10	0.57	0.57	-229.16	-229.16
2670.00	51.94	93.31	2.10	0.57	0.57	-229.72	-229.72
2675.00	51.96	93.35	2.09	0.57	0.57	-230.29	-230.29
2680.00	51.99	93.39	2.09	0.56	0.56	-230.85	-230.85
2685.00	52.01	93.43	2.09	0.56	0.56	-231.42	-231.42
2690.00	52.04	93.46	2.08	0.56	0.56	-231.98	-231.98
2695.00	52.07	93.50	2.08	0.56	0.56	-232.54	-232.54
2700.00	52.09	93.54	2.08	0.56	0.56	-233.11	-233.11

2705.00	52.12	93.57	2.08	0.56	0.56	-233.67	-233.67
2710.00	52.14	93.61	2.07	0.56	0.56	-234.24	-234.24
2715.00	52.17	93.65	2.07	0.56	0.56	-234.80	-234.80
2720.00	52.19	93.68	2.07	0.56	0.56	-235.37	-235.37
2725.00	52.22	93.72	2.06	0.56	0.56	-235.93	-235.93
2730.00	52.25	93.75	2.06	0.56	0.56	-236.49	-236.49
2735.00	52.27	93.79	2.06	0.56	0.56	-237.06	-237.06
2740.00	52.30	93.83	2.05	0.55	0.55	-237.62	-237.62
2745.00	52.32	93.86	2.05	0.55	0.55	-238.19	-238.19
2750.00	52.35	93.90	2.05	0.55	0.55	-238.75	-238.75
2755.00	52.37	93.94	2.05	0.55	0.55	-239.32	-239.32
2760.00	52.40	93.97	2.04	0.55	0.55	-239.88	-239.88
2765.00	52.42	94.01	2.04	0.55	0.55	-240.45	-240.45
2770.00	52.45	94.04	2.04	0.55	0.55	-241.01	-241.01
2775.00	52.48	94.08	2.03	0.55	0.55	-241.58	-241.58
2780.00	52.50	94.12	2.03	0.55	0.55	-242.14	-242.14
2785.00	52.53	94.15	2.03	0.55	0.55	-242.71	-242.71
2790.00	52.55	94.19	2.03	0.55	0.55	-243.27	-243.27
2795.00	52.58	94.22	2.02	0.55	0.55	-243.84	-243.84
2800.00	52.60	94.26	2.02	0.55	0.55	-244.40	-244.40
2805.00	52.63	94.29	2.02	0.54	0.54	-244.97	-244.97
2810.00	52.65	94.33	2.01	0.54	0.54	-245.54	-245.54
2815.00	52.68	94.37	2.01	0.54	0.54	-246.10	-246.10
2820.00	52.70	94.40	2.01	0.54	0.54	-246.67	-246.67
2825.00	52.73	94.44	2.01	0.54	0.54	-247.23	-247.23
2830.00	52.75	94.47	2.00	0.54	0.54	-247.80	-247.80
2835.00	52.78	94.51	2.00	0.54	0.54	-248.36	-248.36
2840.00	52.80	94.54	2.00	0.54	0.54	-248.93	-248.93
2845.00	52.83	94.58	1.99	0.54	0.54	-249.50	-249.50
2850.00	52.85	94.61	1.99	0.54	0.54	-250.06	-250.06
2855.00	52.88	94.65	1.99	0.54	0.54	-250.63	-250.63
2860.00	52.90	94.68	1.99	0.54	0.54	-251.19	-251.19
2865.00	52.93	94.72	1.98	0.54	0.54	-251.76	-251.76
2870.00	52.95	94.75	1.98	0.53	0.53	-252.33	-252.33
2875.00	52.98	94.79	1.98	0.53	0.53	-252.89	-252.89
2880.00	53.00	94.82	1.98	0.53	0.53	-253.46	-253.46

Notes to User

Only values shown blue to be edited

Sheet only for england and wales

In M5-D	J0	J1	J2	Cr	In (MT-D/M5-D)	MT-D/M5-D
2.21	0.1699	0.0028	0.000114	0.205014	0.636605	1.890053
2.39	0.1699	0.0028	0.000114	0.214282	0.665383	1.945235
2.51	0.1644	0.005831	-0.00013	0.215837	0.670212	1.954651
2.60	0.1644	0.005831	-0.00013	0.218417	0.678221	1.97037
2.66	0.1644	0.005831	-0.00013	0.220337	0.684185	1.982156
2.71	0.1644	0.005831	-0.00013	0.22182	0.688788	1.9913
2.76	0.1644	0.005831	-0.00013	0.222992	0.692427	1.998561
2.80	0.1644	0.005831	-0.00013	0.223934	0.695354	2.004418
2.83	0.1644	0.005831	-0.00013	0.224701	0.697734	2.009195
2.86	0.1644	0.005831	-0.00013	0.225329	0.699684	2.013116
2.89	0.1644	0.005831	-0.00013	0.225845	0.701287	2.016345
2.92	0.1644	0.005831	-0.00013	0.226269	0.702605	2.019005
2.94	0.1644	0.005831	-0.00013	0.226617	0.703686	2.021189
2.96	0.1644	0.005831	-0.00013	0.226901	0.704567	2.02297
2.98	0.1644	0.005831	-0.00013	0.22713	0.705277	2.024408
3.00	0.1644	0.005831	-0.00013	0.227311	0.70584	2.025548
3.01	0.1644	0.005831	-0.00013	0.227451	0.706275	2.02643
3.03	0.1644	0.005831	-0.00013	0.227556	0.706599	2.027085
3.05	0.1644	0.005831	-0.00013	0.227628	0.706823	2.02754
3.06	0.1644	0.005831	-0.00013	0.227672	0.70696	2.027818
3.07	0.1644	0.005831	-0.00013	0.227691	0.707019	2.027937
3.09	0.1644	0.005831	-0.00013	0.227687	0.707008	2.027915
3.10	0.1644	0.005831	-0.00013	0.227664	0.706934	2.027766
3.11	0.1644	0.005831	-0.00013	0.227622	0.706804	2.027501
3.12	0.1644	0.005831	-0.00013	0.227563	0.706622	2.027132
3.13	0.1644	0.005831	-0.00013	0.227489	0.706393	2.026668
3.14	0.1644	0.005831	-0.00013	0.227402	0.706121	2.026117
3.15	0.1644	0.005831	-0.00013	0.227302	0.70581	2.025488
3.16	0.1644	0.005831	-0.00013	0.22719	0.705464	2.024786
3.17	0.1644	0.005831	-0.00013	0.227068	0.705084	2.024017
3.18	0.1644	0.005831	-0.00013	0.226936	0.704674	2.023188
3.19	0.1644	0.005831	-0.00013	0.226795	0.704236	2.022302
3.20	0.1644	0.005831	-0.00013	0.226645	0.703772	2.021364
3.21	0.1644	0.005831	-0.00013	0.226488	0.703284	2.020377
3.21	0.1644	0.005831	-0.00013	0.226324	0.702774	2.019346
3.22	0.1644	0.005831	-0.00013	0.226153	0.702243	2.018274
3.23	0.1644	0.005831	-0.00013	0.225975	0.701692	2.017163
3.24	0.1644	0.005831	-0.00013	0.225792	0.701124	2.016017
3.24	0.1644	0.005831	-0.00013	0.225604	0.700538	2.014837

3.25	0.1644	0.005831	-0.00013	0.22541	0.699937	2.013626
3.26	0.1644	0.005831	-0.00013	0.225212	0.699321	2.012386
3.26	0.1644	0.005831	-0.00013	0.225009	0.698691	2.011119
3.27	0.1644	0.005831	-0.00013	0.224802	0.698049	2.009827
3.28	0.1644	0.005831	-0.00013	0.224591	0.697394	2.008511
3.28	0.1644	0.005831	-0.00013	0.224377	0.696727	2.007173
3.29	0.1644	0.005831	-0.00013	0.224158	0.69605	2.005815
3.30	0.1644	0.005831	-0.00013	0.223937	0.695363	2.004437
3.30	0.1644	0.005831	-0.00013	0.223713	0.694666	2.00304
3.31	0.1644	0.005831	-0.00013	0.223485	0.69396	2.001627
3.31	0.1644	0.005831	-0.00013	0.223255	0.693246	2.000198
3.32	0.1644	0.005831	-0.00013	0.223023	0.692524	1.998754
3.32	0.1644	0.005831	-0.00013	0.222788	0.691794	1.997296
3.33	0.1644	0.005831	-0.00013	0.222551	0.691057	1.995825
3.33	0.1644	0.005831	-0.00013	0.222311	0.690314	1.994341
3.34	0.1644	0.005831	-0.00013	0.222069	0.689564	1.992846
3.34	0.1644	0.005831	-0.00013	0.221826	0.688807	1.991339
3.35	0.1644	0.005831	-0.00013	0.221581	0.688046	1.989823
3.35	0.1644	0.005831	-0.00013	0.221334	0.687279	1.988297
3.36	0.1644	0.005831	-0.00013	0.221085	0.686506	1.986762
3.36	0.1644	0.005831	-0.00013	0.220835	0.685729	1.985219
3.37	0.1644	0.005831	-0.00013	0.220583	0.684947	1.983667
3.37	0.1644	0.005831	-0.00013	0.22033	0.684161	1.982109
3.38	0.1644	0.005831	-0.00013	0.220075	0.683371	1.980543
3.38	0.1644	0.005831	-0.00013	0.219819	0.682577	1.978971
3.38	0.1644	0.005831	-0.00013	0.219563	0.681779	1.977393
3.39	0.1644	0.005831	-0.00013	0.219304	0.680978	1.975809
3.39	0.1644	0.005831	-0.00013	0.219045	0.680173	1.974219
3.40	0.1644	0.005831	-0.00013	0.218785	0.679365	1.972625
3.40	0.1644	0.005831	-0.00013	0.218524	0.678554	1.971026
3.40	0.1644	0.005831	-0.00013	0.218262	0.677741	1.969423
3.41	0.1644	0.005831	-0.00013	0.217999	0.676925	1.967816
3.41	0.1644	0.005831	-0.00013	0.217735	0.676106	1.966206
3.42	0.1644	0.005831	-0.00013	0.217471	0.675284	1.964592
3.42	0.1644	0.005831	-0.00013	0.217206	0.674461	1.962974
3.42	0.1644	0.005831	-0.00013	0.21694	0.673635	1.961354
3.43	0.1644	0.005831	-0.00013	0.216673	0.672807	1.959731
3.43	0.1644	0.005831	-0.00013	0.216406	0.671978	1.958106
3.43	0.1644	0.005831	-0.00013	0.216138	0.671146	1.956478
3.44	0.2644	-0.00162	3.15E-06	0.217046	0.673965	1.962001
3.44	0.2644	-0.00162	3.15E-06	0.216895	0.673496	1.961081
3.44	0.2644	-0.00162	3.15E-06	0.216745	0.673031	1.960169
3.45	0.2644	-0.00162	3.15E-06	0.216597	0.672571	1.959267
3.45	0.2644	-0.00162	3.15E-06	0.21645	0.672115	1.958374
3.45	0.2644	-0.00162	3.15E-06	0.216305	0.671663	1.95749
3.46	0.2644	-0.00162	3.15E-06	0.216161	0.671215	1.956614
3.46	0.2644	-0.00162	3.15E-06	0.216018	0.670772	1.955746
3.46	0.2644	-0.00162	3.15E-06	0.215876	0.670332	1.954887
3.47	0.2644	-0.00162	3.15E-06	0.215736	0.669897	1.954035
3.47	0.2644	-0.00162	3.15E-06	0.215597	0.669465	1.953192

3.47	0.2644	-0.00162	3.15E-06	0.215459	0.669037	1.952356
3.48	0.2644	-0.00162	3.15E-06	0.215322	0.668613	1.951528
3.48	0.2644	-0.00162	3.15E-06	0.215187	0.668192	1.950708
3.48	0.2644	-0.00162	3.15E-06	0.215053	0.667775	1.949894
3.48	0.2644	-0.00162	3.15E-06	0.214919	0.667362	1.949088
3.49	0.2644	-0.00162	3.15E-06	0.214787	0.666951	1.948289
3.49	0.2644	-0.00162	3.15E-06	0.214656	0.666545	1.947496
3.49	0.2644	-0.00162	3.15E-06	0.214526	0.666141	1.946711
3.50	0.2644	-0.00162	3.15E-06	0.214398	0.665741	1.945931
3.50	0.2644	-0.00162	3.15E-06	0.21427	0.665344	1.945159
3.50	0.2644	-0.00162	3.15E-06	0.214143	0.66495	1.944393
3.50	0.2644	-0.00162	3.15E-06	0.214017	0.664559	1.943633
3.51	0.2644	-0.00162	3.15E-06	0.213892	0.664171	1.942879
3.51	0.2644	-0.00162	3.15E-06	0.213768	0.663786	1.942131
3.51	0.2644	-0.00162	3.15E-06	0.213645	0.663404	1.941389
3.51	0.2644	-0.00162	3.15E-06	0.213523	0.663025	1.940653
3.52	0.2644	-0.00162	3.15E-06	0.213402	0.662648	1.939923
3.52	0.2644	-0.00162	3.15E-06	0.213281	0.662275	1.939198
3.52	0.2644	-0.00162	3.15E-06	0.213162	0.661904	1.938479
3.52	0.2644	-0.00162	3.15E-06	0.213043	0.661535	1.937765
3.53	0.2644	-0.00162	3.15E-06	0.212925	0.66117	1.937057
3.53	0.2644	-0.00162	3.15E-06	0.212809	0.660807	1.936354
3.53	0.2644	-0.00162	3.15E-06	0.212692	0.660446	1.935656
3.53	0.2644	-0.00162	3.15E-06	0.212577	0.660088	1.934963
3.54	0.2644	-0.00162	3.15E-06	0.212463	0.659733	1.934276
3.54	0.2644	-0.00162	3.15E-06	0.212349	0.65938	1.933593
3.54	0.2644	-0.00162	3.15E-06	0.212236	0.659029	1.932915
3.54	0.2644	-0.00162	3.15E-06	0.212124	0.658681	1.932242
3.55	0.2644	-0.00162	3.15E-06	0.212013	0.658335	1.931573
3.55	0.2644	-0.00162	3.15E-06	0.211902	0.657991	1.93091
3.55	0.2644	-0.00162	3.15E-06	0.211792	0.65765	1.93025
3.55	0.2644	-0.00162	3.15E-06	0.211683	0.65731	1.929596
3.55	0.2644	-0.00162	3.15E-06	0.211574	0.656973	1.928945
3.56	0.2644	-0.00162	3.15E-06	0.211466	0.656639	1.928299
3.56	0.2644	-0.00162	3.15E-06	0.211359	0.656306	1.927658
3.56	0.2644	-0.00162	3.15E-06	0.211253	0.655975	1.92702
3.56	0.2644	-0.00162	3.15E-06	0.211147	0.655646	1.926387
3.57	0.2644	-0.00162	3.15E-06	0.211042	0.65532	1.925758
3.57	0.2644	-0.00162	3.15E-06	0.210937	0.654995	1.925133
3.57	0.2644	-0.00162	3.15E-06	0.210833	0.654673	1.924512
3.57	0.2644	-0.00162	3.15E-06	0.21073	0.654352	1.923895
3.57	0.2644	-0.00162	3.15E-06	0.210627	0.654033	1.923282
3.58	0.2644	-0.00162	3.15E-06	0.210525	0.653716	1.922673
3.58	0.2644	-0.00162	3.15E-06	0.210424	0.653401	1.922067
3.58	0.2644	-0.00162	3.15E-06	0.210323	0.653088	1.921466
3.58	0.2644	-0.00162	3.15E-06	0.210223	0.652777	1.920868
3.58	0.2644	-0.00162	3.15E-06	0.210123	0.652467	1.920273
3.59	0.2644	-0.00162	3.15E-06	0.210024	0.65216	1.919682
3.59	0.2644	-0.00162	3.15E-06	0.209925	0.651854	1.919095
3.59	0.2644	-0.00162	3.15E-06	0.209827	0.65155	1.918511

3.59	0.2644	-0.00162	3.15E-06	0.20973	0.651247	1.917931
3.59	0.2644	-0.00162	3.15E-06	0.209633	0.650946	1.917354
3.60	0.2644	-0.00162	3.15E-06	0.209537	0.650647	1.916781
3.60	0.2644	-0.00162	3.15E-06	0.209441	0.650349	1.91621
3.60	0.2644	-0.00162	3.15E-06	0.209346	0.650054	1.915643
3.60	0.2644	-0.00162	3.15E-06	0.209251	0.649759	1.91508
3.60	0.2644	-0.00162	3.15E-06	0.209157	0.649467	1.914519
3.60	0.2644	-0.00162	3.15E-06	0.209063	0.649175	1.913962
3.61	0.2644	-0.00162	3.15E-06	0.208969	0.648886	1.913408
3.61	0.2644	-0.00162	3.15E-06	0.208877	0.648598	1.912857
3.61	0.2644	-0.00162	3.15E-06	0.208784	0.648311	1.912309
3.61	0.2644	-0.00162	3.15E-06	0.208693	0.648026	1.911763
3.61	0.2644	-0.00162	3.15E-06	0.208601	0.647742	1.911221
3.62	0.2644	-0.00162	3.15E-06	0.20851	0.64746	1.910682
3.62	0.2644	-0.00162	3.15E-06	0.20842	0.64718	1.910146
3.62	0.2644	-0.00162	3.15E-06	0.20833	0.6469	1.909613
3.62	0.2644	-0.00162	3.15E-06	0.208241	0.646623	1.909082
3.62	0.2644	-0.00162	3.15E-06	0.208152	0.646346	1.908554
3.62	0.2644	-0.00162	3.15E-06	0.208063	0.646071	1.908029
3.63	0.2644	-0.00162	3.15E-06	0.207975	0.645797	1.907507
3.63	0.2644	-0.00162	3.15E-06	0.207887	0.645525	1.906988
3.63	0.2644	-0.00162	3.15E-06	0.2078	0.645254	1.906471
3.63	0.2644	-0.00162	3.15E-06	0.207713	0.644984	1.905957
3.63	0.2644	-0.00162	3.15E-06	0.207627	0.644716	1.905445
3.63	0.2644	-0.00162	3.15E-06	0.20754	0.644449	1.904936
3.64	0.2644	-0.00162	3.15E-06	0.207455	0.644183	1.90443
3.64	0.2644	-0.00162	3.15E-06	0.20737	0.643918	1.903926
3.64	0.2644	-0.00162	3.15E-06	0.207285	0.643655	1.903425
3.64	0.2644	-0.00162	3.15E-06	0.2072	0.643393	1.902926
3.64	0.2644	-0.00162	3.15E-06	0.207116	0.643132	1.902429
3.64	0.2644	-0.00162	3.15E-06	0.207033	0.642872	1.901935
3.65	0.2644	-0.00162	3.15E-06	0.20695	0.642613	1.901444
3.65	0.2644	-0.00162	3.15E-06	0.206867	0.642356	1.900955
3.65	0.2644	-0.00162	3.15E-06	0.206784	0.6421	1.900468
3.65	0.2644	-0.00162	3.15E-06	0.206702	0.641845	1.899983
3.65	0.2644	-0.00162	3.15E-06	0.20662	0.641591	1.899501
3.65	0.2644	-0.00162	3.15E-06	0.206539	0.641338	1.899021
3.65	0.2644	-0.00162	3.15E-06	0.206458	0.641087	1.898543
3.66	0.2644	-0.00162	3.15E-06	0.206377	0.640836	1.898068
3.66	0.2644	-0.00162	3.15E-06	0.206297	0.640587	1.897595
3.66	0.2644	-0.00162	3.15E-06	0.206217	0.640339	1.897124
3.66	0.2644	-0.00162	3.15E-06	0.206137	0.640092	1.896655
3.66	0.2644	-0.00162	3.15E-06	0.206058	0.639846	1.896188
3.66	0.2644	-0.00162	3.15E-06	0.205979	0.6396	1.895723
3.66	0.2644	-0.00162	3.15E-06	0.205901	0.639356	1.895261
3.67	0.2644	-0.00162	3.15E-06	0.205822	0.639113	1.8948
3.67	0.2644	-0.00162	3.15E-06	0.205744	0.638872	1.894342
3.67	0.2644	-0.00162	3.15E-06	0.205667	0.638631	1.893886
3.67	0.2644	-0.00162	3.15E-06	0.20559	0.638391	1.893431
3.67	0.2644	-0.00162	3.15E-06	0.205513	0.638152	1.892979

3.67	0.2644	-0.00162	3.15E-06	0.205436	0.637914	1.892529
3.67	0.2644	-0.00162	3.15E-06	0.20536	0.637677	1.89208
3.68	0.2644	-0.00162	3.15E-06	0.205284	0.637441	1.891634
3.68	0.2644	-0.00162	3.15E-06	0.205208	0.637206	1.891189
3.68	0.2644	-0.00162	3.15E-06	0.205133	0.636972	1.890747
3.68	0.2644	-0.00162	3.15E-06	0.205058	0.636739	1.890306
3.68	0.2644	-0.00162	3.15E-06	0.204983	0.636507	1.889867
3.68	0.2644	-0.00162	3.15E-06	0.204908	0.636275	1.889431
3.68	0.2644	-0.00162	3.15E-06	0.204834	0.636045	1.888995
3.69	0.2644	-0.00162	3.15E-06	0.20476	0.635816	1.888562
3.69	0.2644	-0.00162	3.15E-06	0.204687	0.635587	1.888131
3.69	0.2644	-0.00162	3.15E-06	0.204613	0.63536	1.887701
3.69	0.2644	-0.00162	3.15E-06	0.20454	0.635133	1.887273
3.69	0.2644	-0.00162	3.15E-06	0.204468	0.634907	1.886847
3.69	0.2644	-0.00162	3.15E-06	0.204395	0.634682	1.886423
3.69	0.2644	-0.00162	3.15E-06	0.204323	0.634458	1.886
3.70	0.2644	-0.00162	3.15E-06	0.204251	0.634235	1.885579
3.70	0.2644	-0.00162	3.15E-06	0.20418	0.634013	1.88516
3.70	0.2644	-0.00162	3.15E-06	0.204108	0.633791	1.884742
3.70	0.2644	-0.00162	3.15E-06	0.204037	0.63357	1.884326
3.70	0.2644	-0.00162	3.15E-06	0.203966	0.63335	1.883912
3.70	0.2644	-0.00162	3.15E-06	0.203896	0.633131	1.883499
3.70	0.2644	-0.00162	3.15E-06	0.203826	0.632913	1.883088
3.70	0.2644	-0.00162	3.15E-06	0.203756	0.632696	1.882679
3.71	0.2644	-0.00162	3.15E-06	0.203686	0.632479	1.882271
3.71	0.2644	-0.00162	3.15E-06	0.203616	0.632263	1.881865
3.71	0.2644	-0.00162	3.15E-06	0.203547	0.632048	1.88146
3.71	0.2644	-0.00162	3.15E-06	0.203478	0.631834	1.881057
3.71	0.2644	-0.00162	3.15E-06	0.203409	0.631621	1.880656
3.71	0.2644	-0.00162	3.15E-06	0.203341	0.631408	1.880256
3.71	0.2644	-0.00162	3.15E-06	0.203273	0.631196	1.879857
3.71	0.2644	-0.00162	3.15E-06	0.203205	0.630985	1.87946
3.72	0.2644	-0.00162	3.15E-06	0.203137	0.630774	1.879065
3.72	0.2644	-0.00162	3.15E-06	0.203069	0.630565	1.878671
3.72	0.2644	-0.00162	3.15E-06	0.203002	0.630356	1.878278
3.72	0.2644	-0.00162	3.15E-06	0.202935	0.630147	1.877887
3.72	0.2644	-0.00162	3.15E-06	0.202868	0.62994	1.877498
3.72	0.2644	-0.00162	3.15E-06	0.202802	0.629733	1.87711
3.72	0.2644	-0.00162	3.15E-06	0.202735	0.629527	1.876723
3.72	0.2644	-0.00162	3.15E-06	0.202669	0.629322	1.876338
3.72	0.2644	-0.00162	3.15E-06	0.202603	0.629117	1.875954
3.73	0.2644	-0.00162	3.15E-06	0.202537	0.628913	1.875571
3.73	0.2644	-0.00162	3.15E-06	0.202472	0.62871	1.87519
3.73	0.2644	-0.00162	3.15E-06	0.202407	0.628507	1.87481
3.73	0.2644	-0.00162	3.15E-06	0.202342	0.628306	1.874432
3.73	0.2644	-0.00162	3.15E-06	0.202277	0.628104	1.874055
3.73	0.2644	-0.00162	3.15E-06	0.202212	0.627904	1.873679
3.73	0.2644	-0.00162	3.15E-06	0.202148	0.627704	1.873305
3.73	0.2644	-0.00162	3.15E-06	0.202084	0.627505	1.872932
3.74	0.2644	-0.00162	3.15E-06	0.20202	0.627306	1.87256

3.74	0.2644	-0.00162	3.15E-06	0.201956	0.627109	1.872189
3.74	0.2644	-0.00162	3.15E-06	0.201893	0.626911	1.87182
3.74	0.2644	-0.00162	3.15E-06	0.201829	0.626715	1.871452
3.74	0.2644	-0.00162	3.15E-06	0.201766	0.626519	1.871086
3.74	0.2644	-0.00162	3.15E-06	0.201703	0.626324	1.87072
3.74	0.2644	-0.00162	3.15E-06	0.201641	0.626129	1.870356
3.74	0.2644	-0.00162	3.15E-06	0.201578	0.625935	1.869993
3.74	0.2644	-0.00162	3.15E-06	0.201516	0.625741	1.869632
3.75	0.2644	-0.00162	3.15E-06	0.201454	0.625549	1.869271
3.75	0.2644	-0.00162	3.15E-06	0.201392	0.625356	1.868912
3.75	0.2644	-0.00162	3.15E-06	0.20133	0.625165	1.868554
3.75	0.2644	-0.00162	3.15E-06	0.201269	0.624974	1.868197
3.75	0.2644	-0.00162	3.15E-06	0.201207	0.624783	1.867841
3.75	0.2644	-0.00162	3.15E-06	0.201146	0.624594	1.867487
3.75	0.2644	-0.00162	3.15E-06	0.201085	0.624405	1.867134
3.75	0.2644	-0.00162	3.15E-06	0.201025	0.624216	1.866782
3.75	0.2644	-0.00162	3.15E-06	0.200964	0.624028	1.866431
3.75	0.2644	-0.00162	3.15E-06	0.200904	0.62384	1.866081
3.76	0.2644	-0.00162	3.15E-06	0.200844	0.623654	1.865732
3.76	0.2644	-0.00162	3.15E-06	0.200784	0.623467	1.865385
3.76	0.2644	-0.00162	3.15E-06	0.200724	0.623282	1.865038
3.76	0.2644	-0.00162	3.15E-06	0.200664	0.623096	1.864693
3.76	0.2644	-0.00162	3.15E-06	0.200605	0.622912	1.864349
3.76	0.2644	-0.00162	3.15E-06	0.200545	0.622728	1.864006
3.76	0.2644	-0.00162	3.15E-06	0.200486	0.622544	1.863664
3.76	0.2644	-0.00162	3.15E-06	0.200427	0.622361	1.863323
3.76	0.2644	-0.00162	3.15E-06	0.200369	0.622179	1.862983
3.76	0.2644	-0.00162	3.15E-06	0.20031	0.621997	1.862644
3.77	0.2644	-0.00162	3.15E-06	0.200252	0.621816	1.862306
3.77	0.2644	-0.00162	3.15E-06	0.200194	0.621635	1.86197
3.77	0.2644	-0.00162	3.15E-06	0.200135	0.621455	1.861634
3.77	0.2644	-0.00162	3.15E-06	0.200078	0.621275	1.8613
3.77	0.2644	-0.00162	3.15E-06	0.20002	0.621096	1.860966
3.77	0.2644	-0.00162	3.15E-06	0.199962	0.620917	1.860634
3.77	0.2644	-0.00162	3.15E-06	0.199905	0.620739	1.860302
3.77	0.2644	-0.00162	3.15E-06	0.199848	0.620561	1.859972
3.77	0.2644	-0.00162	3.15E-06	0.199791	0.620384	1.859642
3.77	0.2644	-0.00162	3.15E-06	0.199734	0.620207	1.859314
3.78	0.2644	-0.00162	3.15E-06	0.199677	0.620031	1.858986
3.78	0.2644	-0.00162	3.15E-06	0.19962	0.619856	1.85866
3.78	0.2644	-0.00162	3.15E-06	0.199564	0.61968	1.858334
3.78	0.2644	-0.00162	3.15E-06	0.199508	0.619506	1.85801
3.78	0.2644	-0.00162	3.15E-06	0.199452	0.619332	1.857686
3.78	0.2644	-0.00162	3.15E-06	0.199396	0.619158	1.857363
3.78	0.2644	-0.00162	3.15E-06	0.19934	0.618985	1.857042
3.78	0.2644	-0.00162	3.15E-06	0.199284	0.618812	1.856721
3.78	0.2644	-0.00162	3.15E-06	0.199229	0.61864	1.856401
3.78	0.2644	-0.00162	3.15E-06	0.199174	0.618468	1.856083
3.79	0.2644	-0.00162	3.15E-06	0.199119	0.618297	1.855765
3.79	0.2644	-0.00162	3.15E-06	0.199064	0.618126	1.855448

3.79	0.2644	-0.00162	3.15E-06	0.199009	0.617956	1.855132
3.79	0.2644	-0.00162	3.15E-06	0.198954	0.617786	1.854817
3.79	0.2644	-0.00162	3.15E-06	0.198899	0.617616	1.854502
3.79	0.2644	-0.00162	3.15E-06	0.198845	0.617447	1.854189
3.79	0.2644	-0.00162	3.15E-06	0.198791	0.617279	1.853877
3.79	0.2644	-0.00162	3.15E-06	0.198737	0.617111	1.853565
3.79	0.2644	-0.00162	3.15E-06	0.198683	0.616943	1.853255
3.79	0.2644	-0.00162	3.15E-06	0.198629	0.616776	1.852945
3.79	0.2644	-0.00162	3.15E-06	0.198575	0.616609	1.852636
3.80	0.2644	-0.00162	3.15E-06	0.198522	0.616443	1.852328
3.80	0.2644	-0.00162	3.15E-06	0.198468	0.616277	1.852021
3.80	0.2644	-0.00162	3.15E-06	0.198415	0.616112	1.851715
3.80	0.2644	-0.00162	3.15E-06	0.198362	0.615947	1.851409
3.80	0.2644	-0.00162	3.15E-06	0.198309	0.615783	1.851105
3.80	0.2644	-0.00162	3.15E-06	0.198256	0.615618	1.850801
3.80	0.2644	-0.00162	3.15E-06	0.198203	0.615455	1.850498
3.80	0.2644	-0.00162	3.15E-06	0.198151	0.615292	1.850196
3.80	0.2644	-0.00162	3.15E-06	0.198098	0.615129	1.849895
3.80	0.2644	-0.00162	3.15E-06	0.198046	0.614966	1.849594
3.80	0.2644	-0.00162	3.15E-06	0.197994	0.614804	1.849295
3.80	0.2644	-0.00162	3.15E-06	0.197942	0.614643	1.848996
3.81	0.2644	-0.00162	3.15E-06	0.19789	0.614482	1.848698
3.81	0.2644	-0.00162	3.15E-06	0.197838	0.614321	1.848401
3.81	0.2644	-0.00162	3.15E-06	0.197786	0.614161	1.848105
3.81	0.2644	-0.00162	3.15E-06	0.197735	0.614001	1.847809
3.81	0.2644	-0.00162	3.15E-06	0.197684	0.613841	1.847514
3.81	0.2644	-0.00162	3.15E-06	0.197632	0.613682	1.84722
3.81	0.2644	-0.00162	3.15E-06	0.197581	0.613523	1.846927
3.81	0.2644	-0.00162	3.15E-06	0.19753	0.613365	1.846635
3.81	0.2644	-0.00162	3.15E-06	0.197479	0.613207	1.846343
3.81	0.2644	-0.00162	3.15E-06	0.197429	0.613049	1.846052
3.81	0.2644	-0.00162	3.15E-06	0.197378	0.612892	1.845762
3.82	0.2644	-0.00162	3.15E-06	0.197328	0.612736	1.845473
3.82	0.2644	-0.00162	3.15E-06	0.197277	0.612579	1.845184
3.82	0.2644	-0.00162	3.15E-06	0.197227	0.612423	1.844897
3.82	0.2644	-0.00162	3.15E-06	0.197177	0.612268	1.844609
3.82	0.2644	-0.00162	3.15E-06	0.197127	0.612112	1.844323
3.82	0.2644	-0.00162	3.15E-06	0.197077	0.611958	1.844038
3.82	0.2644	-0.00162	3.15E-06	0.197027	0.611803	1.843753
3.82	0.2644	-0.00162	3.15E-06	0.196978	0.611649	1.843469
3.82	0.2644	-0.00162	3.15E-06	0.196928	0.611495	1.843185
3.82	0.2644	-0.00162	3.15E-06	0.196879	0.611342	1.842903
3.82	0.2644	-0.00162	3.15E-06	0.196829	0.611189	1.842621
3.82	0.2644	-0.00162	3.15E-06	0.19678	0.611036	1.842339
3.82	0.2644	-0.00162	3.15E-06	0.196731	0.610884	1.842059
3.83	0.2644	-0.00162	3.15E-06	0.196682	0.610732	1.841779
3.83	0.2644	-0.00162	3.15E-06	0.196633	0.61058	1.8415
3.83	0.2644	-0.00162	3.15E-06	0.196585	0.610429	1.841222
3.83	0.2644	-0.00162	3.15E-06	0.196536	0.610278	1.840944
3.83	0.2644	-0.00162	3.15E-06	0.196488	0.610128	1.840667

3.83	0.2644	-0.00162	3.15E-06	0.196439	0.609978	1.840391
3.83	0.2644	-0.00162	3.15E-06	0.196391	0.609828	1.840115
3.83	0.2644	-0.00162	3.15E-06	0.196343	0.609679	1.83984
3.83	0.2644	-0.00162	3.15E-06	0.196295	0.609529	1.839566
3.83	0.2644	-0.00162	3.15E-06	0.196247	0.609381	1.839292
3.83	0.2644	-0.00162	3.15E-06	0.196199	0.609232	1.839019
3.83	0.2644	-0.00162	3.15E-06	0.196152	0.609084	1.838747
3.84	0.2644	-0.00162	3.15E-06	0.196104	0.608937	1.838475
3.84	0.2644	-0.00162	3.15E-06	0.196057	0.608789	1.838204
3.84	0.2644	-0.00162	3.15E-06	0.196009	0.608642	1.837934
3.84	0.2644	-0.00162	3.15E-06	0.195962	0.608495	1.837664
3.84	0.2644	-0.00162	3.15E-06	0.195915	0.608349	1.837395
3.84	0.2644	-0.00162	3.15E-06	0.195868	0.608203	1.837127
3.84	0.2644	-0.00162	3.15E-06	0.195821	0.608057	1.836859
3.84	0.2644	-0.00162	3.15E-06	0.195774	0.607912	1.836592
3.84	0.2644	-0.00162	3.15E-06	0.195727	0.607767	1.836326
3.84	0.2644	-0.00162	3.15E-06	0.195681	0.607622	1.83606
3.84	0.2644	-0.00162	3.15E-06	0.195634	0.607478	1.835795
3.84	0.2644	-0.00162	3.15E-06	0.195588	0.607334	1.835531
3.84	0.2644	-0.00162	3.15E-06	0.195542	0.60719	1.835267
3.84	0.2644	-0.00162	3.15E-06	0.195495	0.607046	1.835003
3.85	0.2644	-0.00162	3.15E-06	0.195449	0.606903	1.834741
3.85	0.2644	-0.00162	3.15E-06	0.195403	0.60676	1.834479
3.85	0.2644	-0.00162	3.15E-06	0.195357	0.606618	1.834217
3.85	0.2644	-0.00162	3.15E-06	0.195312	0.606476	1.833956
3.85	0.2644	-0.00162	3.15E-06	0.195266	0.606334	1.833696
3.85	0.2644	-0.00162	3.15E-06	0.19522	0.606192	1.833437
3.85	0.2644	-0.00162	3.15E-06	0.195175	0.606051	1.833178
3.85	0.2644	-0.00162	3.15E-06	0.195129	0.60591	1.832919
3.85	0.2644	-0.00162	3.15E-06	0.195084	0.605769	1.832661
3.85	0.2644	-0.00162	3.15E-06	0.195039	0.605629	1.832404
3.85	0.2644	-0.00162	3.15E-06	0.194994	0.605489	1.832148
3.85	0.2644	-0.00162	3.15E-06	0.194949	0.605349	1.831892
3.85	0.2644	-0.00162	3.15E-06	0.194904	0.60521	1.831636
3.86	0.2644	-0.00162	3.15E-06	0.194859	0.60507	1.831381
3.86	0.2644	-0.00162	3.15E-06	0.194814	0.604932	1.831127
3.86	0.2644	-0.00162	3.15E-06	0.19477	0.604793	1.830873
3.86	0.2644	-0.00162	3.15E-06	0.194725	0.604655	1.83062
3.86	0.2644	-0.00162	3.15E-06	0.194681	0.604517	1.830367
3.86	0.2644	-0.00162	3.15E-06	0.194636	0.604379	1.830115
3.86	0.2644	-0.00162	3.15E-06	0.194592	0.604242	1.829864
3.86	0.2644	-0.00162	3.15E-06	0.194548	0.604104	1.829613
3.86	0.2644	-0.00162	3.15E-06	0.194504	0.603968	1.829363
3.86	0.2644	-0.00162	3.15E-06	0.19446	0.603831	1.829113
3.86	0.2644	-0.00162	3.15E-06	0.194416	0.603695	1.828864
3.86	0.2644	-0.00162	3.15E-06	0.194372	0.603559	1.828615
3.86	0.2644	-0.00162	3.15E-06	0.194329	0.603423	1.828367
3.86	0.2644	-0.00162	3.15E-06	0.194285	0.603288	1.828119
3.86	0.2644	-0.00162	3.15E-06	0.194241	0.603153	1.827872
3.87	0.2644	-0.00162	3.15E-06	0.194198	0.603018	1.827626

3.87	0.2644	-0.00162	3.15E-06	0.194155	0.602883	1.82738
3.87	0.2644	-0.00162	3.15E-06	0.194111	0.602749	1.827134
3.87	0.2644	-0.00162	3.15E-06	0.194068	0.602615	1.826889
3.87	0.2644	-0.00162	3.15E-06	0.194025	0.602481	1.826645
3.87	0.2644	-0.00162	3.15E-06	0.193982	0.602347	1.826401
3.87	0.2644	-0.00162	3.15E-06	0.193939	0.602214	1.826158
3.87	0.2644	-0.00162	3.15E-06	0.193896	0.602081	1.825915
3.87	0.2644	-0.00162	3.15E-06	0.193854	0.601949	1.825673
3.87	0.2644	-0.00162	3.15E-06	0.193811	0.601816	1.825431
3.87	0.2644	-0.00162	3.15E-06	0.193768	0.601684	1.82519
3.87	0.2644	-0.00162	3.15E-06	0.193726	0.601552	1.824949
3.87	0.2644	-0.00162	3.15E-06	0.193684	0.60142	1.824709
3.87	0.2644	-0.00162	3.15E-06	0.193641	0.601289	1.824469
3.88	0.2644	-0.00162	3.15E-06	0.193599	0.601158	1.82423
3.88	0.2644	-0.00162	3.15E-06	0.193557	0.601027	1.823991
3.88	0.2644	-0.00162	3.15E-06	0.193515	0.600896	1.823753
3.88	0.2644	-0.00162	3.15E-06	0.193473	0.600766	1.823515
3.88	0.2644	-0.00162	3.15E-06	0.193431	0.600636	1.823278
3.88	0.2644	-0.00162	3.15E-06	0.193389	0.600506	1.823041
3.88	0.2644	-0.00162	3.15E-06	0.193347	0.600377	1.822805
3.88	0.2644	-0.00162	3.15E-06	0.193306	0.600247	1.822569
3.88	0.2644	-0.00162	3.15E-06	0.193264	0.600118	1.822334
3.88	0.2644	-0.00162	3.15E-06	0.193223	0.599989	1.822099
3.88	0.2644	-0.00162	3.15E-06	0.193181	0.599861	1.821865
3.88	0.2644	-0.00162	3.15E-06	0.19314	0.599732	1.821631
3.88	0.2644	-0.00162	3.15E-06	0.193099	0.599604	1.821398
3.88	0.2644	-0.00162	3.15E-06	0.193058	0.599476	1.821165
3.88	0.2644	-0.00162	3.15E-06	0.193016	0.599349	1.820933
3.88	0.2644	-0.00162	3.15E-06	0.192975	0.599221	1.820701
3.89	0.2644	-0.00162	3.15E-06	0.192934	0.599094	1.820469
3.89	0.2644	-0.00162	3.15E-06	0.192894	0.598967	1.820238
3.89	0.2644	-0.00162	3.15E-06	0.192853	0.598841	1.820008
3.89	0.2644	-0.00162	3.15E-06	0.192812	0.598714	1.819778
3.89	0.2644	-0.00162	3.15E-06	0.192771	0.598588	1.819548
3.89	0.2644	-0.00162	3.15E-06	0.192731	0.598462	1.819319
3.89	0.2644	-0.00162	3.15E-06	0.19269	0.598337	1.819091
3.89	0.2644	-0.00162	3.15E-06	0.19265	0.598211	1.818862
3.89	0.2644	-0.00162	3.15E-06	0.19261	0.598086	1.818635
3.89	0.2644	-0.00162	3.15E-06	0.19257	0.597961	1.818407
3.89	0.2644	-0.00162	3.15E-06	0.192529	0.597836	1.818181
3.89	0.2644	-0.00162	3.15E-06	0.192489	0.597712	1.817954
3.89	0.2644	-0.00162	3.15E-06	0.192449	0.597588	1.817728
3.89	0.2644	-0.00162	3.15E-06	0.192409	0.597464	1.817503
3.89	0.2644	-0.00162	3.15E-06	0.192369	0.59734	1.817278
3.89	0.2644	-0.00162	3.15E-06	0.19233	0.597216	1.817053
3.90	0.2644	-0.00162	3.15E-06	0.19229	0.597093	1.816829
3.90	0.2644	-0.00162	3.15E-06	0.19225	0.59697	1.816605
3.90	0.2644	-0.00162	3.15E-06	0.192211	0.596847	1.816382
3.90	0.2644	-0.00162	3.15E-06	0.192171	0.596724	1.816159
3.90	0.2644	-0.00162	3.15E-06	0.192132	0.596602	1.815937

3.90	0.2644	-0.00162	3.15E-06	0.192092	0.596479	1.815715
3.90	0.2644	-0.00162	3.15E-06	0.192053	0.596357	1.815493
3.90	0.2644	-0.00162	3.15E-06	0.192014	0.596235	1.815272
3.90	0.2644	-0.00162	3.15E-06	0.191975	0.596114	1.815052
3.90	0.2644	-0.00162	3.15E-06	0.191936	0.595993	1.814831
3.90	0.2644	-0.00162	3.15E-06	0.191897	0.595871	1.814612
3.90	0.2644	-0.00162	3.15E-06	0.191858	0.59575	1.814392
3.90	0.2644	-0.00162	3.15E-06	0.191819	0.59563	1.814173
3.90	0.2644	-0.00162	3.15E-06	0.19178	0.595509	1.813955
3.90	0.2644	-0.00162	3.15E-06	0.191741	0.595389	1.813736
3.90	0.2644	-0.00162	3.15E-06	0.191703	0.595269	1.813519
3.91	0.2644	-0.00162	3.15E-06	0.191664	0.595149	1.813301
3.91	0.2644	-0.00162	3.15E-06	0.191625	0.595029	1.813084
3.91	0.2644	-0.00162	3.15E-06	0.191587	0.59491	1.812868
3.91	0.2644	-0.00162	3.15E-06	0.191549	0.594791	1.812652
3.91	0.2644	-0.00162	3.15E-06	0.19151	0.594672	1.812436
3.91	0.2644	-0.00162	3.15E-06	0.191472	0.594553	1.812221
3.91	0.2644	-0.00162	3.15E-06	0.191434	0.594434	1.812006
3.91	0.2644	-0.00162	3.15E-06	0.191396	0.594316	1.811791
3.91	0.2644	-0.00162	3.15E-06	0.191358	0.594198	1.811577
3.91	0.2644	-0.00162	3.15E-06	0.19132	0.59408	1.811364
3.91	0.2644	-0.00162	3.15E-06	0.191282	0.593962	1.81115
3.91	0.2644	-0.00162	3.15E-06	0.191244	0.593845	1.810937
3.91	0.2644	-0.00162	3.15E-06	0.191206	0.593727	1.810725
3.91	0.2644	-0.00162	3.15E-06	0.191168	0.59361	1.810513
3.91	0.2644	-0.00162	3.15E-06	0.191131	0.593493	1.810301
3.91	0.2644	-0.00162	3.15E-06	0.191093	0.593376	1.81009
3.91	0.2644	-0.00162	3.15E-06	0.191055	0.59326	1.809879
3.92	0.2644	-0.00162	3.15E-06	0.191018	0.593143	1.809668
3.92	0.2644	-0.00162	3.15E-06	0.190981	0.593027	1.809458
3.92	0.2644	-0.00162	3.15E-06	0.190943	0.592911	1.809248
3.92	0.2644	-0.00162	3.15E-06	0.190906	0.592796	1.809039
3.92	0.2644	-0.00162	3.15E-06	0.190869	0.59268	1.80883
3.92	0.2644	-0.00162	3.15E-06	0.190832	0.592565	1.808621
3.92	0.2644	-0.00162	3.15E-06	0.190795	0.592449	1.808413
3.92	0.2644	-0.00162	3.15E-06	0.190757	0.592334	1.808205
3.92	0.2644	-0.00162	3.15E-06	0.190721	0.59222	1.807997
3.92	0.2644	-0.00162	3.15E-06	0.190684	0.592105	1.80779
3.92	0.2644	-0.00162	3.15E-06	0.190647	0.591991	1.807583
3.92	0.2644	-0.00162	3.15E-06	0.19061	0.591876	1.807377
3.92	0.2644	-0.00162	3.15E-06	0.190573	0.591762	1.807171
3.92	0.2644	-0.00162	3.15E-06	0.190537	0.591649	1.806965
3.92	0.2644	-0.00162	3.15E-06	0.1905	0.591535	1.80676
3.92	0.2644	-0.00162	3.15E-06	0.190463	0.591422	1.806555
3.92	0.2644	-0.00162	3.15E-06	0.190427	0.591308	1.80635
3.92	0.2644	-0.00162	3.15E-06	0.190391	0.591195	1.806146
3.93	0.2644	-0.00162	3.15E-06	0.190354	0.591082	1.805942
3.93	0.2644	-0.00162	3.15E-06	0.190318	0.59097	1.805738
3.93	0.2644	-0.00162	3.15E-06	0.190282	0.590857	1.805535
3.93	0.2644	-0.00162	3.15E-06	0.190246	0.590745	1.805332

3.93	0.2644	-0.00162	3.15E-06	0.190209	0.590633	1.80513
3.93	0.2644	-0.00162	3.15E-06	0.190173	0.590521	1.804928
3.93	0.2644	-0.00162	3.15E-06	0.190137	0.590409	1.804726
3.93	0.2644	-0.00162	3.15E-06	0.190101	0.590297	1.804525
3.93	0.2644	-0.00162	3.15E-06	0.190066	0.590186	1.804324
3.93	0.2644	-0.00162	3.15E-06	0.19003	0.590075	1.804123
3.93	0.2644	-0.00162	3.15E-06	0.189994	0.589963	1.803923
3.93	0.2644	-0.00162	3.15E-06	0.189958	0.589853	1.803723
3.93	0.2644	-0.00162	3.15E-06	0.189923	0.589742	1.803523
3.93	0.2644	-0.00162	3.15E-06	0.189887	0.589631	1.803324
3.93	0.2644	-0.00162	3.15E-06	0.189851	0.589521	1.803125
3.93	0.2644	-0.00162	3.15E-06	0.189816	0.589411	1.802926
3.93	0.2644	-0.00162	3.15E-06	0.189781	0.589301	1.802728
3.93	0.2644	-0.00162	3.15E-06	0.189745	0.589191	1.80253
3.94	0.2644	-0.00162	3.15E-06	0.18971	0.589081	1.802332
3.94	0.2644	-0.00162	3.15E-06	0.189675	0.588972	1.802135
3.94	0.2644	-0.00162	3.15E-06	0.189639	0.588863	1.801938
3.94	0.2644	-0.00162	3.15E-06	0.189604	0.588753	1.801741
3.94	0.2644	-0.00162	3.15E-06	0.189569	0.588645	1.801545
3.94	0.2644	-0.00162	3.15E-06	0.189534	0.588536	1.801349
3.94	0.2644	-0.00162	3.15E-06	0.189499	0.588427	1.801153
3.94	0.2644	-0.00162	3.15E-06	0.189464	0.588319	1.800958
3.94	0.2644	-0.00162	3.15E-06	0.189429	0.58821	1.800763
3.94	0.2644	-0.00162	3.15E-06	0.189395	0.588102	1.800568
3.94	0.2644	-0.00162	3.15E-06	0.18936	0.587994	1.800374
3.94	0.2644	-0.00162	3.15E-06	0.189325	0.587887	1.80018
3.94	0.2644	-0.00162	3.15E-06	0.18929	0.587779	1.799986
3.94	0.2644	-0.00162	3.15E-06	0.189256	0.587672	1.799793
3.94	0.2644	-0.00162	3.15E-06	0.189221	0.587564	1.7996
3.94	0.2644	-0.00162	3.15E-06	0.189187	0.587457	1.799407
3.94	0.2644	-0.00162	3.15E-06	0.189152	0.58735	1.799215
3.94	0.2644	-0.00162	3.15E-06	0.189118	0.587244	1.799023
3.94	0.2644	-0.00162	3.15E-06	0.189084	0.587137	1.798831
3.94	0.2644	-0.00162	3.15E-06	0.189049	0.58703	1.798639
3.95	0.2644	-0.00162	3.15E-06	0.189015	0.586924	1.798448
3.95	0.2644	-0.00162	3.15E-06	0.188981	0.586818	1.798257
3.95	0.2644	-0.00162	3.15E-06	0.188947	0.586712	1.798067
3.95	0.2644	-0.00162	3.15E-06	0.188913	0.586606	1.797877
3.95	0.2644	-0.00162	3.15E-06	0.188879	0.586501	1.797687
3.95	0.2644	-0.00162	3.15E-06	0.188845	0.586395	1.797497
3.95	0.2644	-0.00162	3.15E-06	0.188811	0.58629	1.797308
3.95	0.2644	-0.00162	3.15E-06	0.188777	0.586185	1.797119
3.95	0.2644	-0.00162	3.15E-06	0.188743	0.58608	1.79693
3.95	0.2644	-0.00162	3.15E-06	0.188709	0.585975	1.796742
3.95	0.2644	-0.00162	3.15E-06	0.188676	0.58587	1.796554
3.95	0.2644	-0.00162	3.15E-06	0.188642	0.585766	1.796366
3.95	0.2644	-0.00162	3.15E-06	0.188608	0.585661	1.796179
3.95	0.2644	-0.00162	3.15E-06	0.188575	0.585557	1.795991
3.95	0.2644	-0.00162	3.15E-06	0.188541	0.585453	1.795805
3.95	0.2644	-0.00162	3.15E-06	0.188508	0.585349	1.795618

3.95	0.2644	-0.00162	3.15E-06	0.188475	0.585245	1.795432
3.95	0.2644	-0.00162	3.15E-06	0.188441	0.585142	1.795246
3.95	0.2644	-0.00162	3.15E-06	0.188408	0.585038	1.79506
3.95	0.2644	-0.00162	3.15E-06	0.188375	0.584935	1.794875
3.96	0.2644	-0.00162	3.15E-06	0.188341	0.584832	1.79469
3.96	0.2644	-0.00162	3.15E-06	0.188308	0.584729	1.794505
3.96	0.2644	-0.00162	3.15E-06	0.188275	0.584626	1.79432
3.96	0.2644	-0.00162	3.15E-06	0.188242	0.584524	1.794136
3.96	0.2644	-0.00162	3.15E-06	0.188209	0.584421	1.793952
3.96	0.2644	-0.00162	3.15E-06	0.188176	0.584319	1.793768
3.96	0.2644	-0.00162	3.15E-06	0.188143	0.584216	1.793585
3.96	0.2644	-0.00162	3.15E-06	0.18811	0.584114	1.793402
3.96	0.2644	-0.00162	3.15E-06	0.188077	0.584012	1.793219
3.96	0.2644	-0.00162	3.15E-06	0.188045	0.583911	1.793037
3.96	0.2644	-0.00162	3.15E-06	0.188012	0.583809	1.792855
3.96	0.2644	-0.00162	3.15E-06	0.187979	0.583708	1.792673
3.96	0.2644	-0.00162	3.15E-06	0.187947	0.583606	1.792491
3.96	0.2644	-0.00162	3.15E-06	0.187914	0.583505	1.79231
3.96	0.2644	-0.00162	3.15E-06	0.187881	0.583404	1.792128
3.96	0.2644	-0.00162	3.15E-06	0.187849	0.583303	1.791948
3.96	0.2644	-0.00162	3.15E-06	0.187817	0.583202	1.791767
3.96	0.2644	-0.00162	3.15E-06	0.187784	0.583102	1.791587
3.96	0.2644	-0.00162	3.15E-06	0.187752	0.583001	1.791407
3.96	0.2644	-0.00162	3.15E-06	0.187719	0.582901	1.791227
3.97	0.2644	-0.00162	3.15E-06	0.187687	0.582801	1.791048
3.97	0.2644	-0.00162	3.15E-06	0.187655	0.582701	1.790869
3.97	0.2644	-0.00162	3.15E-06	0.187623	0.582601	1.79069
3.97	0.2644	-0.00162	3.15E-06	0.187591	0.582501	1.790511
3.97	0.2644	-0.00162	3.15E-06	0.187559	0.582401	1.790333
3.97	0.2644	-0.00162	3.15E-06	0.187527	0.582302	1.790155
3.97	0.2644	-0.00162	3.15E-06	0.187495	0.582203	1.789977
3.97	0.2644	-0.00162	3.15E-06	0.187463	0.582104	1.789799
3.97	0.2644	-0.00162	3.15E-06	0.187431	0.582004	1.789622
3.97	0.2644	-0.00162	3.15E-06	0.187399	0.581906	1.789445
3.97	0.2644	-0.00162	3.15E-06	0.187367	0.581807	1.789268
3.97	0.2644	-0.00162	3.15E-06	0.187335	0.581708	1.789092

Location Index	
England and Wales	1
Scotland and Ireland	2

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Table 6.1 Values of Constants to calculate Cr

Geographic Location	Range of M5-D	Location Index	J0	J1	J2
England and Wales	0-10	1	0.1699	0.0028	0.000114
	11-30		0.1644	0.005831	-0.00013
	31-75		0.2644	-0.00162	3.15E-06
	76-150		0.2718	-0.00195	6.19E-06
	>150		0.1454	-0.00019	1.14E-07

Integra Consulting							Job No	Date
							3301	10.02.2022
Calculations							Sheet	By
							01	JS
Job Title Withington								
Storm Water Flood Model								
M5-60 = 18.00			r = 0.36		Return, T = 100		Area (m²) = 978	
					CC Factor = 0.40		Limit (l/s) = 2.0	
					Totals		29 47	
D (mins)	M5-D (mm)	MT-D (mm)	Rate (mm/hr)	Flow (l/s)	CC Flow (l/s)	Storage (m³)	CC Storage (m³)	
10.00	9.14	17.27	103.65	27.98	39.17	15.59	22.30	
15.00	10.96	21.32	85.28	23.02	32.23	18.92	27.20	
20.00	12.31	24.07	72.21	19.49	27.29	20.99	30.34	
25.00	13.40	26.40	63.36	17.10	23.94	22.65	32.92	
30.00	14.31	28.36	56.72	15.31	21.44	23.96	34.98	
35.00	15.10	30.06	51.53	13.91	19.47	25.01	36.70	
40.00	15.79	31.56	47.34	12.78	17.89	25.87	38.14	
45.00	16.42	32.91	43.88	11.84	16.58	26.58	39.37	
50.00	16.99	34.13	40.96	11.06	15.48	27.17	40.44	
55.00	17.51	35.26	38.46	10.38	14.53	27.66	41.37	
60.00	18.00	36.29	36.29	9.80	13.72	28.07	42.18	
65.00	18.45	37.26	34.39	9.28	13.00	28.41	42.89	
70.00	18.88	38.16	32.71	8.83	12.36	28.68	43.51	
75.00	19.28	39.01	31.21	8.42	11.79	28.90	44.07	
80.00	19.66	39.81	29.85	8.06	11.28	29.08	44.55	
85.00	20.02	40.56	28.63	7.73	10.82	29.21	44.98	
90.00	20.37	41.28	27.52	7.43	10.40	29.31	45.36	
95.00	20.70	41.96	26.50	7.15	10.01	29.38	45.69	
100.00	21.02	42.61	25.57	6.90	9.66	29.41	45.97	
105.00	21.32	43.24	24.71	6.67	9.34	29.41	46.22	
110.00	21.61	43.83	23.91	6.45	9.03	29.39	46.43	
115.00	21.90	44.40	23.17	6.25	8.75	29.35	46.61	
120.00	22.17	44.95	22.48	6.07	8.49	29.28	46.76	
125.00	22.43	45.48	21.83	5.89	8.25	29.20	46.88	
130.00	22.69	45.99	21.23	5.73	8.02	29.10	46.97	
135.00	22.94	46.49	20.66	5.58	7.81	28.97	47.04	
140.00	23.18	46.96	20.13	5.43	7.61	28.84	47.09	
145.00	23.41	47.42	19.62	5.30	7.42	28.68	47.12	
150.00	23.64	47.87	19.15	5.17	7.24	28.52	47.13	
155.00	23.86	48.30	18.70	5.05	7.07	28.34	47.11	
160.00	24.08	48.72	18.27	4.93	6.90	28.15	47.08	
165.00	24.29	49.13	17.87	4.82	6.75	27.94	47.04	
170.00	24.50	49.52	17.48	4.72	6.61	27.73	46.98	
175.00	24.70	49.91	17.11	4.62	6.47	27.50	46.90	
180.00	24.90	50.28	16.76	4.52	6.33	27.26	46.81	
185.00	25.09	50.65	16.43	4.43	6.21	27.02	46.70	
190.00	25.28	51.00	16.11	4.35	6.09	26.76	46.59	
195.00	25.47	51.35	15.80	4.26	5.97	26.50	46.46	
200.00	25.65	51.69	15.51	4.19	5.86	26.22	46.31	

205.00	25.83	52.01	15.22	4.11	5.75	25.94	46.16
210.00	26.01	52.33	14.95	4.04	5.65	25.66	46.00
215.00	26.18	52.65	14.69	3.97	5.55	25.36	45.82
220.00	26.35	52.95	14.44	3.90	5.46	25.06	45.64
225.00	26.51	53.25	14.20	3.83	5.37	24.75	45.45
230.00	26.68	53.55	13.97	3.77	5.28	24.43	45.25
235.00	26.84	53.83	13.74	3.71	5.19	24.11	45.04
240.00	27.00	54.11	13.53	3.65	5.11	23.78	44.82
245.00	27.15	54.39	13.32	3.60	5.03	23.45	44.59
250.00	27.31	54.66	13.12	3.54	4.96	23.11	44.36
255.00	27.46	54.92	12.92	3.49	4.88	22.77	44.11
260.00	27.61	55.18	12.73	3.44	4.81	22.42	43.86
265.00	27.75	55.43	12.55	3.39	4.74	22.06	43.61
270.00	27.90	55.68	12.37	3.34	4.68	21.70	43.34
275.00	28.04	55.92	12.20	3.29	4.61	21.34	43.07
280.00	28.18	56.16	12.03	3.25	4.55	20.97	42.80
285.00	28.32	56.39	11.87	3.20	4.49	20.60	42.52
290.00	28.45	56.62	11.71	3.16	4.43	20.22	42.23
295.00	28.59	56.84	11.56	3.12	4.37	19.84	41.93
300.00	28.72	57.07	11.41	3.08	4.31	19.45	41.63
305.00	28.85	57.28	11.27	3.04	4.26	19.06	41.33
310.00	28.98	57.50	11.13	3.00	4.21	18.67	41.02
315.00	29.11	57.71	10.99	2.97	4.15	18.27	40.70
320.00	29.24	57.91	10.86	2.93	4.10	17.87	40.38
325.00	29.37	58.11	10.73	2.90	4.05	17.47	40.06
330.00	29.49	58.31	10.60	2.86	4.01	17.06	39.73
335.00	29.61	58.51	10.48	2.83	3.96	16.65	39.40
340.00	29.73	58.70	10.36	2.80	3.91	16.24	39.06
345.00	29.85	58.89	10.24	2.76	3.87	15.82	38.71
350.00	29.97	59.07	10.13	2.73	3.83	15.40	38.37
355.00	30.09	59.26	10.02	2.70	3.78	14.98	38.02
360.00	30.20	59.44	9.91	2.67	3.74	14.56	37.66
365.00	30.32	59.61	9.80	2.65	3.70	14.13	37.30
370.00	30.43	59.79	9.70	2.62	3.66	13.70	36.94
375.00	30.55	59.96	9.59	2.59	3.63	13.27	36.57
380.00	30.66	60.13	9.49	2.56	3.59	12.83	36.20
385.00	30.77	60.29	9.40	2.54	3.55	12.39	35.83
390.00	30.88	60.46	9.30	2.51	3.51	11.95	35.45
395.00	30.98	60.62	9.21	2.49	3.48	11.51	35.07
400.00	31.09	61.00	9.15	2.47	3.46	11.28	34.99
405.00	31.20	61.18	9.06	2.45	3.43	10.85	34.63
410.00	31.30	61.36	8.98	2.42	3.39	10.42	34.27
415.00	31.41	61.53	8.90	2.40	3.36	9.99	33.91
420.00	31.51	61.71	8.82	2.38	3.33	9.56	33.55
425.00	31.61	61.88	8.74	2.36	3.30	9.13	33.18
430.00	31.71	62.05	8.66	2.34	3.27	8.70	32.82
435.00	31.81	62.22	8.58	2.32	3.24	8.26	32.45
440.00	31.91	62.39	8.51	2.30	3.21	7.82	32.07
445.00	32.01	62.55	8.43	2.28	3.19	7.39	31.70
450.00	32.11	62.72	8.36	2.26	3.16	6.95	31.32

455.00	32.21	62.88	8.29	2.24	3.13	6.50	30.95
460.00	32.30	63.04	8.22	2.22	3.11	6.06	30.56
465.00	32.40	63.20	8.16	2.20	3.08	5.62	30.18
470.00	32.49	63.36	8.09	2.18	3.06	5.17	29.80
475.00	32.59	63.52	8.02	2.17	3.03	4.72	29.41
480.00	32.68	63.67	7.96	2.15	3.01	4.27	29.02
485.00	32.77	63.83	7.90	2.13	2.98	3.82	28.63
490.00	32.87	63.98	7.83	2.11	2.96	3.37	28.24
495.00	32.96	64.13	7.77	2.10	2.94	2.92	27.85
500.00	33.05	64.28	7.71	2.08	2.92	2.47	27.45
505.00	33.14	64.43	7.66	2.07	2.89	2.01	27.06
510.00	33.23	64.58	7.60	2.05	2.87	1.56	26.66
515.00	33.32	64.73	7.54	2.04	2.85	1.10	26.26
520.00	33.40	64.87	7.49	2.02	2.83	0.64	25.86
525.00	33.49	65.02	7.43	2.01	2.81	0.18	25.45
530.00	33.58	65.16	7.38	1.99	2.79	-0.28	25.05
535.00	33.66	65.30	7.32	1.98	2.77	-0.74	24.64
540.00	33.75	65.45	7.27	1.96	2.75	-1.20	24.23
545.00	33.83	65.59	7.22	1.95	2.73	-1.67	23.82
550.00	33.92	65.72	7.17	1.94	2.71	-2.13	23.41
555.00	34.00	65.86	7.12	1.92	2.69	-2.60	23.00
560.00	34.08	66.00	7.07	1.91	2.67	-3.07	22.59
565.00	34.17	66.14	7.02	1.90	2.65	-3.53	22.17
570.00	34.25	66.27	6.98	1.88	2.64	-4.00	21.76
575.00	34.33	66.40	6.93	1.87	2.62	-4.47	21.34
580.00	34.41	66.54	6.88	1.86	2.60	-4.94	20.92
585.00	34.49	66.67	6.84	1.85	2.58	-5.41	20.50
590.00	34.57	66.80	6.79	1.83	2.57	-5.89	20.08
595.00	34.65	66.93	6.75	1.82	2.55	-6.36	19.66
600.00	34.73	67.06	6.71	1.81	2.53	-6.83	19.23
605.00	34.81	67.19	6.66	1.80	2.52	-7.31	18.81
610.00	34.89	67.32	6.62	1.79	2.50	-7.79	18.38
615.00	34.96	67.44	6.58	1.78	2.49	-8.26	17.95
620.00	35.04	67.57	6.54	1.77	2.47	-8.74	17.52
625.00	35.12	67.69	6.50	1.75	2.46	-9.22	17.09
630.00	35.19	67.82	6.46	1.74	2.44	-9.70	16.66
635.00	35.27	67.94	6.42	1.73	2.43	-10.18	16.23
640.00	35.34	68.07	6.38	1.72	2.41	-10.66	15.80
645.00	35.42	68.19	6.34	1.71	2.40	-11.14	15.36
650.00	35.49	68.31	6.31	1.70	2.38	-11.62	14.93
655.00	35.57	68.43	6.27	1.69	2.37	-12.11	14.49
660.00	35.64	68.55	6.23	1.68	2.35	-12.59	14.06
665.00	35.71	68.67	6.20	1.67	2.34	-13.07	13.62
670.00	35.79	68.78	6.16	1.66	2.33	-13.56	13.18
675.00	35.86	68.90	6.12	1.65	2.31	-14.05	12.74
680.00	35.93	69.02	6.09	1.64	2.30	-14.53	12.30
685.00	36.00	69.13	6.06	1.63	2.29	-15.02	11.85
690.00	36.07	69.25	6.02	1.63	2.28	-15.51	11.41
695.00	36.14	69.36	5.99	1.62	2.26	-16.00	10.97
700.00	36.21	69.48	5.96	1.61	2.25	-16.49	10.52

705.00	36.28	69.59	5.92	1.60	2.24	-16.98	10.07
710.00	36.35	69.70	5.89	1.59	2.23	-17.47	9.63
715.00	36.42	69.82	5.86	1.58	2.21	-17.96	9.18
720.00	36.49	69.93	5.83	1.57	2.20	-18.45	8.73
725.00	36.56	70.04	5.80	1.56	2.19	-18.94	8.28
730.00	36.63	70.15	5.77	1.56	2.18	-19.43	7.83
735.00	36.70	70.26	5.74	1.55	2.17	-19.93	7.38
740.00	36.76	70.37	5.71	1.54	2.16	-20.42	6.93
745.00	36.83	70.47	5.68	1.53	2.14	-20.92	6.47
750.00	36.90	70.58	5.65	1.52	2.13	-21.41	6.02
755.00	36.96	70.69	5.62	1.52	2.12	-21.91	5.57
760.00	37.03	70.79	5.59	1.51	2.11	-22.41	5.11
765.00	37.10	70.90	5.56	1.50	2.10	-22.90	4.65
770.00	37.16	71.01	5.53	1.49	2.09	-23.40	4.20
775.00	37.23	71.11	5.51	1.49	2.08	-23.90	3.74
780.00	37.29	71.21	5.48	1.48	2.07	-24.40	3.28
785.00	37.36	71.32	5.45	1.47	2.06	-24.90	2.82
790.00	37.42	71.42	5.42	1.46	2.05	-25.40	2.36
795.00	37.48	71.52	5.40	1.46	2.04	-25.90	1.90
800.00	37.55	71.62	5.37	1.45	2.03	-26.40	1.44
805.00	37.61	71.73	5.35	1.44	2.02	-26.90	0.98
810.00	37.68	71.83	5.32	1.44	2.01	-27.40	0.52
815.00	37.74	71.93	5.30	1.43	2.00	-27.91	0.05
820.00	37.80	72.03	5.27	1.42	1.99	-28.41	-0.41
825.00	37.86	72.13	5.25	1.42	1.98	-28.91	-0.88
830.00	37.92	72.22	5.22	1.41	1.97	-29.42	-1.34
835.00	37.99	72.32	5.20	1.40	1.96	-29.92	-1.81
840.00	38.05	72.42	5.17	1.40	1.95	-30.43	-2.28
845.00	38.11	72.52	5.15	1.39	1.95	-30.93	-2.74
850.00	38.17	72.61	5.13	1.38	1.94	-31.44	-3.21
855.00	38.23	72.71	5.10	1.38	1.93	-31.94	-3.68
860.00	38.29	72.81	5.08	1.37	1.92	-32.45	-4.15
865.00	38.35	72.90	5.06	1.36	1.91	-32.96	-4.62
870.00	38.41	73.00	5.03	1.36	1.90	-33.47	-5.09
875.00	38.47	73.09	5.01	1.35	1.89	-33.97	-5.56
880.00	38.53	73.19	4.99	1.35	1.89	-34.48	-6.03
885.00	38.59	73.28	4.97	1.34	1.88	-34.99	-6.51
890.00	38.65	73.37	4.95	1.34	1.87	-35.50	-6.98
895.00	38.71	73.47	4.93	1.33	1.86	-36.01	-7.45
900.00	38.76	73.56	4.90	1.32	1.85	-36.52	-7.93
905.00	38.82	73.65	4.88	1.32	1.85	-37.03	-8.40
910.00	38.88	73.74	4.86	1.31	1.84	-37.54	-8.88
915.00	38.94	73.83	4.84	1.31	1.83	-38.05	-9.36
920.00	38.99	73.92	4.82	1.30	1.82	-38.57	-9.83
925.00	39.05	74.01	4.80	1.30	1.81	-39.08	-10.31
930.00	39.11	74.10	4.78	1.29	1.81	-39.59	-10.79
935.00	39.17	74.19	4.76	1.29	1.80	-40.10	-11.26
940.00	39.22	74.28	4.74	1.28	1.79	-40.62	-11.74
945.00	39.28	74.37	4.72	1.27	1.78	-41.13	-12.22
950.00	39.33	74.46	4.70	1.27	1.78	-41.65	-12.70

955.00	39.39	74.55	4.68	1.26	1.77	-42.16	-13.18
960.00	39.45	74.63	4.66	1.26	1.76	-42.67	-13.66
965.00	39.50	74.72	4.65	1.25	1.76	-43.19	-14.15
970.00	39.56	74.81	4.63	1.25	1.75	-43.71	-14.63
975.00	39.61	74.89	4.61	1.24	1.74	-44.22	-15.11
980.00	39.67	74.98	4.59	1.24	1.73	-44.74	-15.59
985.00	39.72	75.07	4.57	1.23	1.73	-45.25	-16.08
990.00	39.77	75.15	4.55	1.23	1.72	-45.77	-16.56
995.00	39.83	75.24	4.54	1.22	1.71	-46.29	-17.05
1000.00	39.88	75.32	4.52	1.22	1.71	-46.81	-17.53
1005.00	39.94	75.41	4.50	1.22	1.70	-47.33	-18.02
1010.00	39.99	75.49	4.48	1.21	1.69	-47.84	-18.50
1015.00	40.04	75.57	4.47	1.21	1.69	-48.36	-18.99
1020.00	40.10	75.66	4.45	1.20	1.68	-48.88	-19.47
1025.00	40.15	75.74	4.43	1.20	1.68	-49.40	-19.96
1030.00	40.20	75.82	4.42	1.19	1.67	-49.92	-20.45
1035.00	40.25	75.90	4.40	1.19	1.66	-50.44	-20.94
1040.00	40.31	75.99	4.38	1.18	1.66	-50.96	-21.43
1045.00	40.36	76.07	4.37	1.18	1.65	-51.48	-21.92
1050.00	40.41	76.15	4.35	1.17	1.64	-52.00	-22.40
1055.00	40.46	76.23	4.34	1.17	1.64	-52.52	-22.89
1060.00	40.51	76.31	4.32	1.17	1.63	-53.05	-23.39
1065.00	40.57	76.39	4.30	1.16	1.63	-53.57	-23.88
1070.00	40.62	76.47	4.29	1.16	1.62	-54.09	-24.37
1075.00	40.67	76.55	4.27	1.15	1.61	-54.61	-24.86
1080.00	40.72	76.63	4.26	1.15	1.61	-55.14	-25.35
1085.00	40.77	76.71	4.24	1.15	1.60	-55.66	-25.84
1090.00	40.82	76.79	4.23	1.14	1.60	-56.18	-26.34
1095.00	40.87	76.87	4.21	1.14	1.59	-56.71	-26.83
1100.00	40.92	76.94	4.20	1.13	1.59	-57.23	-27.32
1105.00	40.97	77.02	4.18	1.13	1.58	-57.76	-27.82
1110.00	41.02	77.10	4.17	1.12	1.57	-58.28	-28.31
1115.00	41.07	77.18	4.15	1.12	1.57	-58.80	-28.81
1120.00	41.12	77.25	4.14	1.12	1.56	-59.33	-29.30
1125.00	41.17	77.33	4.12	1.11	1.56	-59.86	-29.80
1130.00	41.22	77.41	4.11	1.11	1.55	-60.38	-30.29
1135.00	41.27	77.48	4.10	1.11	1.55	-60.91	-30.79
1140.00	41.32	77.56	4.08	1.10	1.54	-61.43	-31.29
1145.00	41.37	77.63	4.07	1.10	1.54	-61.96	-31.78
1150.00	41.42	77.71	4.05	1.09	1.53	-62.49	-32.28
1155.00	41.46	77.78	4.04	1.09	1.53	-63.01	-32.78
1160.00	41.51	77.86	4.03	1.09	1.52	-63.54	-33.28
1165.00	41.56	77.93	4.01	1.08	1.52	-64.07	-33.78
1170.00	41.61	78.01	4.00	1.08	1.51	-64.60	-34.28
1175.00	41.66	78.08	3.99	1.08	1.51	-65.13	-34.78
1180.00	41.70	78.15	3.97	1.07	1.50	-65.65	-35.28
1185.00	41.75	78.23	3.96	1.07	1.50	-66.18	-35.78
1190.00	41.80	78.30	3.95	1.07	1.49	-66.71	-36.28
1195.00	41.85	78.37	3.94	1.06	1.49	-67.24	-36.78
1200.00	41.89	78.45	3.92	1.06	1.48	-67.77	-37.28

1205.00	41.94	78.52	3.91	1.06	1.48	-68.30	-37.78
1210.00	41.99	78.59	3.90	1.05	1.47	-68.83	-38.28
1215.00	42.03	78.66	3.88	1.05	1.47	-69.36	-38.78
1220.00	42.08	78.73	3.87	1.05	1.46	-69.89	-39.29
1225.00	42.13	78.81	3.86	1.04	1.46	-70.42	-39.79
1230.00	42.17	78.88	3.85	1.04	1.45	-70.95	-40.29
1235.00	42.22	78.95	3.84	1.04	1.45	-71.48	-40.80
1240.00	42.26	79.02	3.82	1.03	1.44	-72.01	-41.30
1245.00	42.31	79.09	3.81	1.03	1.44	-72.55	-41.80
1250.00	42.36	79.16	3.80	1.03	1.44	-73.08	-42.31
1255.00	42.40	79.23	3.79	1.02	1.43	-73.61	-42.81
1260.00	42.45	79.30	3.78	1.02	1.43	-74.14	-43.32
1265.00	42.49	79.37	3.76	1.02	1.42	-74.67	-43.82
1270.00	42.54	79.44	3.75	1.01	1.42	-75.21	-44.33
1275.00	42.58	79.51	3.74	1.01	1.41	-75.74	-44.84
1280.00	42.63	79.58	3.73	1.01	1.41	-76.27	-45.34
1285.00	42.67	79.64	3.72	1.00	1.41	-76.81	-45.85
1290.00	42.72	79.71	3.71	1.00	1.40	-77.34	-46.36
1295.00	42.76	79.78	3.70	1.00	1.40	-77.87	-46.86
1300.00	42.81	79.85	3.69	0.99	1.39	-78.41	-47.37
1305.00	42.85	79.92	3.67	0.99	1.39	-78.94	-47.88
1310.00	42.89	79.98	3.66	0.99	1.38	-79.48	-48.39
1315.00	42.94	80.05	3.65	0.99	1.38	-80.01	-48.89
1320.00	42.98	80.12	3.64	0.98	1.38	-80.55	-49.40
1325.00	43.03	80.19	3.63	0.98	1.37	-81.08	-49.91
1330.00	43.07	80.25	3.62	0.98	1.37	-81.62	-50.42
1335.00	43.11	80.32	3.61	0.97	1.36	-82.15	-50.93
1340.00	43.16	80.39	3.60	0.97	1.36	-82.69	-51.44
1345.00	43.20	80.45	3.59	0.97	1.36	-83.22	-51.95
1350.00	43.24	80.52	3.58	0.97	1.35	-83.76	-52.46
1355.00	43.29	80.58	3.57	0.96	1.35	-84.29	-52.97
1360.00	43.33	80.65	3.56	0.96	1.34	-84.83	-53.48
1365.00	43.37	80.71	3.55	0.96	1.34	-85.37	-53.99
1370.00	43.41	80.78	3.54	0.95	1.34	-85.90	-54.51
1375.00	43.46	80.84	3.53	0.95	1.33	-86.44	-55.02
1380.00	43.50	80.91	3.52	0.95	1.33	-86.98	-55.53
1385.00	43.54	80.97	3.51	0.95	1.33	-87.52	-56.04
1390.00	43.58	81.04	3.50	0.94	1.32	-88.05	-56.55
1395.00	43.63	81.10	3.49	0.94	1.32	-88.59	-57.07
1400.00	43.67	81.16	3.48	0.94	1.31	-89.13	-57.58
1405.00	43.71	81.23	3.47	0.94	1.31	-89.67	-58.09
1410.00	43.75	81.29	3.46	0.93	1.31	-90.21	-58.61
1415.00	43.79	81.35	3.45	0.93	1.30	-90.74	-59.12
1420.00	43.84	81.42	3.44	0.93	1.30	-91.28	-59.64
1425.00	43.88	81.48	3.43	0.93	1.30	-91.82	-60.15
1430.00	43.92	81.54	3.42	0.92	1.29	-92.36	-60.66
1435.00	43.96	81.61	3.41	0.92	1.29	-92.90	-61.18
1440.00	44.00	81.67	3.40	0.92	1.29	-93.44	-61.69
1445.00	44.04	81.73	3.39	0.92	1.28	-93.98	-62.21
1450.00	44.08	81.79	3.38	0.91	1.28	-94.52	-62.73

1455.00	44.12	81.85	3.38	0.91	1.28	-95.06	-63.24
1460.00	44.16	81.92	3.37	0.91	1.27	-95.60	-63.76
1465.00	44.20	81.98	3.36	0.91	1.27	-96.14	-64.27
1470.00	44.25	82.04	3.35	0.90	1.27	-96.68	-64.79
1475.00	44.29	82.10	3.34	0.90	1.26	-97.22	-65.31
1480.00	44.33	82.16	3.33	0.90	1.26	-97.76	-65.82
1485.00	44.37	82.22	3.32	0.90	1.26	-98.30	-66.34
1490.00	44.41	82.28	3.31	0.89	1.25	-98.84	-66.86
1495.00	44.45	82.34	3.30	0.89	1.25	-99.38	-67.38
1500.00	44.49	82.40	3.30	0.89	1.25	-99.93	-67.90
1505.00	44.53	82.46	3.29	0.89	1.24	-100.47	-68.41
1510.00	44.57	82.52	3.28	0.89	1.24	-101.01	-68.93
1515.00	44.61	82.58	3.27	0.88	1.24	-101.55	-69.45
1520.00	44.65	82.64	3.26	0.88	1.23	-102.09	-69.97
1525.00	44.68	82.70	3.25	0.88	1.23	-102.63	-70.49
1530.00	44.72	82.76	3.25	0.88	1.23	-103.18	-71.01
1535.00	44.76	82.82	3.24	0.87	1.22	-103.72	-71.53
1540.00	44.80	82.88	3.23	0.87	1.22	-104.26	-72.05
1545.00	44.84	82.94	3.22	0.87	1.22	-104.81	-72.57
1550.00	44.88	83.00	3.21	0.87	1.21	-105.35	-73.09
1555.00	44.92	83.06	3.20	0.87	1.21	-105.89	-73.61
1560.00	44.96	83.11	3.20	0.86	1.21	-106.43	-74.13
1565.00	45.00	83.17	3.19	0.86	1.21	-106.98	-74.65
1570.00	45.04	83.23	3.18	0.86	1.20	-107.52	-75.17
1575.00	45.07	83.29	3.17	0.86	1.20	-108.07	-75.69
1580.00	45.11	83.35	3.17	0.85	1.20	-108.61	-76.21
1585.00	45.15	83.40	3.16	0.85	1.19	-109.15	-76.74
1590.00	45.19	83.46	3.15	0.85	1.19	-109.70	-77.26
1595.00	45.23	83.52	3.14	0.85	1.19	-110.24	-77.78
1600.00	45.27	83.57	3.13	0.85	1.18	-110.79	-78.30
1605.00	45.30	83.63	3.13	0.84	1.18	-111.33	-78.82
1610.00	45.34	83.69	3.12	0.84	1.18	-111.88	-79.35
1615.00	45.38	83.75	3.11	0.84	1.18	-112.42	-79.87
1620.00	45.42	83.80	3.10	0.84	1.17	-112.97	-80.39
1625.00	45.45	83.86	3.10	0.84	1.17	-113.51	-80.92
1630.00	45.49	83.91	3.09	0.83	1.17	-114.06	-81.44
1635.00	45.53	83.97	3.08	0.83	1.16	-114.60	-81.96
1640.00	45.57	84.03	3.07	0.83	1.16	-115.15	-82.49
1645.00	45.60	84.08	3.07	0.83	1.16	-115.69	-83.01
1650.00	45.64	84.14	3.06	0.83	1.16	-116.24	-83.54
1655.00	45.68	84.19	3.05	0.82	1.15	-116.79	-84.06
1660.00	45.72	84.25	3.05	0.82	1.15	-117.33	-84.58
1665.00	45.75	84.30	3.04	0.82	1.15	-117.88	-85.11
1670.00	45.79	84.36	3.03	0.82	1.15	-118.42	-85.63
1675.00	45.83	84.41	3.02	0.82	1.14	-118.97	-86.16
1680.00	45.86	84.47	3.02	0.81	1.14	-119.52	-86.69
1685.00	45.90	84.52	3.01	0.81	1.14	-120.07	-87.21
1690.00	45.94	84.58	3.00	0.81	1.13	-120.61	-87.74
1695.00	45.97	84.63	3.00	0.81	1.13	-121.16	-88.26
1700.00	46.01	84.69	2.99	0.81	1.13	-121.71	-88.79

1705.00	46.05	84.74	2.98	0.80	1.13	-122.25	-89.32
1710.00	46.08	84.79	2.98	0.80	1.12	-122.80	-89.84
1715.00	46.12	84.85	2.97	0.80	1.12	-123.35	-90.37
1720.00	46.15	84.90	2.96	0.80	1.12	-123.90	-90.90
1725.00	46.19	84.96	2.95	0.80	1.12	-124.44	-91.42
1730.00	46.23	85.01	2.95	0.80	1.11	-124.99	-91.95
1735.00	46.26	85.06	2.94	0.79	1.11	-125.54	-92.48
1740.00	46.30	85.12	2.94	0.79	1.11	-126.09	-93.00
1745.00	46.33	85.17	2.93	0.79	1.11	-126.64	-93.53
1750.00	46.37	85.22	2.92	0.79	1.10	-127.19	-94.06
1755.00	46.40	85.28	2.92	0.79	1.10	-127.73	-94.59
1760.00	46.44	85.33	2.91	0.79	1.10	-128.28	-95.12
1765.00	46.47	85.38	2.90	0.78	1.10	-128.83	-95.65
1770.00	46.51	85.43	2.90	0.78	1.09	-129.38	-96.17
1775.00	46.55	85.49	2.89	0.78	1.09	-129.93	-96.70
1780.00	46.58	85.54	2.88	0.78	1.09	-130.48	-97.23
1785.00	46.62	85.59	2.88	0.78	1.09	-131.03	-97.76
1790.00	46.65	85.64	2.87	0.77	1.08	-131.58	-98.29
1795.00	46.69	85.69	2.86	0.77	1.08	-132.13	-98.82
1800.00	46.72	85.75	2.86	0.77	1.08	-132.68	-99.35
1805.00	46.76	85.80	2.85	0.77	1.08	-133.23	-99.88
1810.00	46.79	85.85	2.85	0.77	1.08	-133.78	-100.41
1815.00	46.83	85.90	2.84	0.77	1.07	-134.33	-100.94
1820.00	46.86	85.95	2.83	0.76	1.07	-134.88	-101.47
1825.00	46.89	86.00	2.83	0.76	1.07	-135.43	-102.00
1830.00	46.93	86.05	2.82	0.76	1.07	-135.98	-102.53
1835.00	46.96	86.10	2.82	0.76	1.06	-136.53	-103.06
1840.00	47.00	86.15	2.81	0.76	1.06	-137.08	-103.59
1845.00	47.03	86.21	2.80	0.76	1.06	-137.63	-104.12
1850.00	47.07	86.26	2.80	0.76	1.06	-138.18	-104.65
1855.00	47.10	86.31	2.79	0.75	1.05	-138.73	-105.19
1860.00	47.13	86.36	2.79	0.75	1.05	-139.28	-105.72
1865.00	47.17	86.41	2.78	0.75	1.05	-139.83	-106.25
1870.00	47.20	86.46	2.77	0.75	1.05	-140.39	-106.78
1875.00	47.24	86.51	2.77	0.75	1.05	-140.94	-107.31
1880.00	47.27	86.56	2.76	0.75	1.04	-141.49	-107.84
1885.00	47.30	86.61	2.76	0.74	1.04	-142.04	-108.38
1890.00	47.34	86.66	2.75	0.74	1.04	-142.59	-108.91
1895.00	47.37	86.71	2.75	0.74	1.04	-143.14	-109.44
1900.00	47.40	86.76	2.74	0.74	1.04	-143.70	-109.98
1905.00	47.44	86.80	2.73	0.74	1.03	-144.25	-110.51
1910.00	47.47	86.85	2.73	0.74	1.03	-144.80	-111.04
1915.00	47.50	86.90	2.72	0.73	1.03	-145.35	-111.57
1920.00	47.54	86.95	2.72	0.73	1.03	-145.91	-112.11
1925.00	47.57	87.00	2.71	0.73	1.02	-146.46	-112.64
1930.00	47.60	87.05	2.71	0.73	1.02	-147.01	-113.17
1935.00	47.64	87.10	2.70	0.73	1.02	-147.56	-113.71
1940.00	47.67	87.15	2.70	0.73	1.02	-148.12	-114.24
1945.00	47.70	87.20	2.69	0.73	1.02	-148.67	-114.78
1950.00	47.74	87.24	2.68	0.72	1.01	-149.22	-115.31

1955.00	47.77	87.29	2.68	0.72	1.01	-149.78	-115.85
1960.00	47.80	87.34	2.67	0.72	1.01	-150.33	-116.38
1965.00	47.83	87.39	2.67	0.72	1.01	-150.88	-116.91
1970.00	47.87	87.44	2.66	0.72	1.01	-151.43	-117.45
1975.00	47.90	87.48	2.66	0.72	1.00	-151.99	-117.98
1980.00	47.93	87.53	2.65	0.72	1.00	-152.54	-118.52
1985.00	47.96	87.58	2.65	0.71	1.00	-153.10	-119.05
1990.00	48.00	87.63	2.64	0.71	1.00	-153.65	-119.59
1995.00	48.03	87.67	2.64	0.71	1.00	-154.20	-120.12
2000.00	48.06	87.72	2.63	0.71	0.99	-154.76	-120.66
2005.00	48.09	87.77	2.63	0.71	0.99	-155.31	-121.20
2010.00	48.13	87.82	2.62	0.71	0.99	-155.87	-121.73
2015.00	48.16	87.86	2.62	0.71	0.99	-156.42	-122.27
2020.00	48.19	87.91	2.61	0.70	0.99	-156.97	-122.80
2025.00	48.22	87.96	2.61	0.70	0.98	-157.53	-123.34
2030.00	48.25	88.00	2.60	0.70	0.98	-158.08	-123.88
2035.00	48.29	88.05	2.60	0.70	0.98	-158.64	-124.41
2040.00	48.32	88.10	2.59	0.70	0.98	-159.19	-124.95
2045.00	48.35	88.14	2.59	0.70	0.98	-159.75	-125.49
2050.00	48.38	88.19	2.58	0.70	0.98	-160.30	-126.02
2055.00	48.41	88.24	2.58	0.70	0.97	-160.86	-126.56
2060.00	48.44	88.28	2.57	0.69	0.97	-161.41	-127.10
2065.00	48.48	88.33	2.57	0.69	0.97	-161.97	-127.64
2070.00	48.51	88.37	2.56	0.69	0.97	-162.52	-128.17
2075.00	48.54	88.42	2.56	0.69	0.97	-163.08	-128.71
2080.00	48.57	88.47	2.55	0.69	0.96	-163.63	-129.25
2085.00	48.60	88.51	2.55	0.69	0.96	-164.19	-129.79
2090.00	48.63	88.56	2.54	0.69	0.96	-164.75	-130.32
2095.00	48.66	88.60	2.54	0.68	0.96	-165.30	-130.86
2100.00	48.70	88.65	2.53	0.68	0.96	-165.86	-131.40
2105.00	48.73	88.69	2.53	0.68	0.96	-166.41	-131.94
2110.00	48.76	88.74	2.52	0.68	0.95	-166.97	-132.48
2115.00	48.79	88.78	2.52	0.68	0.95	-167.53	-133.02
2120.00	48.82	88.83	2.51	0.68	0.95	-168.08	-133.55
2125.00	48.85	88.87	2.51	0.68	0.95	-168.64	-134.09
2130.00	48.88	88.92	2.50	0.68	0.95	-169.19	-134.63
2135.00	48.91	88.96	2.50	0.67	0.94	-169.75	-135.17
2140.00	48.94	89.01	2.50	0.67	0.94	-170.31	-135.71
2145.00	48.97	89.05	2.49	0.67	0.94	-170.86	-136.25
2150.00	49.00	89.10	2.49	0.67	0.94	-171.42	-136.79
2155.00	49.03	89.14	2.48	0.67	0.94	-171.98	-137.33
2160.00	49.06	89.19	2.48	0.67	0.94	-172.53	-137.87
2165.00	49.10	89.23	2.47	0.67	0.93	-173.09	-138.41
2170.00	49.13	89.27	2.47	0.67	0.93	-173.65	-138.95
2175.00	49.16	89.32	2.46	0.67	0.93	-174.21	-139.49
2180.00	49.19	89.36	2.46	0.66	0.93	-174.76	-140.03
2185.00	49.22	89.41	2.46	0.66	0.93	-175.32	-140.57
2190.00	49.25	89.45	2.45	0.66	0.93	-175.88	-141.11
2195.00	49.28	89.49	2.45	0.66	0.92	-176.43	-141.65
2200.00	49.31	89.54	2.44	0.66	0.92	-176.99	-142.19

2205.00	49.34	89.58	2.44	0.66	0.92	-177.55	-142.73
2210.00	49.37	89.63	2.43	0.66	0.92	-178.11	-143.27
2215.00	49.40	89.67	2.43	0.66	0.92	-178.67	-143.81
2220.00	49.43	89.71	2.42	0.65	0.92	-179.22	-144.35
2225.00	49.46	89.76	2.42	0.65	0.91	-179.78	-144.89
2230.00	49.49	89.80	2.42	0.65	0.91	-180.34	-145.43
2235.00	49.52	89.84	2.41	0.65	0.91	-180.90	-145.98
2240.00	49.55	89.88	2.41	0.65	0.91	-181.46	-146.52
2245.00	49.58	89.93	2.40	0.65	0.91	-182.01	-147.06
2250.00	49.61	89.97	2.40	0.65	0.91	-182.57	-147.60
2255.00	49.63	90.01	2.40	0.65	0.91	-183.13	-148.14
2260.00	49.66	90.06	2.39	0.65	0.90	-183.69	-148.68
2265.00	49.69	90.10	2.39	0.64	0.90	-184.25	-149.23
2270.00	49.72	90.14	2.38	0.64	0.90	-184.81	-149.77
2275.00	49.75	90.18	2.38	0.64	0.90	-185.36	-150.31
2280.00	49.78	90.23	2.37	0.64	0.90	-185.92	-150.85
2285.00	49.81	90.27	2.37	0.64	0.90	-186.48	-151.40
2290.00	49.84	90.31	2.37	0.64	0.89	-187.04	-151.94
2295.00	49.87	90.35	2.36	0.64	0.89	-187.60	-152.48
2300.00	49.90	90.40	2.36	0.64	0.89	-188.16	-153.02
2305.00	49.93	90.44	2.35	0.64	0.89	-188.72	-153.57
2310.00	49.96	90.48	2.35	0.63	0.89	-189.28	-154.11
2315.00	49.99	90.52	2.35	0.63	0.89	-189.84	-154.65
2320.00	50.01	90.56	2.34	0.63	0.89	-190.40	-155.20
2325.00	50.04	90.60	2.34	0.63	0.88	-190.96	-155.74
2330.00	50.07	90.65	2.33	0.63	0.88	-191.52	-156.28
2335.00	50.10	90.69	2.33	0.63	0.88	-192.08	-156.83
2340.00	50.13	90.73	2.33	0.63	0.88	-192.63	-157.37
2345.00	50.16	90.77	2.32	0.63	0.88	-193.19	-157.91
2350.00	50.19	90.81	2.32	0.63	0.88	-193.75	-158.46
2355.00	50.22	90.85	2.31	0.62	0.87	-194.31	-159.00
2360.00	50.24	90.89	2.31	0.62	0.87	-194.87	-159.54
2365.00	50.27	90.94	2.31	0.62	0.87	-195.43	-160.09
2370.00	50.30	90.98	2.30	0.62	0.87	-195.99	-160.63
2375.00	50.33	91.02	2.30	0.62	0.87	-196.55	-161.18
2380.00	50.36	91.06	2.30	0.62	0.87	-197.12	-161.72
2385.00	50.39	91.10	2.29	0.62	0.87	-197.68	-162.27
2390.00	50.41	91.14	2.29	0.62	0.86	-198.24	-162.81
2395.00	50.44	91.18	2.28	0.62	0.86	-198.80	-163.35
2400.00	50.47	91.22	2.28	0.62	0.86	-199.36	-163.90
2405.00	50.50	91.26	2.28	0.61	0.86	-199.92	-164.44
2410.00	50.53	91.30	2.27	0.61	0.86	-200.48	-164.99
2415.00	50.56	91.34	2.27	0.61	0.86	-201.04	-165.53
2420.00	50.58	91.38	2.27	0.61	0.86	-201.60	-166.08
2425.00	50.61	91.42	2.26	0.61	0.85	-202.16	-166.62
2430.00	50.64	91.46	2.26	0.61	0.85	-202.72	-167.17
2435.00	50.67	91.50	2.25	0.61	0.85	-203.28	-167.72
2440.00	50.70	91.54	2.25	0.61	0.85	-203.84	-168.26
2445.00	50.72	91.58	2.25	0.61	0.85	-204.40	-168.81
2450.00	50.75	91.62	2.24	0.61	0.85	-204.97	-169.35

2455.00	50.78	91.66	2.24	0.60	0.85	-205.53	-169.90
2460.00	50.81	91.70	2.24	0.60	0.85	-206.09	-170.44
2465.00	50.83	91.74	2.23	0.60	0.84	-206.65	-170.99
2470.00	50.86	91.78	2.23	0.60	0.84	-207.21	-171.54
2475.00	50.89	91.82	2.23	0.60	0.84	-207.77	-172.08
2480.00	50.92	91.86	2.22	0.60	0.84	-208.33	-172.63
2485.00	50.94	91.90	2.22	0.60	0.84	-208.90	-173.18
2490.00	50.97	91.94	2.22	0.60	0.84	-209.46	-173.72
2495.00	51.00	91.98	2.21	0.60	0.84	-210.02	-174.27
2500.00	51.03	92.02	2.21	0.60	0.83	-210.58	-174.81
2505.00	51.05	92.06	2.20	0.60	0.83	-211.14	-175.36
2510.00	51.08	92.10	2.20	0.59	0.83	-211.71	-175.91
2515.00	51.11	92.14	2.20	0.59	0.83	-212.27	-176.46
2520.00	51.14	92.17	2.19	0.59	0.83	-212.83	-177.00
2525.00	51.16	92.21	2.19	0.59	0.83	-213.39	-177.55
2530.00	51.19	92.25	2.19	0.59	0.83	-213.95	-178.10
2535.00	51.22	92.29	2.18	0.59	0.83	-214.52	-178.64
2540.00	51.24	92.33	2.18	0.59	0.82	-215.08	-179.19
2545.00	51.27	92.37	2.18	0.59	0.82	-215.64	-179.74
2550.00	51.30	92.41	2.17	0.59	0.82	-216.20	-180.29
2555.00	51.33	92.45	2.17	0.59	0.82	-216.77	-180.83
2560.00	51.35	92.48	2.17	0.59	0.82	-217.33	-181.38
2565.00	51.38	92.52	2.16	0.58	0.82	-217.89	-181.93
2570.00	51.41	92.56	2.16	0.58	0.82	-218.46	-182.48
2575.00	51.43	92.60	2.16	0.58	0.82	-219.02	-183.03
2580.00	51.46	92.64	2.15	0.58	0.81	-219.58	-183.57
2585.00	51.49	92.68	2.15	0.58	0.81	-220.14	-184.12
2590.00	51.51	92.71	2.15	0.58	0.81	-220.71	-184.67
2595.00	51.54	92.75	2.14	0.58	0.81	-221.27	-185.22
2600.00	51.57	92.79	2.14	0.58	0.81	-221.83	-185.77
2605.00	51.59	92.83	2.14	0.58	0.81	-222.40	-186.31
2610.00	51.62	92.86	2.13	0.58	0.81	-222.96	-186.86
2615.00	51.65	92.90	2.13	0.58	0.81	-223.52	-187.41
2620.00	51.67	92.94	2.13	0.57	0.80	-224.09	-187.96
2625.00	51.70	92.98	2.13	0.57	0.80	-224.65	-188.51
2630.00	51.73	93.02	2.12	0.57	0.80	-225.21	-189.06
2635.00	51.75	93.05	2.12	0.57	0.80	-225.78	-189.61
2640.00	51.78	93.09	2.12	0.57	0.80	-226.34	-190.16
2645.00	51.80	93.13	2.11	0.57	0.80	-226.90	-190.71
2650.00	51.83	93.17	2.11	0.57	0.80	-227.47	-191.25
2655.00	51.86	93.20	2.11	0.57	0.80	-228.03	-191.80
2660.00	51.88	93.24	2.10	0.57	0.79	-228.60	-192.35
2665.00	51.91	93.28	2.10	0.57	0.79	-229.16	-192.90
2670.00	51.94	93.31	2.10	0.57	0.79	-229.72	-193.45
2675.00	51.96	93.35	2.09	0.57	0.79	-230.29	-194.00
2680.00	51.99	93.39	2.09	0.56	0.79	-230.85	-194.55
2685.00	52.01	93.43	2.09	0.56	0.79	-231.42	-195.10
2690.00	52.04	93.46	2.08	0.56	0.79	-231.98	-195.65
2695.00	52.07	93.50	2.08	0.56	0.79	-232.54	-196.20
2700.00	52.09	93.54	2.08	0.56	0.79	-233.11	-196.75

2705.00	52.12	93.57	2.08	0.56	0.78	-233.67	-197.30
2710.00	52.14	93.61	2.07	0.56	0.78	-234.24	-197.85
2715.00	52.17	93.65	2.07	0.56	0.78	-234.80	-198.40
2720.00	52.19	93.68	2.07	0.56	0.78	-235.37	-198.95
2725.00	52.22	93.72	2.06	0.56	0.78	-235.93	-199.50
2730.00	52.25	93.75	2.06	0.56	0.78	-236.49	-200.05
2735.00	52.27	93.79	2.06	0.56	0.78	-237.06	-200.60
2740.00	52.30	93.83	2.05	0.55	0.78	-237.62	-201.15
2745.00	52.32	93.86	2.05	0.55	0.78	-238.19	-201.70
2750.00	52.35	93.90	2.05	0.55	0.77	-238.75	-202.26
2755.00	52.37	93.94	2.05	0.55	0.77	-239.32	-202.81
2760.00	52.40	93.97	2.04	0.55	0.77	-239.88	-203.36
2765.00	52.42	94.01	2.04	0.55	0.77	-240.45	-203.91
2770.00	52.45	94.04	2.04	0.55	0.77	-241.01	-204.46
2775.00	52.48	94.08	2.03	0.55	0.77	-241.58	-205.01
2780.00	52.50	94.12	2.03	0.55	0.77	-242.14	-205.56
2785.00	52.53	94.15	2.03	0.55	0.77	-242.71	-206.11
2790.00	52.55	94.19	2.03	0.55	0.77	-243.27	-206.66
2795.00	52.58	94.22	2.02	0.55	0.76	-243.84	-207.22
2800.00	52.60	94.26	2.02	0.55	0.76	-244.40	-207.77
2805.00	52.63	94.29	2.02	0.54	0.76	-244.97	-208.32
2810.00	52.65	94.33	2.01	0.54	0.76	-245.54	-208.87
2815.00	52.68	94.37	2.01	0.54	0.76	-246.10	-209.42
2820.00	52.70	94.40	2.01	0.54	0.76	-246.67	-209.97
2825.00	52.73	94.44	2.01	0.54	0.76	-247.23	-210.53
2830.00	52.75	94.47	2.00	0.54	0.76	-247.80	-211.08
2835.00	52.78	94.51	2.00	0.54	0.76	-248.36	-211.63
2840.00	52.80	94.54	2.00	0.54	0.75	-248.93	-212.18
2845.00	52.83	94.58	1.99	0.54	0.75	-249.50	-212.73
2850.00	52.85	94.61	1.99	0.54	0.75	-250.06	-213.29
2855.00	52.88	94.65	1.99	0.54	0.75	-250.63	-213.84
2860.00	52.90	94.68	1.99	0.54	0.75	-251.19	-214.39
2865.00	52.93	94.72	1.98	0.54	0.75	-251.76	-214.94
2870.00	52.95	94.75	1.98	0.53	0.75	-252.33	-215.50
2875.00	52.98	94.79	1.98	0.53	0.75	-252.89	-216.05
2880.00	53.00	94.82	1.98	0.53	0.75	-253.46	-216.60

Notes to User

Only values shown blue to be edited

Sheet only for england and wales

In M5-D	J0	J1	J2	Cr	In (MT-D/M5-D)	MT-D/M5-D
2.21	0.1699	0.0028	0.000114	0.205014	0.636605	1.890053
2.39	0.1699	0.0028	0.000114	0.214282	0.665383	1.945235
2.51	0.1644	0.005831	-0.00013	0.215837	0.670212	1.954651
2.60	0.1644	0.005831	-0.00013	0.218417	0.678221	1.97037
2.66	0.1644	0.005831	-0.00013	0.220337	0.684185	1.982156
2.71	0.1644	0.005831	-0.00013	0.22182	0.688788	1.9913
2.76	0.1644	0.005831	-0.00013	0.222992	0.692427	1.998561
2.80	0.1644	0.005831	-0.00013	0.223934	0.695354	2.004418
2.83	0.1644	0.005831	-0.00013	0.224701	0.697734	2.009195
2.86	0.1644	0.005831	-0.00013	0.225329	0.699684	2.013116
2.89	0.1644	0.005831	-0.00013	0.225845	0.701287	2.016345
2.92	0.1644	0.005831	-0.00013	0.226269	0.702605	2.019005
2.94	0.1644	0.005831	-0.00013	0.226617	0.703686	2.021189
2.96	0.1644	0.005831	-0.00013	0.226901	0.704567	2.02297
2.98	0.1644	0.005831	-0.00013	0.22713	0.705277	2.024408
3.00	0.1644	0.005831	-0.00013	0.227311	0.70584	2.025548
3.01	0.1644	0.005831	-0.00013	0.227451	0.706275	2.02643
3.03	0.1644	0.005831	-0.00013	0.227556	0.706599	2.027085
3.05	0.1644	0.005831	-0.00013	0.227628	0.706823	2.02754
3.06	0.1644	0.005831	-0.00013	0.227672	0.70696	2.027818
3.07	0.1644	0.005831	-0.00013	0.227691	0.707019	2.027937
3.09	0.1644	0.005831	-0.00013	0.227687	0.707008	2.027915
3.10	0.1644	0.005831	-0.00013	0.227664	0.706934	2.027766
3.11	0.1644	0.005831	-0.00013	0.227622	0.706804	2.027501
3.12	0.1644	0.005831	-0.00013	0.227563	0.706622	2.027132
3.13	0.1644	0.005831	-0.00013	0.227489	0.706393	2.026668
3.14	0.1644	0.005831	-0.00013	0.227402	0.706121	2.026117
3.15	0.1644	0.005831	-0.00013	0.227302	0.70581	2.025488
3.16	0.1644	0.005831	-0.00013	0.22719	0.705464	2.024786
3.17	0.1644	0.005831	-0.00013	0.227068	0.705084	2.024017
3.18	0.1644	0.005831	-0.00013	0.226936	0.704674	2.023188
3.19	0.1644	0.005831	-0.00013	0.226795	0.704236	2.022302
3.20	0.1644	0.005831	-0.00013	0.226645	0.703772	2.021364
3.21	0.1644	0.005831	-0.00013	0.226488	0.703284	2.020377
3.21	0.1644	0.005831	-0.00013	0.226324	0.702774	2.019346
3.22	0.1644	0.005831	-0.00013	0.226153	0.702243	2.018274
3.23	0.1644	0.005831	-0.00013	0.225975	0.701692	2.017163
3.24	0.1644	0.005831	-0.00013	0.225792	0.701124	2.016017
3.24	0.1644	0.005831	-0.00013	0.225604	0.700538	2.014837

3.25	0.1644	0.005831	-0.00013	0.22541	0.699937	2.013626
3.26	0.1644	0.005831	-0.00013	0.225212	0.699321	2.012386
3.26	0.1644	0.005831	-0.00013	0.225009	0.698691	2.011119
3.27	0.1644	0.005831	-0.00013	0.224802	0.698049	2.009827
3.28	0.1644	0.005831	-0.00013	0.224591	0.697394	2.008511
3.28	0.1644	0.005831	-0.00013	0.224377	0.696727	2.007173
3.29	0.1644	0.005831	-0.00013	0.224158	0.69605	2.005815
3.30	0.1644	0.005831	-0.00013	0.223937	0.695363	2.004437
3.30	0.1644	0.005831	-0.00013	0.223713	0.694666	2.00304
3.31	0.1644	0.005831	-0.00013	0.223485	0.69396	2.001627
3.31	0.1644	0.005831	-0.00013	0.223255	0.693246	2.000198
3.32	0.1644	0.005831	-0.00013	0.223023	0.692524	1.998754
3.32	0.1644	0.005831	-0.00013	0.222788	0.691794	1.997296
3.33	0.1644	0.005831	-0.00013	0.222551	0.691057	1.995825
3.33	0.1644	0.005831	-0.00013	0.222311	0.690314	1.994341
3.34	0.1644	0.005831	-0.00013	0.222069	0.689564	1.992846
3.34	0.1644	0.005831	-0.00013	0.221826	0.688807	1.991339
3.35	0.1644	0.005831	-0.00013	0.221581	0.688046	1.989823
3.35	0.1644	0.005831	-0.00013	0.221334	0.687279	1.988297
3.36	0.1644	0.005831	-0.00013	0.221085	0.686506	1.986762
3.36	0.1644	0.005831	-0.00013	0.220835	0.685729	1.985219
3.37	0.1644	0.005831	-0.00013	0.220583	0.684947	1.983667
3.37	0.1644	0.005831	-0.00013	0.22033	0.684161	1.982109
3.38	0.1644	0.005831	-0.00013	0.220075	0.683371	1.980543
3.38	0.1644	0.005831	-0.00013	0.219819	0.682577	1.978971
3.38	0.1644	0.005831	-0.00013	0.219563	0.681779	1.977393
3.39	0.1644	0.005831	-0.00013	0.219304	0.680978	1.975809
3.39	0.1644	0.005831	-0.00013	0.219045	0.680173	1.974219
3.40	0.1644	0.005831	-0.00013	0.218785	0.679365	1.972625
3.40	0.1644	0.005831	-0.00013	0.218524	0.678554	1.971026
3.40	0.1644	0.005831	-0.00013	0.218262	0.677741	1.969423
3.41	0.1644	0.005831	-0.00013	0.217999	0.676925	1.967816
3.41	0.1644	0.005831	-0.00013	0.217735	0.676106	1.966206
3.42	0.1644	0.005831	-0.00013	0.217471	0.675284	1.964592
3.42	0.1644	0.005831	-0.00013	0.217206	0.674461	1.962974
3.42	0.1644	0.005831	-0.00013	0.21694	0.673635	1.961354
3.43	0.1644	0.005831	-0.00013	0.216673	0.672807	1.959731
3.43	0.1644	0.005831	-0.00013	0.216406	0.671978	1.958106
3.43	0.1644	0.005831	-0.00013	0.216138	0.671146	1.956478
3.44	0.2644	-0.00162	3.15E-06	0.217046	0.673965	1.962001
3.44	0.2644	-0.00162	3.15E-06	0.216895	0.673496	1.961081
3.44	0.2644	-0.00162	3.15E-06	0.216745	0.673031	1.960169
3.45	0.2644	-0.00162	3.15E-06	0.216597	0.672571	1.959267
3.45	0.2644	-0.00162	3.15E-06	0.21645	0.672115	1.958374
3.45	0.2644	-0.00162	3.15E-06	0.216305	0.671663	1.95749
3.46	0.2644	-0.00162	3.15E-06	0.216161	0.671215	1.956614
3.46	0.2644	-0.00162	3.15E-06	0.216018	0.670772	1.955746
3.46	0.2644	-0.00162	3.15E-06	0.215876	0.670332	1.954887
3.47	0.2644	-0.00162	3.15E-06	0.215736	0.669897	1.954035
3.47	0.2644	-0.00162	3.15E-06	0.215597	0.669465	1.953192

3.47	0.2644	-0.00162	3.15E-06	0.215459	0.669037	1.952356
3.48	0.2644	-0.00162	3.15E-06	0.215322	0.668613	1.951528
3.48	0.2644	-0.00162	3.15E-06	0.215187	0.668192	1.950708
3.48	0.2644	-0.00162	3.15E-06	0.215053	0.667775	1.949894
3.48	0.2644	-0.00162	3.15E-06	0.214919	0.667362	1.949088
3.49	0.2644	-0.00162	3.15E-06	0.214787	0.666951	1.948289
3.49	0.2644	-0.00162	3.15E-06	0.214656	0.666545	1.947496
3.49	0.2644	-0.00162	3.15E-06	0.214526	0.666141	1.946711
3.50	0.2644	-0.00162	3.15E-06	0.214398	0.665741	1.945931
3.50	0.2644	-0.00162	3.15E-06	0.21427	0.665344	1.945159
3.50	0.2644	-0.00162	3.15E-06	0.214143	0.66495	1.944393
3.50	0.2644	-0.00162	3.15E-06	0.214017	0.664559	1.943633
3.51	0.2644	-0.00162	3.15E-06	0.213892	0.664171	1.942879
3.51	0.2644	-0.00162	3.15E-06	0.213768	0.663786	1.942131
3.51	0.2644	-0.00162	3.15E-06	0.213645	0.663404	1.941389
3.51	0.2644	-0.00162	3.15E-06	0.213523	0.663025	1.940653
3.52	0.2644	-0.00162	3.15E-06	0.213402	0.662648	1.939923
3.52	0.2644	-0.00162	3.15E-06	0.213281	0.662275	1.939198
3.52	0.2644	-0.00162	3.15E-06	0.213162	0.661904	1.938479
3.52	0.2644	-0.00162	3.15E-06	0.213043	0.661535	1.937765
3.53	0.2644	-0.00162	3.15E-06	0.212925	0.66117	1.937057
3.53	0.2644	-0.00162	3.15E-06	0.212809	0.660807	1.936354
3.53	0.2644	-0.00162	3.15E-06	0.212692	0.660446	1.935656
3.53	0.2644	-0.00162	3.15E-06	0.212577	0.660088	1.934963
3.54	0.2644	-0.00162	3.15E-06	0.212463	0.659733	1.934276
3.54	0.2644	-0.00162	3.15E-06	0.212349	0.65938	1.933593
3.54	0.2644	-0.00162	3.15E-06	0.212236	0.659029	1.932915
3.54	0.2644	-0.00162	3.15E-06	0.212124	0.658681	1.932242
3.55	0.2644	-0.00162	3.15E-06	0.212013	0.658335	1.931573
3.55	0.2644	-0.00162	3.15E-06	0.211902	0.657991	1.93091
3.55	0.2644	-0.00162	3.15E-06	0.211792	0.65765	1.93025
3.55	0.2644	-0.00162	3.15E-06	0.211683	0.65731	1.929596
3.55	0.2644	-0.00162	3.15E-06	0.211574	0.656973	1.928945
3.56	0.2644	-0.00162	3.15E-06	0.211466	0.656639	1.928299
3.56	0.2644	-0.00162	3.15E-06	0.211359	0.656306	1.927658
3.56	0.2644	-0.00162	3.15E-06	0.211253	0.655975	1.92702
3.56	0.2644	-0.00162	3.15E-06	0.211147	0.655646	1.926387
3.57	0.2644	-0.00162	3.15E-06	0.211042	0.65532	1.925758
3.57	0.2644	-0.00162	3.15E-06	0.210937	0.654995	1.925133
3.57	0.2644	-0.00162	3.15E-06	0.210833	0.654673	1.924512
3.57	0.2644	-0.00162	3.15E-06	0.21073	0.654352	1.923895
3.57	0.2644	-0.00162	3.15E-06	0.210627	0.654033	1.923282
3.58	0.2644	-0.00162	3.15E-06	0.210525	0.653716	1.922673
3.58	0.2644	-0.00162	3.15E-06	0.210424	0.653401	1.922067
3.58	0.2644	-0.00162	3.15E-06	0.210323	0.653088	1.921466
3.58	0.2644	-0.00162	3.15E-06	0.210223	0.652777	1.920868
3.58	0.2644	-0.00162	3.15E-06	0.210123	0.652467	1.920273
3.59	0.2644	-0.00162	3.15E-06	0.210024	0.65216	1.919682
3.59	0.2644	-0.00162	3.15E-06	0.209925	0.651854	1.919095
3.59	0.2644	-0.00162	3.15E-06	0.209827	0.65155	1.918511

3.59	0.2644	-0.00162	3.15E-06	0.20973	0.651247	1.917931
3.59	0.2644	-0.00162	3.15E-06	0.209633	0.650946	1.917354
3.60	0.2644	-0.00162	3.15E-06	0.209537	0.650647	1.916781
3.60	0.2644	-0.00162	3.15E-06	0.209441	0.650349	1.91621
3.60	0.2644	-0.00162	3.15E-06	0.209346	0.650054	1.915643
3.60	0.2644	-0.00162	3.15E-06	0.209251	0.649759	1.91508
3.60	0.2644	-0.00162	3.15E-06	0.209157	0.649467	1.914519
3.60	0.2644	-0.00162	3.15E-06	0.209063	0.649175	1.913962
3.61	0.2644	-0.00162	3.15E-06	0.208969	0.648886	1.913408
3.61	0.2644	-0.00162	3.15E-06	0.208877	0.648598	1.912857
3.61	0.2644	-0.00162	3.15E-06	0.208784	0.648311	1.912309
3.61	0.2644	-0.00162	3.15E-06	0.208693	0.648026	1.911763
3.61	0.2644	-0.00162	3.15E-06	0.208601	0.647742	1.911221
3.62	0.2644	-0.00162	3.15E-06	0.20851	0.64746	1.910682
3.62	0.2644	-0.00162	3.15E-06	0.20842	0.64718	1.910146
3.62	0.2644	-0.00162	3.15E-06	0.20833	0.6469	1.909613
3.62	0.2644	-0.00162	3.15E-06	0.208241	0.646623	1.909082
3.62	0.2644	-0.00162	3.15E-06	0.208152	0.646346	1.908554
3.62	0.2644	-0.00162	3.15E-06	0.208063	0.646071	1.908029
3.63	0.2644	-0.00162	3.15E-06	0.207975	0.645797	1.907507
3.63	0.2644	-0.00162	3.15E-06	0.207887	0.645525	1.906988
3.63	0.2644	-0.00162	3.15E-06	0.2078	0.645254	1.906471
3.63	0.2644	-0.00162	3.15E-06	0.207713	0.644984	1.905957
3.63	0.2644	-0.00162	3.15E-06	0.207627	0.644716	1.905445
3.63	0.2644	-0.00162	3.15E-06	0.20754	0.644449	1.904936
3.64	0.2644	-0.00162	3.15E-06	0.207455	0.644183	1.90443
3.64	0.2644	-0.00162	3.15E-06	0.20737	0.643918	1.903926
3.64	0.2644	-0.00162	3.15E-06	0.207285	0.643655	1.903425
3.64	0.2644	-0.00162	3.15E-06	0.2072	0.643393	1.902926
3.64	0.2644	-0.00162	3.15E-06	0.207116	0.643132	1.902429
3.64	0.2644	-0.00162	3.15E-06	0.207033	0.642872	1.901935
3.65	0.2644	-0.00162	3.15E-06	0.20695	0.642613	1.901444
3.65	0.2644	-0.00162	3.15E-06	0.206867	0.642356	1.900955
3.65	0.2644	-0.00162	3.15E-06	0.206784	0.6421	1.900468
3.65	0.2644	-0.00162	3.15E-06	0.206702	0.641845	1.899983
3.65	0.2644	-0.00162	3.15E-06	0.20662	0.641591	1.899501
3.65	0.2644	-0.00162	3.15E-06	0.206539	0.641338	1.899021
3.65	0.2644	-0.00162	3.15E-06	0.206458	0.641087	1.898543
3.66	0.2644	-0.00162	3.15E-06	0.206377	0.640836	1.898068
3.66	0.2644	-0.00162	3.15E-06	0.206297	0.640587	1.897595
3.66	0.2644	-0.00162	3.15E-06	0.206217	0.640339	1.897124
3.66	0.2644	-0.00162	3.15E-06	0.206137	0.640092	1.896655
3.66	0.2644	-0.00162	3.15E-06	0.206058	0.639846	1.896188
3.66	0.2644	-0.00162	3.15E-06	0.205979	0.6396	1.895723
3.66	0.2644	-0.00162	3.15E-06	0.205901	0.639356	1.895261
3.67	0.2644	-0.00162	3.15E-06	0.205822	0.639113	1.8948
3.67	0.2644	-0.00162	3.15E-06	0.205744	0.638872	1.894342
3.67	0.2644	-0.00162	3.15E-06	0.205667	0.638631	1.893886
3.67	0.2644	-0.00162	3.15E-06	0.20559	0.638391	1.893431
3.67	0.2644	-0.00162	3.15E-06	0.205513	0.638152	1.892979

3.67	0.2644	-0.00162	3.15E-06	0.205436	0.637914	1.892529
3.67	0.2644	-0.00162	3.15E-06	0.20536	0.637677	1.89208
3.68	0.2644	-0.00162	3.15E-06	0.205284	0.637441	1.891634
3.68	0.2644	-0.00162	3.15E-06	0.205208	0.637206	1.891189
3.68	0.2644	-0.00162	3.15E-06	0.205133	0.636972	1.890747
3.68	0.2644	-0.00162	3.15E-06	0.205058	0.636739	1.890306
3.68	0.2644	-0.00162	3.15E-06	0.204983	0.636507	1.889867
3.68	0.2644	-0.00162	3.15E-06	0.204908	0.636275	1.889431
3.68	0.2644	-0.00162	3.15E-06	0.204834	0.636045	1.888995
3.69	0.2644	-0.00162	3.15E-06	0.20476	0.635816	1.888562
3.69	0.2644	-0.00162	3.15E-06	0.204687	0.635587	1.888131
3.69	0.2644	-0.00162	3.15E-06	0.204613	0.63536	1.887701
3.69	0.2644	-0.00162	3.15E-06	0.20454	0.635133	1.887273
3.69	0.2644	-0.00162	3.15E-06	0.204468	0.634907	1.886847
3.69	0.2644	-0.00162	3.15E-06	0.204395	0.634682	1.886423
3.69	0.2644	-0.00162	3.15E-06	0.204323	0.634458	1.886
3.70	0.2644	-0.00162	3.15E-06	0.204251	0.634235	1.885579
3.70	0.2644	-0.00162	3.15E-06	0.20418	0.634013	1.88516
3.70	0.2644	-0.00162	3.15E-06	0.204108	0.633791	1.884742
3.70	0.2644	-0.00162	3.15E-06	0.204037	0.63357	1.884326
3.70	0.2644	-0.00162	3.15E-06	0.203966	0.63335	1.883912
3.70	0.2644	-0.00162	3.15E-06	0.203896	0.633131	1.883499
3.70	0.2644	-0.00162	3.15E-06	0.203826	0.632913	1.883088
3.70	0.2644	-0.00162	3.15E-06	0.203756	0.632696	1.882679
3.71	0.2644	-0.00162	3.15E-06	0.203686	0.632479	1.882271
3.71	0.2644	-0.00162	3.15E-06	0.203616	0.632263	1.881865
3.71	0.2644	-0.00162	3.15E-06	0.203547	0.632048	1.88146
3.71	0.2644	-0.00162	3.15E-06	0.203478	0.631834	1.881057
3.71	0.2644	-0.00162	3.15E-06	0.203409	0.631621	1.880656
3.71	0.2644	-0.00162	3.15E-06	0.203341	0.631408	1.880256
3.71	0.2644	-0.00162	3.15E-06	0.203273	0.631196	1.879857
3.71	0.2644	-0.00162	3.15E-06	0.203205	0.630985	1.87946
3.72	0.2644	-0.00162	3.15E-06	0.203137	0.630774	1.879065
3.72	0.2644	-0.00162	3.15E-06	0.203069	0.630565	1.878671
3.72	0.2644	-0.00162	3.15E-06	0.203002	0.630356	1.878278
3.72	0.2644	-0.00162	3.15E-06	0.202935	0.630147	1.877887
3.72	0.2644	-0.00162	3.15E-06	0.202868	0.62994	1.877498
3.72	0.2644	-0.00162	3.15E-06	0.202802	0.629733	1.87711
3.72	0.2644	-0.00162	3.15E-06	0.202735	0.629527	1.876723
3.72	0.2644	-0.00162	3.15E-06	0.202669	0.629322	1.876338
3.72	0.2644	-0.00162	3.15E-06	0.202603	0.629117	1.875954
3.73	0.2644	-0.00162	3.15E-06	0.202537	0.628913	1.875571
3.73	0.2644	-0.00162	3.15E-06	0.202472	0.62871	1.87519
3.73	0.2644	-0.00162	3.15E-06	0.202407	0.628507	1.87481
3.73	0.2644	-0.00162	3.15E-06	0.202342	0.628306	1.874432
3.73	0.2644	-0.00162	3.15E-06	0.202277	0.628104	1.874055
3.73	0.2644	-0.00162	3.15E-06	0.202212	0.627904	1.873679
3.73	0.2644	-0.00162	3.15E-06	0.202148	0.627704	1.873305
3.73	0.2644	-0.00162	3.15E-06	0.202084	0.627505	1.872932
3.74	0.2644	-0.00162	3.15E-06	0.20202	0.627306	1.87256

3.74	0.2644	-0.00162	3.15E-06	0.201956	0.627109	1.872189
3.74	0.2644	-0.00162	3.15E-06	0.201893	0.626911	1.87182
3.74	0.2644	-0.00162	3.15E-06	0.201829	0.626715	1.871452
3.74	0.2644	-0.00162	3.15E-06	0.201766	0.626519	1.871086
3.74	0.2644	-0.00162	3.15E-06	0.201703	0.626324	1.87072
3.74	0.2644	-0.00162	3.15E-06	0.201641	0.626129	1.870356
3.74	0.2644	-0.00162	3.15E-06	0.201578	0.625935	1.869993
3.74	0.2644	-0.00162	3.15E-06	0.201516	0.625741	1.869632
3.75	0.2644	-0.00162	3.15E-06	0.201454	0.625549	1.869271
3.75	0.2644	-0.00162	3.15E-06	0.201392	0.625356	1.868912
3.75	0.2644	-0.00162	3.15E-06	0.20133	0.625165	1.868554
3.75	0.2644	-0.00162	3.15E-06	0.201269	0.624974	1.868197
3.75	0.2644	-0.00162	3.15E-06	0.201207	0.624783	1.867841
3.75	0.2644	-0.00162	3.15E-06	0.201146	0.624594	1.867487
3.75	0.2644	-0.00162	3.15E-06	0.201085	0.624405	1.867134
3.75	0.2644	-0.00162	3.15E-06	0.201025	0.624216	1.866782
3.75	0.2644	-0.00162	3.15E-06	0.200964	0.624028	1.866431
3.75	0.2644	-0.00162	3.15E-06	0.200904	0.62384	1.866081
3.76	0.2644	-0.00162	3.15E-06	0.200844	0.623654	1.865732
3.76	0.2644	-0.00162	3.15E-06	0.200784	0.623467	1.865385
3.76	0.2644	-0.00162	3.15E-06	0.200724	0.623282	1.865038
3.76	0.2644	-0.00162	3.15E-06	0.200664	0.623096	1.864693
3.76	0.2644	-0.00162	3.15E-06	0.200605	0.622912	1.864349
3.76	0.2644	-0.00162	3.15E-06	0.200545	0.622728	1.864006
3.76	0.2644	-0.00162	3.15E-06	0.200486	0.622544	1.863664
3.76	0.2644	-0.00162	3.15E-06	0.200427	0.622361	1.863323
3.76	0.2644	-0.00162	3.15E-06	0.200369	0.622179	1.862983
3.76	0.2644	-0.00162	3.15E-06	0.20031	0.621997	1.862644
3.77	0.2644	-0.00162	3.15E-06	0.200252	0.621816	1.862306
3.77	0.2644	-0.00162	3.15E-06	0.200194	0.621635	1.86197
3.77	0.2644	-0.00162	3.15E-06	0.200135	0.621455	1.861634
3.77	0.2644	-0.00162	3.15E-06	0.200078	0.621275	1.8613
3.77	0.2644	-0.00162	3.15E-06	0.20002	0.621096	1.860966
3.77	0.2644	-0.00162	3.15E-06	0.199962	0.620917	1.860634
3.77	0.2644	-0.00162	3.15E-06	0.199905	0.620739	1.860302
3.77	0.2644	-0.00162	3.15E-06	0.199848	0.620561	1.859972
3.77	0.2644	-0.00162	3.15E-06	0.199791	0.620384	1.859642
3.77	0.2644	-0.00162	3.15E-06	0.199734	0.620207	1.859314
3.78	0.2644	-0.00162	3.15E-06	0.199677	0.620031	1.858986
3.78	0.2644	-0.00162	3.15E-06	0.19962	0.619856	1.85866
3.78	0.2644	-0.00162	3.15E-06	0.199564	0.61968	1.858334
3.78	0.2644	-0.00162	3.15E-06	0.199508	0.619506	1.85801
3.78	0.2644	-0.00162	3.15E-06	0.199452	0.619332	1.857686
3.78	0.2644	-0.00162	3.15E-06	0.199396	0.619158	1.857363
3.78	0.2644	-0.00162	3.15E-06	0.19934	0.618985	1.857042
3.78	0.2644	-0.00162	3.15E-06	0.199284	0.618812	1.856721
3.78	0.2644	-0.00162	3.15E-06	0.199229	0.61864	1.856401
3.78	0.2644	-0.00162	3.15E-06	0.199174	0.618468	1.856083
3.79	0.2644	-0.00162	3.15E-06	0.199119	0.618297	1.855765
3.79	0.2644	-0.00162	3.15E-06	0.199064	0.618126	1.855448

3.79	0.2644	-0.00162	3.15E-06	0.199009	0.617956	1.855132
3.79	0.2644	-0.00162	3.15E-06	0.198954	0.617786	1.854817
3.79	0.2644	-0.00162	3.15E-06	0.198899	0.617616	1.854502
3.79	0.2644	-0.00162	3.15E-06	0.198845	0.617447	1.854189
3.79	0.2644	-0.00162	3.15E-06	0.198791	0.617279	1.853877
3.79	0.2644	-0.00162	3.15E-06	0.198737	0.617111	1.853565
3.79	0.2644	-0.00162	3.15E-06	0.198683	0.616943	1.853255
3.79	0.2644	-0.00162	3.15E-06	0.198629	0.616776	1.852945
3.79	0.2644	-0.00162	3.15E-06	0.198575	0.616609	1.852636
3.80	0.2644	-0.00162	3.15E-06	0.198522	0.616443	1.852328
3.80	0.2644	-0.00162	3.15E-06	0.198468	0.616277	1.852021
3.80	0.2644	-0.00162	3.15E-06	0.198415	0.616112	1.851715
3.80	0.2644	-0.00162	3.15E-06	0.198362	0.615947	1.851409
3.80	0.2644	-0.00162	3.15E-06	0.198309	0.615783	1.851105
3.80	0.2644	-0.00162	3.15E-06	0.198256	0.615618	1.850801
3.80	0.2644	-0.00162	3.15E-06	0.198203	0.615455	1.850498
3.80	0.2644	-0.00162	3.15E-06	0.198151	0.615292	1.850196
3.80	0.2644	-0.00162	3.15E-06	0.198098	0.615129	1.849895
3.80	0.2644	-0.00162	3.15E-06	0.198046	0.614966	1.849594
3.80	0.2644	-0.00162	3.15E-06	0.197994	0.614804	1.849295
3.80	0.2644	-0.00162	3.15E-06	0.197942	0.614643	1.848996
3.81	0.2644	-0.00162	3.15E-06	0.19789	0.614482	1.848698
3.81	0.2644	-0.00162	3.15E-06	0.197838	0.614321	1.848401
3.81	0.2644	-0.00162	3.15E-06	0.197786	0.614161	1.848105
3.81	0.2644	-0.00162	3.15E-06	0.197735	0.614001	1.847809
3.81	0.2644	-0.00162	3.15E-06	0.197684	0.613841	1.847514
3.81	0.2644	-0.00162	3.15E-06	0.197632	0.613682	1.84722
3.81	0.2644	-0.00162	3.15E-06	0.197581	0.613523	1.846927
3.81	0.2644	-0.00162	3.15E-06	0.19753	0.613365	1.846635
3.81	0.2644	-0.00162	3.15E-06	0.197479	0.613207	1.846343
3.81	0.2644	-0.00162	3.15E-06	0.197429	0.613049	1.846052
3.81	0.2644	-0.00162	3.15E-06	0.197378	0.612892	1.845762
3.82	0.2644	-0.00162	3.15E-06	0.197328	0.612736	1.845473
3.82	0.2644	-0.00162	3.15E-06	0.197277	0.612579	1.845184
3.82	0.2644	-0.00162	3.15E-06	0.197227	0.612423	1.844897
3.82	0.2644	-0.00162	3.15E-06	0.197177	0.612268	1.844609
3.82	0.2644	-0.00162	3.15E-06	0.197127	0.612112	1.844323
3.82	0.2644	-0.00162	3.15E-06	0.197077	0.611958	1.844038
3.82	0.2644	-0.00162	3.15E-06	0.197027	0.611803	1.843753
3.82	0.2644	-0.00162	3.15E-06	0.196978	0.611649	1.843469
3.82	0.2644	-0.00162	3.15E-06	0.196928	0.611495	1.843185
3.82	0.2644	-0.00162	3.15E-06	0.196879	0.611342	1.842903
3.82	0.2644	-0.00162	3.15E-06	0.196829	0.611189	1.842621
3.82	0.2644	-0.00162	3.15E-06	0.19678	0.611036	1.842339
3.82	0.2644	-0.00162	3.15E-06	0.196731	0.610884	1.842059
3.83	0.2644	-0.00162	3.15E-06	0.196682	0.610732	1.841779
3.83	0.2644	-0.00162	3.15E-06	0.196633	0.61058	1.8415
3.83	0.2644	-0.00162	3.15E-06	0.196585	0.610429	1.841222
3.83	0.2644	-0.00162	3.15E-06	0.196536	0.610278	1.840944
3.83	0.2644	-0.00162	3.15E-06	0.196488	0.610128	1.840667

3.83	0.2644	-0.00162	3.15E-06	0.196439	0.609978	1.840391
3.83	0.2644	-0.00162	3.15E-06	0.196391	0.609828	1.840115
3.83	0.2644	-0.00162	3.15E-06	0.196343	0.609679	1.83984
3.83	0.2644	-0.00162	3.15E-06	0.196295	0.609529	1.839566
3.83	0.2644	-0.00162	3.15E-06	0.196247	0.609381	1.839292
3.83	0.2644	-0.00162	3.15E-06	0.196199	0.609232	1.839019
3.83	0.2644	-0.00162	3.15E-06	0.196152	0.609084	1.838747
3.84	0.2644	-0.00162	3.15E-06	0.196104	0.608937	1.838475
3.84	0.2644	-0.00162	3.15E-06	0.196057	0.608789	1.838204
3.84	0.2644	-0.00162	3.15E-06	0.196009	0.608642	1.837934
3.84	0.2644	-0.00162	3.15E-06	0.195962	0.608495	1.837664
3.84	0.2644	-0.00162	3.15E-06	0.195915	0.608349	1.837395
3.84	0.2644	-0.00162	3.15E-06	0.195868	0.608203	1.837127
3.84	0.2644	-0.00162	3.15E-06	0.195821	0.608057	1.836859
3.84	0.2644	-0.00162	3.15E-06	0.195774	0.607912	1.836592
3.84	0.2644	-0.00162	3.15E-06	0.195727	0.607767	1.836326
3.84	0.2644	-0.00162	3.15E-06	0.195681	0.607622	1.83606
3.84	0.2644	-0.00162	3.15E-06	0.195634	0.607478	1.835795
3.84	0.2644	-0.00162	3.15E-06	0.195588	0.607334	1.835531
3.84	0.2644	-0.00162	3.15E-06	0.195542	0.60719	1.835267
3.84	0.2644	-0.00162	3.15E-06	0.195495	0.607046	1.835003
3.85	0.2644	-0.00162	3.15E-06	0.195449	0.606903	1.834741
3.85	0.2644	-0.00162	3.15E-06	0.195403	0.60676	1.834479
3.85	0.2644	-0.00162	3.15E-06	0.195357	0.606618	1.834217
3.85	0.2644	-0.00162	3.15E-06	0.195312	0.606476	1.833956
3.85	0.2644	-0.00162	3.15E-06	0.195266	0.606334	1.833696
3.85	0.2644	-0.00162	3.15E-06	0.19522	0.606192	1.833437
3.85	0.2644	-0.00162	3.15E-06	0.195175	0.606051	1.833178
3.85	0.2644	-0.00162	3.15E-06	0.195129	0.60591	1.832919
3.85	0.2644	-0.00162	3.15E-06	0.195084	0.605769	1.832661
3.85	0.2644	-0.00162	3.15E-06	0.195039	0.605629	1.832404
3.85	0.2644	-0.00162	3.15E-06	0.194994	0.605489	1.832148
3.85	0.2644	-0.00162	3.15E-06	0.194949	0.605349	1.831892
3.85	0.2644	-0.00162	3.15E-06	0.194904	0.60521	1.831636
3.86	0.2644	-0.00162	3.15E-06	0.194859	0.60507	1.831381
3.86	0.2644	-0.00162	3.15E-06	0.194814	0.604932	1.831127
3.86	0.2644	-0.00162	3.15E-06	0.19477	0.604793	1.830873
3.86	0.2644	-0.00162	3.15E-06	0.194725	0.604655	1.83062
3.86	0.2644	-0.00162	3.15E-06	0.194681	0.604517	1.830367
3.86	0.2644	-0.00162	3.15E-06	0.194636	0.604379	1.830115
3.86	0.2644	-0.00162	3.15E-06	0.194592	0.604242	1.829864
3.86	0.2644	-0.00162	3.15E-06	0.194548	0.604104	1.829613
3.86	0.2644	-0.00162	3.15E-06	0.194504	0.603968	1.829363
3.86	0.2644	-0.00162	3.15E-06	0.19446	0.603831	1.829113
3.86	0.2644	-0.00162	3.15E-06	0.194416	0.603695	1.828864
3.86	0.2644	-0.00162	3.15E-06	0.194372	0.603559	1.828615
3.86	0.2644	-0.00162	3.15E-06	0.194329	0.603423	1.828367
3.86	0.2644	-0.00162	3.15E-06	0.194285	0.603288	1.828119
3.86	0.2644	-0.00162	3.15E-06	0.194241	0.603153	1.827872
3.87	0.2644	-0.00162	3.15E-06	0.194198	0.603018	1.827626

3.87	0.2644	-0.00162	3.15E-06	0.194155	0.602883	1.82738
3.87	0.2644	-0.00162	3.15E-06	0.194111	0.602749	1.827134
3.87	0.2644	-0.00162	3.15E-06	0.194068	0.602615	1.826889
3.87	0.2644	-0.00162	3.15E-06	0.194025	0.602481	1.826645
3.87	0.2644	-0.00162	3.15E-06	0.193982	0.602347	1.826401
3.87	0.2644	-0.00162	3.15E-06	0.193939	0.602214	1.826158
3.87	0.2644	-0.00162	3.15E-06	0.193896	0.602081	1.825915
3.87	0.2644	-0.00162	3.15E-06	0.193854	0.601949	1.825673
3.87	0.2644	-0.00162	3.15E-06	0.193811	0.601816	1.825431
3.87	0.2644	-0.00162	3.15E-06	0.193768	0.601684	1.82519
3.87	0.2644	-0.00162	3.15E-06	0.193726	0.601552	1.824949
3.87	0.2644	-0.00162	3.15E-06	0.193684	0.60142	1.824709
3.87	0.2644	-0.00162	3.15E-06	0.193641	0.601289	1.824469
3.88	0.2644	-0.00162	3.15E-06	0.193599	0.601158	1.82423
3.88	0.2644	-0.00162	3.15E-06	0.193557	0.601027	1.823991
3.88	0.2644	-0.00162	3.15E-06	0.193515	0.600896	1.823753
3.88	0.2644	-0.00162	3.15E-06	0.193473	0.600766	1.823515
3.88	0.2644	-0.00162	3.15E-06	0.193431	0.600636	1.823278
3.88	0.2644	-0.00162	3.15E-06	0.193389	0.600506	1.823041
3.88	0.2644	-0.00162	3.15E-06	0.193347	0.600377	1.822805
3.88	0.2644	-0.00162	3.15E-06	0.193306	0.600247	1.822569
3.88	0.2644	-0.00162	3.15E-06	0.193264	0.600118	1.822334
3.88	0.2644	-0.00162	3.15E-06	0.193223	0.599989	1.822099
3.88	0.2644	-0.00162	3.15E-06	0.193181	0.599861	1.821865
3.88	0.2644	-0.00162	3.15E-06	0.19314	0.599732	1.821631
3.88	0.2644	-0.00162	3.15E-06	0.193099	0.599604	1.821398
3.88	0.2644	-0.00162	3.15E-06	0.193058	0.599476	1.821165
3.88	0.2644	-0.00162	3.15E-06	0.193016	0.599349	1.820933
3.88	0.2644	-0.00162	3.15E-06	0.192975	0.599221	1.820701
3.89	0.2644	-0.00162	3.15E-06	0.192934	0.599094	1.820469
3.89	0.2644	-0.00162	3.15E-06	0.192894	0.598967	1.820238
3.89	0.2644	-0.00162	3.15E-06	0.192853	0.598841	1.820008
3.89	0.2644	-0.00162	3.15E-06	0.192812	0.598714	1.819778
3.89	0.2644	-0.00162	3.15E-06	0.192771	0.598588	1.819548
3.89	0.2644	-0.00162	3.15E-06	0.192731	0.598462	1.819319
3.89	0.2644	-0.00162	3.15E-06	0.19269	0.598337	1.819091
3.89	0.2644	-0.00162	3.15E-06	0.19265	0.598211	1.818862
3.89	0.2644	-0.00162	3.15E-06	0.19261	0.598086	1.818635
3.89	0.2644	-0.00162	3.15E-06	0.19257	0.597961	1.818407
3.89	0.2644	-0.00162	3.15E-06	0.192529	0.597836	1.818181
3.89	0.2644	-0.00162	3.15E-06	0.192489	0.597712	1.817954
3.89	0.2644	-0.00162	3.15E-06	0.192449	0.597588	1.817728
3.89	0.2644	-0.00162	3.15E-06	0.192409	0.597464	1.817503
3.89	0.2644	-0.00162	3.15E-06	0.192369	0.59734	1.817278
3.89	0.2644	-0.00162	3.15E-06	0.19233	0.597216	1.817053
3.90	0.2644	-0.00162	3.15E-06	0.19229	0.597093	1.816829
3.90	0.2644	-0.00162	3.15E-06	0.19225	0.59697	1.816605
3.90	0.2644	-0.00162	3.15E-06	0.192211	0.596847	1.816382
3.90	0.2644	-0.00162	3.15E-06	0.192171	0.596724	1.816159
3.90	0.2644	-0.00162	3.15E-06	0.192132	0.596602	1.815937

3.90	0.2644	-0.00162	3.15E-06	0.192092	0.596479	1.815715
3.90	0.2644	-0.00162	3.15E-06	0.192053	0.596357	1.815493
3.90	0.2644	-0.00162	3.15E-06	0.192014	0.596235	1.815272
3.90	0.2644	-0.00162	3.15E-06	0.191975	0.596114	1.815052
3.90	0.2644	-0.00162	3.15E-06	0.191936	0.595993	1.814831
3.90	0.2644	-0.00162	3.15E-06	0.191897	0.595871	1.814612
3.90	0.2644	-0.00162	3.15E-06	0.191858	0.59575	1.814392
3.90	0.2644	-0.00162	3.15E-06	0.191819	0.59563	1.814173
3.90	0.2644	-0.00162	3.15E-06	0.19178	0.595509	1.813955
3.90	0.2644	-0.00162	3.15E-06	0.191741	0.595389	1.813736
3.90	0.2644	-0.00162	3.15E-06	0.191703	0.595269	1.813519
3.91	0.2644	-0.00162	3.15E-06	0.191664	0.595149	1.813301
3.91	0.2644	-0.00162	3.15E-06	0.191625	0.595029	1.813084
3.91	0.2644	-0.00162	3.15E-06	0.191587	0.59491	1.812868
3.91	0.2644	-0.00162	3.15E-06	0.191549	0.594791	1.812652
3.91	0.2644	-0.00162	3.15E-06	0.19151	0.594672	1.812436
3.91	0.2644	-0.00162	3.15E-06	0.191472	0.594553	1.812221
3.91	0.2644	-0.00162	3.15E-06	0.191434	0.594434	1.812006
3.91	0.2644	-0.00162	3.15E-06	0.191396	0.594316	1.811791
3.91	0.2644	-0.00162	3.15E-06	0.191358	0.594198	1.811577
3.91	0.2644	-0.00162	3.15E-06	0.19132	0.59408	1.811364
3.91	0.2644	-0.00162	3.15E-06	0.191282	0.593962	1.81115
3.91	0.2644	-0.00162	3.15E-06	0.191244	0.593845	1.810937
3.91	0.2644	-0.00162	3.15E-06	0.191206	0.593727	1.810725
3.91	0.2644	-0.00162	3.15E-06	0.191168	0.59361	1.810513
3.91	0.2644	-0.00162	3.15E-06	0.191131	0.593493	1.810301
3.91	0.2644	-0.00162	3.15E-06	0.191093	0.593376	1.81009
3.91	0.2644	-0.00162	3.15E-06	0.191055	0.59326	1.809879
3.92	0.2644	-0.00162	3.15E-06	0.191018	0.593143	1.809668
3.92	0.2644	-0.00162	3.15E-06	0.190981	0.593027	1.809458
3.92	0.2644	-0.00162	3.15E-06	0.190943	0.592911	1.809248
3.92	0.2644	-0.00162	3.15E-06	0.190906	0.592796	1.809039
3.92	0.2644	-0.00162	3.15E-06	0.190869	0.59268	1.80883
3.92	0.2644	-0.00162	3.15E-06	0.190832	0.592565	1.808621
3.92	0.2644	-0.00162	3.15E-06	0.190795	0.592449	1.808413
3.92	0.2644	-0.00162	3.15E-06	0.190757	0.592334	1.808205
3.92	0.2644	-0.00162	3.15E-06	0.190721	0.59222	1.807997
3.92	0.2644	-0.00162	3.15E-06	0.190684	0.592105	1.80779
3.92	0.2644	-0.00162	3.15E-06	0.190647	0.591991	1.807583
3.92	0.2644	-0.00162	3.15E-06	0.19061	0.591876	1.807377
3.92	0.2644	-0.00162	3.15E-06	0.190573	0.591762	1.807171
3.92	0.2644	-0.00162	3.15E-06	0.190537	0.591649	1.806965
3.92	0.2644	-0.00162	3.15E-06	0.1905	0.591535	1.80676
3.92	0.2644	-0.00162	3.15E-06	0.190463	0.591422	1.806555
3.92	0.2644	-0.00162	3.15E-06	0.190427	0.591308	1.80635
3.92	0.2644	-0.00162	3.15E-06	0.190391	0.591195	1.806146
3.93	0.2644	-0.00162	3.15E-06	0.190354	0.591082	1.805942
3.93	0.2644	-0.00162	3.15E-06	0.190318	0.59097	1.805738
3.93	0.2644	-0.00162	3.15E-06	0.190282	0.590857	1.805535
3.93	0.2644	-0.00162	3.15E-06	0.190246	0.590745	1.805332

3.93	0.2644	-0.00162	3.15E-06	0.190209	0.590633	1.80513
3.93	0.2644	-0.00162	3.15E-06	0.190173	0.590521	1.804928
3.93	0.2644	-0.00162	3.15E-06	0.190137	0.590409	1.804726
3.93	0.2644	-0.00162	3.15E-06	0.190101	0.590297	1.804525
3.93	0.2644	-0.00162	3.15E-06	0.190066	0.590186	1.804324
3.93	0.2644	-0.00162	3.15E-06	0.19003	0.590075	1.804123
3.93	0.2644	-0.00162	3.15E-06	0.189994	0.589963	1.803923
3.93	0.2644	-0.00162	3.15E-06	0.189958	0.589853	1.803723
3.93	0.2644	-0.00162	3.15E-06	0.189923	0.589742	1.803523
3.93	0.2644	-0.00162	3.15E-06	0.189887	0.589631	1.803324
3.93	0.2644	-0.00162	3.15E-06	0.189851	0.589521	1.803125
3.93	0.2644	-0.00162	3.15E-06	0.189816	0.589411	1.802926
3.93	0.2644	-0.00162	3.15E-06	0.189781	0.589301	1.802728
3.93	0.2644	-0.00162	3.15E-06	0.189745	0.589191	1.80253
3.94	0.2644	-0.00162	3.15E-06	0.18971	0.589081	1.802332
3.94	0.2644	-0.00162	3.15E-06	0.189675	0.588972	1.802135
3.94	0.2644	-0.00162	3.15E-06	0.189639	0.588863	1.801938
3.94	0.2644	-0.00162	3.15E-06	0.189604	0.588753	1.801741
3.94	0.2644	-0.00162	3.15E-06	0.189569	0.588645	1.801545
3.94	0.2644	-0.00162	3.15E-06	0.189534	0.588536	1.801349
3.94	0.2644	-0.00162	3.15E-06	0.189499	0.588427	1.801153
3.94	0.2644	-0.00162	3.15E-06	0.189464	0.588319	1.800958
3.94	0.2644	-0.00162	3.15E-06	0.189429	0.58821	1.800763
3.94	0.2644	-0.00162	3.15E-06	0.189395	0.588102	1.800568
3.94	0.2644	-0.00162	3.15E-06	0.18936	0.587994	1.800374
3.94	0.2644	-0.00162	3.15E-06	0.189325	0.587887	1.80018
3.94	0.2644	-0.00162	3.15E-06	0.18929	0.587779	1.799986
3.94	0.2644	-0.00162	3.15E-06	0.189256	0.587672	1.799793
3.94	0.2644	-0.00162	3.15E-06	0.189221	0.587564	1.7996
3.94	0.2644	-0.00162	3.15E-06	0.189187	0.587457	1.799407
3.94	0.2644	-0.00162	3.15E-06	0.189152	0.58735	1.799215
3.94	0.2644	-0.00162	3.15E-06	0.189118	0.587244	1.799023
3.94	0.2644	-0.00162	3.15E-06	0.189084	0.587137	1.798831
3.94	0.2644	-0.00162	3.15E-06	0.189049	0.58703	1.798639
3.95	0.2644	-0.00162	3.15E-06	0.189015	0.586924	1.798448
3.95	0.2644	-0.00162	3.15E-06	0.188981	0.586818	1.798257
3.95	0.2644	-0.00162	3.15E-06	0.188947	0.586712	1.798067
3.95	0.2644	-0.00162	3.15E-06	0.188913	0.586606	1.797877
3.95	0.2644	-0.00162	3.15E-06	0.188879	0.586501	1.797687
3.95	0.2644	-0.00162	3.15E-06	0.188845	0.586395	1.797497
3.95	0.2644	-0.00162	3.15E-06	0.188811	0.58629	1.797308
3.95	0.2644	-0.00162	3.15E-06	0.188777	0.586185	1.797119
3.95	0.2644	-0.00162	3.15E-06	0.188743	0.58608	1.79693
3.95	0.2644	-0.00162	3.15E-06	0.188709	0.585975	1.796742
3.95	0.2644	-0.00162	3.15E-06	0.188676	0.58587	1.796554
3.95	0.2644	-0.00162	3.15E-06	0.188642	0.585766	1.796366
3.95	0.2644	-0.00162	3.15E-06	0.188608	0.585661	1.796179
3.95	0.2644	-0.00162	3.15E-06	0.188575	0.585557	1.795991
3.95	0.2644	-0.00162	3.15E-06	0.188541	0.585453	1.795805
3.95	0.2644	-0.00162	3.15E-06	0.188508	0.585349	1.795618

3.95	0.2644	-0.00162	3.15E-06	0.188475	0.585245	1.795432
3.95	0.2644	-0.00162	3.15E-06	0.188441	0.585142	1.795246
3.95	0.2644	-0.00162	3.15E-06	0.188408	0.585038	1.79506
3.95	0.2644	-0.00162	3.15E-06	0.188375	0.584935	1.794875
3.96	0.2644	-0.00162	3.15E-06	0.188341	0.584832	1.79469
3.96	0.2644	-0.00162	3.15E-06	0.188308	0.584729	1.794505
3.96	0.2644	-0.00162	3.15E-06	0.188275	0.584626	1.79432
3.96	0.2644	-0.00162	3.15E-06	0.188242	0.584524	1.794136
3.96	0.2644	-0.00162	3.15E-06	0.188209	0.584421	1.793952
3.96	0.2644	-0.00162	3.15E-06	0.188176	0.584319	1.793768
3.96	0.2644	-0.00162	3.15E-06	0.188143	0.584216	1.793585
3.96	0.2644	-0.00162	3.15E-06	0.18811	0.584114	1.793402
3.96	0.2644	-0.00162	3.15E-06	0.188077	0.584012	1.793219
3.96	0.2644	-0.00162	3.15E-06	0.188045	0.583911	1.793037
3.96	0.2644	-0.00162	3.15E-06	0.188012	0.583809	1.792855
3.96	0.2644	-0.00162	3.15E-06	0.187979	0.583708	1.792673
3.96	0.2644	-0.00162	3.15E-06	0.187947	0.583606	1.792491
3.96	0.2644	-0.00162	3.15E-06	0.187914	0.583505	1.79231
3.96	0.2644	-0.00162	3.15E-06	0.187881	0.583404	1.792128
3.96	0.2644	-0.00162	3.15E-06	0.187849	0.583303	1.791948
3.96	0.2644	-0.00162	3.15E-06	0.187817	0.583202	1.791767
3.96	0.2644	-0.00162	3.15E-06	0.187784	0.583102	1.791587
3.96	0.2644	-0.00162	3.15E-06	0.187752	0.583001	1.791407
3.96	0.2644	-0.00162	3.15E-06	0.187719	0.582901	1.791227
3.97	0.2644	-0.00162	3.15E-06	0.187687	0.582801	1.791048
3.97	0.2644	-0.00162	3.15E-06	0.187655	0.582701	1.790869
3.97	0.2644	-0.00162	3.15E-06	0.187623	0.582601	1.79069
3.97	0.2644	-0.00162	3.15E-06	0.187591	0.582501	1.790511
3.97	0.2644	-0.00162	3.15E-06	0.187559	0.582401	1.790333
3.97	0.2644	-0.00162	3.15E-06	0.187527	0.582302	1.790155
3.97	0.2644	-0.00162	3.15E-06	0.187495	0.582203	1.789977
3.97	0.2644	-0.00162	3.15E-06	0.187463	0.582104	1.789799
3.97	0.2644	-0.00162	3.15E-06	0.187431	0.582004	1.789622
3.97	0.2644	-0.00162	3.15E-06	0.187399	0.581906	1.789445
3.97	0.2644	-0.00162	3.15E-06	0.187367	0.581807	1.789268
3.97	0.2644	-0.00162	3.15E-06	0.187335	0.581708	1.789092

Location Index	
England and Wales	1
Scotland and Ireland	2

From Design and Analysis of Urban Storm Drainage, The Wallingford Procedure, Vol 1

Table 6.1 Values of Constants to calculate Cr

Geographic Location	Range of M5-D	Location Index	J0	J1	J2
England and Wales	0-10	1	0.1699	0.0028	0.000114
	11-30		0.1644	0.005831	-0.00013
	31-75		0.2644	-0.00162	3.15E-06
	76-150		0.2718	-0.00195	6.19E-06
	>150		0.1454	-0.00019	1.14E-07

APPENDIX 13

MICRO DRAINAGE SIMULATIONS

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STORM SEWER DESIGN by the Modified Rational Method

Pipe Sizes STANDARD Manhole Sizes STANDARD

Designed with Level Inverts

Time (mins)	Area (ha)	Time (mins)	Area (ha)
0-4	0.074	4-8	0.024

Total Pipe Volume (m³) = 1.570

Network Design Table for Storm

PN	Length (m)	Fall (m)	Slope (1:X)	I.Area (ha)	T.E. (mins)	Base Flow (l/s)	k (mm)	HYD SECT	DIA (mm)	Section Type	Auto Design
S1.000	2.773	0.110	25.2	0.041	5.00	0.0	0.600	o	150	Pipe/Conduit	
S1.001	25.334	0.260	97.4	0.025	0.00	0.0	0.600	o	150	Pipe/Conduit	
S1.002	7.622	0.150	50.8	0.000	0.00	0.0	0.600	o	150	Pipe/Conduit	
S2.000	10.917	0.110	99.2	0.018	5.00	0.0	0.600	o	150	Pipe/Conduit	

PN	Rain (mm/hr)	T.C. (mins)	US/IL (m)	E I.Area (ha)	E Base Flow (l/s)	Foul (l/s)	Add Flow (l/s)	Vel (m/s)	Cap (l/s)	Flow (l/s)
S1.000	50.00	5.02	33.790	0.041	0.0	0.0	0.0	2.01	35.6	5.6
S1.001	50.00	5.44	33.680	0.066	0.0	0.0	0.0	1.02	18.0	8.9
S1.002	50.00	5.53	33.420	0.066	0.0	0.0	0.0	1.41	25.0	8.9
S2.000	50.00	5.18	33.680	0.018	0.0	0.0	0.0	1.01	17.8	2.4

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Network Design Table for Storm

PN	Length (m)	Fall (m)	Slope (1:X)	I.Area (ha)	T.E. (mins)	Base Flow (l/s)	k (mm)	HYD SECT	DIA (mm)	Section Type	Auto Design
S2.001	15.236	0.160	95.2	0.007	0.00	0.0	0.600	o	150	Pipe/Conduit	
S2.002	12.356	0.140	88.3	0.000	0.00	0.0	0.600	o	150	Pipe/Conduit	
S1.003	1.500#	0.010	150.0	0.007	0.00	0.0	0.600	o	225	Pipe/Conduit	
S1.004	5.000	0.050	100.0	0.000	0.00	0.0	0.600	o	225	Pipe/Conduit	

Network Results Table

PN	Rain (mm/hr)	T.C. (mins)	US/IL (m)	Σ I.Area (ha)	Σ Base Flow (l/s)	Foul (l/s)	Add Flow (l/s)	Vel (m/s)	Cap (l/s)	Flow (l/s)
S2.001	50.00	5.43	33.570	0.025	0.0	0.0	0.0	1.03	18.2	3.4
S2.002	50.00	5.62	33.410	0.025	0.0	0.0	0.0	1.07	18.9	3.4
S1.003	50.00	5.64	33.270	0.098	0.0	0.0	0.0	1.07	42.4	13.3
S1.004	50.00	5.71	33.240	0.098	0.0	0.0	0.0	1.31	52.0	13.3

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PIPELINE SCHEDULES for Storm

Upstream Manhole

- Indicates pipe length does not match coordinates

PN	Hyd Sect	Diam (mm)	MH Name	C.Level (m)	I.Level (m)	D.Depth (m)	MH Connection	MH DIAM., L*W (mm)
S1.000	o	150	S1	34.500	33.790	0.560	Open Manhole	150
S1.001	o	150	S2	34.600	33.680	0.770	Open Manhole	450
S1.002	o	150	S3	36.100	33.420	2.530	Open Manhole	450
S2.000	o	150	S4	34.600	33.680	0.770	Open Manhole	450
S2.001	o	150	S5	35.100	33.570	1.380	Open Manhole	450
S2.002	o	150	S6	36.100	33.410	2.540	Open Manhole	450
S1.003	o	225	S4	34.800	33.270	1.305	Open Manhole	450
S1.004	o	225	S5	35.600	33.240	2.135	Open Manhole	450

Downstream Manhole

PN	Length (m)	Slope (1:X)	MH Name	C.Level (m)	I.Level (m)	D.Depth (m)	MH Connection	MH DIAM., L*W (mm)
S1.000	2.773	25.2	S2	34.600	33.680	0.770	Open Manhole	450
S1.001	25.334	97.4	S3	36.100	33.420	2.530	Open Manhole	450
S1.002	7.622	50.8	S4	34.800	33.270	1.380	Open Manhole	450
S2.000	10.917	99.2	S5	35.100	33.570	1.380	Open Manhole	450
S2.001	15.236	95.2	S6	36.100	33.410	2.540	Open Manhole	450
S2.002	12.356	88.3	S4	34.800	33.270	1.380	Open Manhole	450
S1.003	1.500#	150.0	S5	35.600	33.260	2.115	Open Manhole	450
S1.004	5.000	100.0	S	35.000	33.190	1.585	Open Manhole	0

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Area Summary for Storm

Pipe Number	PIMP Type	PIMP Name	PIMP (%)	Gross Area (ha)	Imp. Area (ha)	Pipe Total (ha)
1.000	-	-	100	0.041	0.041	0.041
1.001	-	-	100	0.025	0.025	0.025
1.002	-	-	100	0.000	0.000	0.000
2.000	-	-	100	0.018	0.018	0.018
2.001	-	-	100	0.007	0.007	0.007
2.002	-	-	100	0.000	0.000	0.000
1.003	-	-	100	0.007	0.007	0.007
1.004	-	-	100	0.000	0.000	0.000
				Total	Total	Total
				0.098	0.098	0.098

Free Flowing Outfall Details for Storm

Outfall Pipe Number	Outfall Name	C. Level (m)	I. Level (m)	Min I. Level (m)	D,L (mm)	W (mm)
---------------------	--------------	--------------	--------------	------------------	----------	--------

S1.004	S	35.000	33.190	0.000	0	0
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Simulation Criteria for Storm

Volumetric Runoff Coeff	0.750	Additional Flow - % of Total Flow	0.000
Areal Reduction Factor	1.000	MADD Factor * 10m ³ /ha	Storage 2.000
Hot Start (mins)	0	Inlet Coefficient	0.800
Hot Start Level (mm)	0	Flow per Person per Day (l/per/day)	0.000
Manhole Headloss Coeff (Global)	0.500	Run Time (mins)	60
Foul Sewage per hectare (l/s)	0.000	Output Interval (mins)	1

Number of Input Hydrographs	0	Number of Storage Structures	1
Number of Online Controls	1	Number of Time/Area Diagrams	0
Number of Offline Controls	0	Number of Real Time Controls	0

Synthetic Rainfall Details

Rainfall Model	FSR	Profile Type	Summer
Return Period (years)	2	Cv (Summer)	0.750
Region	England and Wales	Cv (Winter)	0.840
M5-60 (mm)	18.000	Storm Duration (mins)	30
Ratio R	0.360		

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Storage Structures for Storm

Cellular Storage Manhole: S5, DS/PN: S1.004

Invert Level (m) 33.240 Safety Factor 2.0
Infiltration Coefficient Base (m/hr) 0.00000 Porosity 0.95
Infiltration Coefficient Side (m/hr) 0.00000

Depth (m)	Area (m ²)	Inf. Area (m ²)	Depth (m)	Area (m ²)	Inf. Area (m ²)
0.000	25.0	0.0	1.076	0.0	0.0
1.075	25.0	0.0			

Manhole Headloss for Storm

PN	US/MH	US/MH
	Name	Headloss
S1.000	S1	0.500
S1.001	S2	0.500
S1.002	S3	0.500
S2.000	S4	0.500
S2.001	S5	0.500
S2.002	S6	0.500
S1.003	S4	0.500
S1.004	S5	0.500



Micro
Drainage

Simulation Criteria

Number of Input Hydrographs	0	Number of Storage Structures	1
Number of Online Controls	1	Number of Time/Area Diagrams	0
Number of Offline Controls	0	Number of Real Time Controls	0

Rainfall Model	FSR	Ratio R	0.360
Region	England and Wales	Cv (Summer)	0.750
M5-60 (mm)	18.000	Cv (Winter)	0.840

Profile(s)	Summer and Winter
Duration(s) (mins)	15, 30, 60, 120, 180, 240, 360, 480, 600, 720, 960, 1440, 2160, 2880, 4320, 5760, 7200, 8640, 10080
Time Period(s) (years)	2
Climate Change (%)	0

PN	US/MH	Storm	Return Period	Climate Change	First (X) Surcharge	First (Y) Flood	First (Z) Overflow	Overflow Act.	Water
	Name								Level (m)
S1.000	S1 15	Winter	2	+0%					33.847
S1.001	S2 15	Winter	2	+0%					33.762
S1.002	S3 60	Winter	2	+0%					33.539
S2.000	S4 15	Winter	2	+0%					33.722
S2.001	S5 15	Winter	2	+0%					33.618
S2.002	S6 60	Winter	2	+0%					33.538
S1.003	S4 60	Winter	2	+0%	2/30	Winter			33.536
S1.004	S5 60	Winter	2	+0%	2/15	Winter			33.533

PN	US/MH Name	Surcharged Flooded		Pipe		Status	Level Exceeded
		Depth (m)	Volume (m³)	Flow / Cap.	Overflow (l/s)		
S1.000	S1	-0.093	0.000	0.31		6.4	OK
S1.001	S2	-0.068	0.000	0.56		9.6	OK
S1.002	S3	-0.031	0.000	0.25		5.4	OK
S2.000	S4	-0.108	0.000	0.18		2.8	OK

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Summary of Critical Results by Maximum Level (Rank 1) for Storm

PN	US/MH Name	Surcharged Flooded		Flow / Overflow		Pipe Flow	Status	Level Exceeded
		Depth (m)	Volume (m³)	Cap.	(l/s)	(l/s)		
S2.001	S5	-0.102	0.000	0.22		3.7	OK	
S2.002	S6	-0.022	0.000	0.12		2.1	OK	
S1.003	S4	0.041	0.000	0.25		7.5	SURCHARGED	
S1.004	S5	0.071	0.000	0.06		1.8	SURCHARGED	

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STORM SEWER DESIGN by the Modified Rational Method

Pipe Sizes STANDARD Manhole Sizes STANDARD

Designed with Level Inverts

Time (mins)	Area (ha)	Time (mins)	Area (ha)
0-4	0.074	4-8	0.024

Total Pipe Volume (m³) = 1.570

Network Design Table for Storm

PN	Length (m)	Fall (m)	Slope (1:X)	I.Area (ha)	T.E. (mins)	Base Flow (l/s)	k (mm)	HYD SECT	DIA (mm)	Section Type	Auto Design
S1.000	2.773	0.110	25.2	0.041	5.00	0.0	0.600	o	150	Pipe/Conduit	
S1.001	25.334	0.260	97.4	0.025	0.00	0.0	0.600	o	150	Pipe/Conduit	
S1.002	7.622	0.150	50.8	0.000	0.00	0.0	0.600	o	150	Pipe/Conduit	
S2.000	10.917	0.110	99.2	0.018	5.00	0.0	0.600	o	150	Pipe/Conduit	

PN	Rain (mm/hr)	T.C. (mins)	US/IL (m)	E I.Area (ha)	E Base Flow (l/s)	Foul (l/s)	Add Flow (l/s)	Vel (m/s)	Cap (l/s)	Flow (l/s)
S1.000	50.00	5.02	33.790	0.041	0.0	0.0	0.0	2.01	35.6	5.6
S1.001	50.00	5.44	33.680	0.066	0.0	0.0	0.0	1.02	18.0	8.9
S1.002	50.00	5.53	33.420	0.066	0.0	0.0	0.0	1.41	25.0	8.9
S2.000	50.00	5.18	33.680	0.018	0.0	0.0	0.0	1.01	17.8	2.4

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Network Design Table for Storm

PN	Length (m)	Fall (m)	Slope (1:X)	I.Area (ha)	T.E. (mins)	Base Flow (l/s)	k (mm)	HYD SECT	DIA (mm)	Section Type	Auto Design
S2.001	15.236	0.160	95.2	0.007	0.00	0.0	0.600	o	150	Pipe/Conduit	
S2.002	12.356	0.140	88.3	0.000	0.00	0.0	0.600	o	150	Pipe/Conduit	
S1.003	1.500#	0.010	150.0	0.007	0.00	0.0	0.600	o	225	Pipe/Conduit	
S1.004	5.000	0.050	100.0	0.000	0.00	0.0	0.600	o	225	Pipe/Conduit	

Network Results Table

PN	Rain (mm/hr)	T.C. (mins)	US/IL (m)	Σ I.Area (ha)	Σ Base Flow (l/s)	Foul (l/s)	Add Flow (l/s)	Vel (m/s)	Cap (l/s)	Flow (l/s)
S2.001	50.00	5.43	33.570	0.025	0.0	0.0	0.0	1.03	18.2	3.4
S2.002	50.00	5.62	33.410	0.025	0.0	0.0	0.0	1.07	18.9	3.4
S1.003	50.00	5.64	33.270	0.098	0.0	0.0	0.0	1.07	42.4	13.3
S1.004	50.00	5.71	33.240	0.098	0.0	0.0	0.0	1.31	52.0	13.3

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Manhole Schedules for Storm

MH Name	MH CL (m)	MH Depth (m)	MH Connection	MH Diam., L*W (mm)	PN	Pipe Out Invert Level (m)	Pipe Out Diameter (mm)	PN	Pipes In Invert Level (m)	Pipes In Diameter (mm)	Backdrop (mm)
S1	34.500	0.710	Open Manhole	150	S1.000	33.790	150				
S2	34.600	0.920	Open Manhole	450	S1.001	33.680	150	S1.000	33.680	150	
S3	36.100	2.680	Open Manhole	450	S1.002	33.420	150	S1.001	33.420	150	
S4	34.600	0.920	Open Manhole	450	S2.000	33.680	150				
S5	35.100	1.530	Open Manhole	450	S2.001	33.570	150	S2.000	33.570	150	
S6	36.100	2.690	Open Manhole	450	S2.002	33.410	150	S2.001	33.410	150	
S4	34.800	1.530	Open Manhole	450	S1.003	33.270	225	S1.002	33.270	150	
								S2.002	33.270	150	
S5	35.600	2.360	Open Manhole	450	S1.004	33.240	225	S1.003	33.260	225	20
S	35.000	1.810	Open Manhole	0		OUTFALL		S1.004	33.190	225	

MH Name	Manhole Easting (m)	Manhole Northing (m)	Intersection Easting (m)	Intersection Northing (m)	Manhole Access	Layout (North)
S1	449828.007	418744.959	449828.007	418744.959	Required	
S2	449828.281	418742.199	449828.281	418742.199	Required	
S3	449828.268	418716.865	449828.268	418716.865	Required	
S4	449845.407	418742.343	449845.407	418742.343	Required	
S5	449847.889	418731.712	449847.889	418731.712	Required	
S6	449847.881	418716.476	449847.881	418716.476	Required	
S4	449835.629	418714.885	449835.629	418714.885	Required	
S5	449835.760	418709.386	449835.760	418709.386	Required	
S	449831.355	418707.021			No Entry	

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PIPELINE SCHEDULES for Storm

Upstream Manhole

- Indicates pipe length does not match coordinates

PN	Hyd Sect	Diam (mm)	MH Name	C.Level (m)	I.Level (m)	D.Depth (m)	MH Connection	MH DIAM., L*W (mm)
S1.000	o	150	S1	34.500	33.790	0.560	Open Manhole	150
S1.001	o	150	S2	34.600	33.680	0.770	Open Manhole	450
S1.002	o	150	S3	36.100	33.420	2.530	Open Manhole	450
S2.000	o	150	S4	34.600	33.680	0.770	Open Manhole	450
S2.001	o	150	S5	35.100	33.570	1.380	Open Manhole	450
S2.002	o	150	S6	36.100	33.410	2.540	Open Manhole	450
S1.003	o	225	S4	34.800	33.270	1.305	Open Manhole	450
S1.004	o	225	S5	35.600	33.240	2.135	Open Manhole	450

Downstream Manhole

PN	Length (m)	Slope (1:X)	MH Name	C.Level (m)	I.Level (m)	D.Depth (m)	MH Connection	MH DIAM., L*W (mm)
S1.000	2.773	25.2	S2	34.600	33.680	0.770	Open Manhole	450
S1.001	25.334	97.4	S3	36.100	33.420	2.530	Open Manhole	450
S1.002	7.622	50.8	S4	34.800	33.270	1.380	Open Manhole	450
S2.000	10.917	99.2	S5	35.100	33.570	1.380	Open Manhole	450
S2.001	15.236	95.2	S6	36.100	33.410	2.540	Open Manhole	450
S2.002	12.356	88.3	S4	34.800	33.270	1.380	Open Manhole	450
S1.003	1.500#	150.0	S5	35.600	33.260	2.115	Open Manhole	450
S1.004	5.000	100.0	S	35.000	33.190	1.585	Open Manhole	0

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Area Summary for Storm

Pipe Number	PIMP Type	PIMP Name	PIMP (%)	Gross Area (ha)	Imp. Area (ha)	Pipe Total (ha)
1.000	-	-	100	0.041	0.041	0.041
1.001	-	-	100	0.025	0.025	0.025
1.002	-	-	100	0.000	0.000	0.000
2.000	-	-	100	0.018	0.018	0.018
2.001	-	-	100	0.007	0.007	0.007
2.002	-	-	100	0.000	0.000	0.000
1.003	-	-	100	0.007	0.007	0.007
1.004	-	-	100	0.000	0.000	0.000
				Total	Total	Total
				0.098	0.098	0.098

Free Flowing Outfall Details for Storm

Outfall Pipe Number	Outfall Name	C. Level (m)	I. Level (m)	Min I. Level (m)	D,L (mm)	W (mm)
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S1.004	S	35.000	33.190	0.000	0	0
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Simulation Criteria for Storm

Volumetric Runoff Coeff	0.750	Additional Flow - % of Total Flow	0.000
Areal Reduction Factor	1.000	MADD Factor * 10m ³ /ha	Storage 2.000
Hot Start (mins)	0	Inlet Coefficient	0.800
Hot Start Level (mm)	0	Flow per Person per Day (l/per/day)	0.000
Manhole Headloss Coeff (Global)	0.500	Run Time (mins)	60
Foul Sewage per hectare (l/s)	0.000	Output Interval (mins)	1

Number of Input Hydrographs	0	Number of Storage Structures	1
Number of Online Controls	1	Number of Time/Area Diagrams	0
Number of Offline Controls	0	Number of Real Time Controls	0

Synthetic Rainfall Details

Rainfall Model	FSR	Profile Type	Summer
Return Period (years)	2	Cv (Summer)	0.750
Region	England and Wales	Cv (Winter)	0.840
M5-60 (mm)	18.000	Storm Duration (mins)	30
Ratio R	0.360		

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Online Controls for Storm

Hydro-Brake® Optimum Manhole: S5, DS/PN: S1.004, Volume (m³): 0.4

Unit Reference	MD-SHE-0066-2000-1100-2000
Design Head (m)	1.100
Design Flow (l/s)	2.0
Flush-Flo™	Calculated
Objective	Minimise upstream storage
Application	Surface
Sump Available	Yes
Diameter (mm)	66
Invert Level (m)	33.240
Minimum Outlet Pipe Diameter (mm)	100
Suggested Manhole Diameter (mm)	1200

Control Points	Head (m)	Flow (l/s)
Design Point (Calculated)	1.100	2.0
Flush-Flo™	0.289	1.8
Kick-Flo®	0.584	1.5
Mean Flow over Head Range	-	1.7

The hydrological calculations have been based on the Head/Discharge relationship for the Hydro-Brake® Optimum as specified. Should another type of control device other than a Hydro-Brake Optimum® be utilised then these storage routing calculations will be invalidated

Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)
0.100	1.6	1.200	2.1	3.000	3.2	7.000	4.7
0.200	1.8	1.400	2.2	3.500	3.4	7.500	4.9
0.300	1.8	1.600	2.4	4.000	3.6	8.000	5.0
0.400	1.8	1.800	2.5	4.500	3.8	8.500	5.1
0.500	1.7	2.000	2.6	5.000	4.0	9.000	5.3
0.600	1.5	2.200	2.7	5.500	4.2	9.500	5.4
0.800	1.7	2.400	2.9	6.000	4.4		
1.000	1.9	2.600	3.0	6.500	4.5		

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Storage Structures for Storm

Cellular Storage Manhole: S5, DS/PN: S1.004

Invert Level (m) 33.240 Safety Factor 2.0
Infiltration Coefficient Base (m/hr) 0.00000 Porosity 0.95
Infiltration Coefficient Side (m/hr) 0.00000

Depth (m)	Area (m ²)	Inf. Area (m ²)	Depth (m)	Area (m ²)	Inf. Area (m ²)
0.000	25.0	0.0	1.076	0.0	0.0
1.075	25.0	0.0			

Manhole Headloss for Storm

PN	US/MH	US/MH
	Name	Headloss
S1.000	S1	0.500
S1.001	S2	0.500
S1.002	S3	0.500
S2.000	S4	0.500
S2.001	S5	0.500
S2.002	S6	0.500
S1.003	S4	0.500
S1.004	S5	0.500

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Summary of Critical Results by Maximum Level (Rank 1) for Storm

Simulation Criteria

Areal Reduction Factor 1.000 Additional Flow - % of Total Flow 0.000
 Hot Start (mins) 0 MADD Factor * 10m³/ha Storage 2.000
 Hot Start Level (mm) 0 Inlet Coefficient 0.800
 Manhole Headloss Coeff (Global) 0.500 Flow per Person per Day (l/per/day) 0.000
 Foul Sewage per hectare (l/s) 0.000

Number of Input Hydrographs 0 Number of Storage Structures 1
 Number of Online Controls 1 Number of Time/Area Diagrams 0
 Number of Offline Controls 0 Number of Real Time Controls 0

Synthetic Rainfall Details

Rainfall Model FSR Ratio R 0.360
 Region England and Wales Cv (Summer) 0.750
 M5-60 (mm) 18.000 Cv (Winter) 0.840

Margin for Flood Risk Warning (mm) 300.0
 Analysis Timestep 2.5 Second Increment (Extended)
 DTS Status ON
 DVD Status ON
 Inertia Status ON

Profile(s) Summer and Winter
 Duration(s) (mins) 15, 30, 60, 120, 180, 240, 360, 480, 600,
 720, 960, 1440, 2160, 2880, 4320, 5760,
 7200, 8640, 10080
 Return Period(s) (years) 30
 Climate Change (%) 0

									Water
	US/MH			Return Climate	First (X)	First (Y)	First (Z)	Overflow	Level
PN	Name	Storm	Period	Change	Surcharge	Flood	Overflow	Act.	(m)
S1.000	S1	15 Winter	30	+0%					33.938
S1.001	S2	120 Winter	30	+0%	30/15 Summer				33.934
S1.002	S3	120 Winter	30	+0%	30/15 Summer				33.927
S2.000	S4	120 Winter	30	+0%	30/60 Winter				33.928
S2.001	S5	120 Winter	30	+0%	30/30 Summer				33.927
S2.002	S6	120 Winter	30	+0%	30/15 Summer				33.925
S1.003	S4	120 Winter	30	+0%	30/15 Summer				33.924
S1.004	S5	120 Winter	30	+0%	30/15 Summer				33.923

		Surcharged		Flooded		Pipe			
	US/MH	Depth	Volume	Flow /	Overflow	Flow		Level	
PN	Name	(m)	(m³)	Cap.	(l/s)	(l/s)	Status	Exceeded	
S1.000	S1	-0.002	0.000	0.54		11.2	OK		
S1.001	S2	0.104	0.000	0.39		6.6	SURCHARGED		
S1.002	S3	0.357	0.000	0.28		6.1	SURCHARGED		
S2.000	S4	0.098	0.000	0.11		1.8	SURCHARGED		

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Summary of Critical Results by Maximum Level (Rank 1) for Storm

PN	US/MH Name	Surcharged Flooded		Flow / Overflow		Pipe Flow	Status	Level Exceeded
		Depth (m)	Volume (m³)	Cap.	(l/s)	(l/s)		
S2.001	S5	0.207	0.000	0.14		2.4	SURCHARGED	
S2.002	S6	0.365	0.000	0.12		2.0	SURCHARGED	
S1.003	S4	0.429	0.000	0.29		8.7	SURCHARGED	
S1.004	S5	0.458	0.000	0.06		1.8	SURCHARGED	

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STORM SEWER DESIGN by the Modified Rational Method

Design Criteria for Storm

Pipe Sizes STANDARD Manhole Sizes STANDARD

FSR Rainfall Model - England and Wales

Return Period (years)	2	PIMP (%)	100
M5-60 (mm)	18.000	Add Flow / Climate Change (%)	0
Ratio R	0.360	Minimum Backdrop Height (m)	0.200
Maximum Rainfall (mm/hr)	50	Maximum Backdrop Height (m)	1.500
Maximum Time of Concentration (mins)	30	Min Design Depth for Optimisation (m)	1.200
Foul Sewage (l/s/ha)	0.000	Min Vel for Auto Design only (m/s)	1.00
Volumetric Runoff Coeff.	0.750	Min Slope for Optimisation (1:X)	400

Designed with Level Inverts

Time Area Diagram for Storm

Time (mins)	Area (ha)	Time (mins)	Area (ha)
0-4	0.074	4-8	0.024

Total Area Contributing (ha) = 0.098

Total Pipe Volume (m³) = 1.570

Network Design Table for Storm

- Indicates pipe length does not match coordinates

PN	Length (m)	Fall (m)	Slope (1:X)	I.Area (ha)	T.E. (mins)	Base Flow (l/s)	k (mm)	HYD SECT	DIA (mm)	Section Type	Auto Design
S1.000	2.773	0.110	25.2	0.041	5.00	0.0	0.600	o	150	Pipe/Conduit	
S1.001	25.334	0.260	97.4	0.025	0.00	0.0	0.600	o	150	Pipe/Conduit	
S1.002	7.622	0.150	50.8	0.000	0.00	0.0	0.600	o	150	Pipe/Conduit	
S2.000	10.917	0.110	99.2	0.018	5.00	0.0	0.600	o	150	Pipe/Conduit	

Network Results Table

PN	Rain (mm/hr)	T.C. (mins)	US/IL (m)	Σ I.Area (ha)	Σ Base Flow (l/s)	Foul (l/s)	Add Flow (l/s)	Vel (m/s)	Cap (l/s)	Flow (l/s)
S1.000	50.00	5.02	33.790	0.041	0.0	0.0	0.0	2.01	35.6	5.6
S1.001	50.00	5.44	33.680	0.066	0.0	0.0	0.0	1.02	18.0	8.9
S1.002	50.00	5.53	33.420	0.066	0.0	0.0	0.0	1.41	25.0	8.9
S2.000	50.00	5.18	33.680	0.018	0.0	0.0	0.0	1.01	17.8	2.4

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Network Design Table for Storm

PN	Length (m)	Fall (m)	Slope (1:X)	I.Area (ha)	T.E. (mins)	Base Flow (l/s)	k (mm)	HYD SECT	DIA (mm)	Section Type	Auto Design
S2.001	15.236	0.160	95.2	0.007	0.00	0.0	0.600	o	150	Pipe/Conduit	
S2.002	12.356	0.140	88.3	0.000	0.00	0.0	0.600	o	150	Pipe/Conduit	
S1.003	1.500#	0.010	150.0	0.007	0.00	0.0	0.600	o	225	Pipe/Conduit	
S1.004	5.000	0.050	100.0	0.000	0.00	0.0	0.600	o	225	Pipe/Conduit	

Network Results Table

PN	Rain (mm/hr)	T.C. (mins)	US/IL (m)	Σ I.Area (ha)	Σ Base Flow (l/s)	Foul (l/s)	Add Flow (l/s)	Vel (m/s)	Cap (l/s)	Flow (l/s)
S2.001	50.00	5.43	33.570	0.025	0.0	0.0	0.0	1.03	18.2	3.4
S2.002	50.00	5.62	33.410	0.025	0.0	0.0	0.0	1.07	18.9	3.4
S1.003	50.00	5.64	33.270	0.098	0.0	0.0	0.0	1.07	42.4	13.3
S1.004	50.00	5.71	33.240	0.098	0.0	0.0	0.0	1.31	52.0	13.3

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Manhole Schedules for Storm

MH Name	MH CL (m)	MH Depth (m)	MH Connection	MH Diam., L*W (mm)	PN	Pipe Out Invert Level (m)	Pipe Out Diameter (mm)	PN	Pipes In Invert Level (m)	Pipes In Diameter (mm)	Backdrop (mm)
S1	34.500	0.710	Open Manhole	150	S1.000	33.790	150				
S2	34.600	0.920	Open Manhole	450	S1.001	33.680	150	S1.000	33.680	150	
S3	36.100	2.680	Open Manhole	450	S1.002	33.420	150	S1.001	33.420	150	
S4	34.600	0.920	Open Manhole	450	S2.000	33.680	150				
S5	35.100	1.530	Open Manhole	450	S2.001	33.570	150	S2.000	33.570	150	
S6	36.100	2.690	Open Manhole	450	S2.002	33.410	150	S2.001	33.410	150	
S4	34.800	1.530	Open Manhole	450	S1.003	33.270	225	S1.002	33.270	150	
								S2.002	33.270	150	
S5	35.600	2.360	Open Manhole	450	S1.004	33.240	225	S1.003	33.260	225	20
S	35.000	1.810	Open Manhole	0		OUTFALL		S1.004	33.190	225	

MH Name	Manhole Easting (m)	Manhole Northing (m)	Intersection Easting (m)	Intersection Northing (m)	Manhole Access	Layout (North)
S1	449828.007	418744.959	449828.007	418744.959	Required	
S2	449828.281	418742.199	449828.281	418742.199	Required	
S3	449828.268	418716.865	449828.268	418716.865	Required	
S4	449845.407	418742.343	449845.407	418742.343	Required	
S5	449847.889	418731.712	449847.889	418731.712	Required	
S6	449847.881	418716.476	449847.881	418716.476	Required	
S4	449835.629	418714.885	449835.629	418714.885	Required	
S5	449835.760	418709.386	449835.760	418709.386	Required	
S	449831.355	418707.021			No Entry	

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PIPELINE SCHEDULES for Storm

Upstream Manhole

- Indicates pipe length does not match coordinates

PN	Hyd Sect	Diam (mm)	MH Name	C.Level (m)	I.Level (m)	D.Depth (m)	MH Connection	MH DIAM., L*W (mm)
S1.000	o	150	S1	34.500	33.790	0.560	Open Manhole	150
S1.001	o	150	S2	34.600	33.680	0.770	Open Manhole	450
S1.002	o	150	S3	36.100	33.420	2.530	Open Manhole	450
S2.000	o	150	S4	34.600	33.680	0.770	Open Manhole	450
S2.001	o	150	S5	35.100	33.570	1.380	Open Manhole	450
S2.002	o	150	S6	36.100	33.410	2.540	Open Manhole	450
S1.003	o	225	S4	34.800	33.270	1.305	Open Manhole	450
S1.004	o	225	S5	35.600	33.240	2.135	Open Manhole	450

Downstream Manhole

PN	Length (m)	Slope (1:X)	MH Name	C.Level (m)	I.Level (m)	D.Depth (m)	MH Connection	MH DIAM., L*W (mm)
S1.000	2.773	25.2	S2	34.600	33.680	0.770	Open Manhole	450
S1.001	25.334	97.4	S3	36.100	33.420	2.530	Open Manhole	450
S1.002	7.622	50.8	S4	34.800	33.270	1.380	Open Manhole	450
S2.000	10.917	99.2	S5	35.100	33.570	1.380	Open Manhole	450
S2.001	15.236	95.2	S6	36.100	33.410	2.540	Open Manhole	450
S2.002	12.356	88.3	S4	34.800	33.270	1.380	Open Manhole	450
S1.003	1.500#	150.0	S5	35.600	33.260	2.115	Open Manhole	450
S1.004	5.000	100.0	S	35.000	33.190	1.585	Open Manhole	0

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Area Summary for Storm

Pipe Number	PIMP Type	PIMP Name	PIMP (%)	Gross Area (ha)	Imp. Area (ha)	Pipe Total (ha)
1.000	-	-	100	0.041	0.041	0.041
1.001	-	-	100	0.025	0.025	0.025
1.002	-	-	100	0.000	0.000	0.000
2.000	-	-	100	0.018	0.018	0.018
2.001	-	-	100	0.007	0.007	0.007
2.002	-	-	100	0.000	0.000	0.000
1.003	-	-	100	0.007	0.007	0.007
1.004	-	-	100	0.000	0.000	0.000
				Total	Total	Total
				0.098	0.098	0.098

Free Flowing Outfall Details for Storm

Outfall Pipe Number	Outfall Name	C. Level (m)	I. Level (m)	Min I. Level (m)	D,L (mm)	W (mm)
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S1.004	S	35.000	33.190	0.000	0	0
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Simulation Criteria for Storm

Volumetric Runoff Coeff	0.750	Additional Flow - % of Total Flow	0.000
Areal Reduction Factor	1.000	MADD Factor * 10m ³ /ha	Storage 2.000
Hot Start (mins)	0	Inlet Coefficient	0.800
Hot Start Level (mm)	0	Flow per Person per Day (l/per/day)	0.000
Manhole Headloss Coeff (Global)	0.500	Run Time (mins)	60
Foul Sewage per hectare (l/s)	0.000	Output Interval (mins)	1

Number of Input Hydrographs	0	Number of Storage Structures	1
Number of Online Controls	1	Number of Time/Area Diagrams	0
Number of Offline Controls	0	Number of Real Time Controls	0

Synthetic Rainfall Details

Rainfall Model	FSR	Profile Type	Summer
Return Period (years)	2	Cv (Summer)	0.750
Region	England and Wales	Cv (Winter)	0.840
M5-60 (mm)	18.000	Storm Duration (mins)	30
Ratio R	0.360		

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Online Controls for Storm

Hydro-Brake® Optimum Manhole: S5, DS/PN: S1.004, Volume (m³): 0.4

Unit Reference	MD-SHE-0066-2000-1100-2000
Design Head (m)	1.100
Design Flow (l/s)	2.0
Flush-Flo™	Calculated
Objective	Minimise upstream storage
Application	Surface
Sump Available	Yes
Diameter (mm)	66
Invert Level (m)	33.240
Minimum Outlet Pipe Diameter (mm)	100
Suggested Manhole Diameter (mm)	1200

Control Points	Head (m)	Flow (l/s)
Design Point (Calculated)	1.100	2.0
Flush-Flo™	0.289	1.8
Kick-Flo®	0.584	1.5
Mean Flow over Head Range	-	1.7

The hydrological calculations have been based on the Head/Discharge relationship for the Hydro-Brake® Optimum as specified. Should another type of control device other than a Hydro-Brake Optimum® be utilised then these storage routing calculations will be invalidated

Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)
0.100	1.6	1.200	2.1	3.000	3.2	7.000	4.7
0.200	1.8	1.400	2.2	3.500	3.4	7.500	4.9
0.300	1.8	1.600	2.4	4.000	3.6	8.000	5.0
0.400	1.8	1.800	2.5	4.500	3.8	8.500	5.1
0.500	1.7	2.000	2.6	5.000	4.0	9.000	5.3
0.600	1.5	2.200	2.7	5.500	4.2	9.500	5.4
0.800	1.7	2.400	2.9	6.000	4.4		
1.000	1.9	2.600	3.0	6.500	4.5		

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Storage Structures for Storm

Cellular Storage Manhole: S5, DS/PN: S1.004

Invert Level (m) 33.240 Safety Factor 2.0
Infiltration Coefficient Base (m/hr) 0.00000 Porosity 0.95
Infiltration Coefficient Side (m/hr) 0.00000

Depth (m)	Area (m ²)	Inf. Area (m ²)	Depth (m)	Area (m ²)	Inf. Area (m ²)
0.000	25.0	0.0	1.076	0.0	0.0
1.075	25.0	0.0			

Manhole Headloss for Storm

PN	US/MH	US/MH
	Name	Headloss
S1.000	S1	0.500
S1.001	S2	0.500
S1.002	S3	0.500
S2.000	S4	0.500
S2.001	S5	0.500
S2.002	S6	0.500
S1.003	S4	0.500
S1.004	S5	0.500

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Summary of Critical Results by Maximum Level (Rank 1) for Storm

PN	US/MH Name	Surcharged Flooded		Flow / Overflow		Pipe Flow	Status	Level Exceeded
		Depth (m)	Volume (m³)	Cap.	(l/s)	(l/s)		
S2.001	S5	0.487	0.000	0.17		2.8	SURCHARGED	
S2.002	S6	0.645	0.000	0.16		2.8	SURCHARGED	
S1.003	S4	0.709	0.000	0.37		11.2	SURCHARGED	
S1.004	S5	0.738	0.000	0.06		1.9	SURCHARGED	

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STORM SEWER DESIGN by the Modified Rational Method

Pipe Sizes STANDARD Manhole Sizes STANDARD

Designed with Level Inverts

Time (mins)	Area (ha)	Time (mins)	Area (ha)
0-4	0.074	4-8	0.024

Total Pipe Volume (m³) = 1.570

Network Design Table for Storm

PN	Length (m)	Fall (m)	Slope (1:X)	I.Area (ha)	T.E. (mins)	Base Flow (l/s)	k (mm)	HYD SECT	DIA (mm)	Section Type	Auto Design
S1.000	2.773	0.110	25.2	0.041	5.00	0.0	0.600	o	150	Pipe/Conduit	
S1.001	25.334	0.260	97.4	0.025	0.00	0.0	0.600	o	150	Pipe/Conduit	
S1.002	7.622	0.150	50.8	0.000	0.00	0.0	0.600	o	150	Pipe/Conduit	
S2.000	10.917	0.110	99.2	0.018	5.00	0.0	0.600	o	150	Pipe/Conduit	

Network Results Table

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Network Design Table for Storm

PN	Length (m)	Fall (m)	Slope (1:X)	I.Area (ha)	T.E. (mins)	Base Flow (l/s)	k (mm)	HYD SECT	DIA (mm)	Section Type	Auto Design
S2.001	15.236	0.160	95.2	0.007	0.00	0.0	0.600	o	150	Pipe/Conduit	
S2.002	12.356	0.140	88.3	0.000	0.00	0.0	0.600	o	150	Pipe/Conduit	
S1.003	1.500#	0.010	150.0	0.007	0.00	0.0	0.600	o	225	Pipe/Conduit	
S1.004	5.000	0.050	100.0	0.000	0.00	0.0	0.600	o	225	Pipe/Conduit	

Network Results Table

PN	Rain (mm/hr)	T.C. (mins)	US/IL (m)	Σ I.Area (ha)	Σ Base Flow (l/s)	Foul (l/s)	Add Flow (l/s)	Vel (m/s)	Cap (l/s)	Flow (l/s)
S2.001	50.00	5.43	33.570	0.025	0.0	0.0	0.0	1.03	18.2	3.4
S2.002	50.00	5.62	33.410	0.025	0.0	0.0	0.0	1.07	18.9	3.4
S1.003	50.00	5.64	33.270	0.098	0.0	0.0	0.0	1.07	42.4	13.3
S1.004	50.00	5.71	33.240	0.098	0.0	0.0	0.0	1.31	52.0	13.3

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Manhole Schedules for Storm

MH Name	MH CL (m)	MH Depth (m)	MH Connection	MH Diam., L*W (mm)	PN	Pipe Out Invert Level (m)	Pipe Out Diameter (mm)	PN	Pipes In Invert Level (m)	Pipes In Diameter (mm)	Backdrop (mm)
S1	34.500	0.710	Open Manhole	150	S1.000	33.790	150				
S2	34.600	0.920	Open Manhole	450	S1.001	33.680	150	S1.000	33.680	150	
S3	36.100	2.680	Open Manhole	450	S1.002	33.420	150	S1.001	33.420	150	
S4	34.600	0.920	Open Manhole	450	S2.000	33.680	150				
S5	35.100	1.530	Open Manhole	450	S2.001	33.570	150	S2.000	33.570	150	
S6	36.100	2.690	Open Manhole	450	S2.002	33.410	150	S2.001	33.410	150	
S4	34.800	1.530	Open Manhole	450	S1.003	33.270	225	S1.002	33.270	150	
								S2.002	33.270	150	
S5	35.600	2.360	Open Manhole	450	S1.004	33.240	225	S1.003	33.260	225	20
S	35.000	1.810	Open Manhole	0		OUTFALL		S1.004	33.190	225	

MH Name	Manhole Easting (m)	Manhole Northing (m)	Intersection Easting (m)	Intersection Northing (m)	Manhole Access	Layout (North)
S1	449828.007	418744.959	449828.007	418744.959	Required	
S2	449828.281	418742.199	449828.281	418742.199	Required	
S3	449828.268	418716.865	449828.268	418716.865	Required	
S4	449845.407	418742.343	449845.407	418742.343	Required	
S5	449847.889	418731.712	449847.889	418731.712	Required	
S6	449847.881	418716.476	449847.881	418716.476	Required	
S4	449835.629	418714.885	449835.629	418714.885	Required	
S5	449835.760	418709.386	449835.760	418709.386	Required	
S	449831.355	418707.021			No Entry	

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PIPELINE SCHEDULES for Storm

Upstream Manhole

- Indicates pipe length does not match coordinates

PN	Hyd Sect	Diam (mm)	MH Name	C.Level (m)	I.Level (m)	D.Depth (m)	MH Connection	MH DIAM., L*W (mm)
S1.000	o	150	S1	34.500	33.790	0.560	Open Manhole	150
S1.001	o	150	S2	34.600	33.680	0.770	Open Manhole	450
S1.002	o	150	S3	36.100	33.420	2.530	Open Manhole	450
S2.000	o	150	S4	34.600	33.680	0.770	Open Manhole	450
S2.001	o	150	S5	35.100	33.570	1.380	Open Manhole	450
S2.002	o	150	S6	36.100	33.410	2.540	Open Manhole	450
S1.003	o	225	S4	34.800	33.270	1.305	Open Manhole	450
S1.004	o	225	S5	35.600	33.240	2.135	Open Manhole	450

Downstream Manhole

PN	Length (m)	Slope (1:X)	MH Name	C.Level (m)	I.Level (m)	D.Depth (m)	MH Connection	MH DIAM., L*W (mm)
S1.000	2.773	25.2	S2	34.600	33.680	0.770	Open Manhole	450
S1.001	25.334	97.4	S3	36.100	33.420	2.530	Open Manhole	450
S1.002	7.622	50.8	S4	34.800	33.270	1.380	Open Manhole	450
S2.000	10.917	99.2	S5	35.100	33.570	1.380	Open Manhole	450
S2.001	15.236	95.2	S6	36.100	33.410	2.540	Open Manhole	450
S2.002	12.356	88.3	S4	34.800	33.270	1.380	Open Manhole	450
S1.003	1.500#	150.0	S5	35.600	33.260	2.115	Open Manhole	450
S1.004	5.000	100.0	S	35.000	33.190	1.585	Open Manhole	0

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Area Summary for Storm

Pipe Number	PIMP Type	PIMP Name	PIMP (%)	Gross Area (ha)	Imp. Area (ha)	Pipe Total (ha)
1.000	-	-	100	0.041	0.041	0.041
1.001	-	-	100	0.025	0.025	0.025
1.002	-	-	100	0.000	0.000	0.000
2.000	-	-	100	0.018	0.018	0.018
2.001	-	-	100	0.007	0.007	0.007
2.002	-	-	100	0.000	0.000	0.000
1.003	-	-	100	0.007	0.007	0.007
1.004	-	-	100	0.000	0.000	0.000
				Total	Total	Total
				0.098	0.098	0.098

Free Flowing Outfall Details for Storm

Outfall Pipe Number	Outfall Name	C. Level (m)	I. Level (m)	Min I. Level (m)	D,L (mm)	W (mm)
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S1.004	S	35.000	33.190	0.000	0	0
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Simulation Criteria for Storm

Volumetric Runoff Coeff	0.750	Additional Flow - % of Total Flow	0.000
Areal Reduction Factor	1.000	MADD Factor * 10m ³ /ha	Storage 2.000
Hot Start (mins)	0	Inlet Coefficient	0.800
Hot Start Level (mm)	0	Flow per Person per Day (l/per/day)	0.000
Manhole Headloss Coeff (Global)	0.500	Run Time (mins)	60
Foul Sewage per hectare (l/s)	0.000	Output Interval (mins)	1

Number of Input Hydrographs	0	Number of Storage Structures	1
Number of Online Controls	1	Number of Time/Area Diagrams	0
Number of Offline Controls	0	Number of Real Time Controls	0

Synthetic Rainfall Details

Rainfall Model	FSR	Profile Type	Summer
Return Period (years)	2	Cv (Summer)	0.750
Region	England and Wales	Cv (Winter)	0.840
M5-60 (mm)	18.000	Storm Duration (mins)	30
Ratio R	0.360		

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Online Controls for Storm

Hydro-Brake® Optimum Manhole: S5, DS/PN: S1.004, Volume (m³): 0.4

Unit Reference	MD-SHE-0066-2000-1100-2000
Design Head (m)	1.100
Design Flow (l/s)	2.0
Flush-Flo™	Calculated
Objective	Minimise upstream storage
Application	Surface
Sump Available	Yes
Diameter (mm)	66
Invert Level (m)	33.240
Minimum Outlet Pipe Diameter (mm)	100
Suggested Manhole Diameter (mm)	1200

Control Points	Head (m)	Flow (l/s)
Design Point (Calculated)	1.100	2.0
Flush-Flo™	0.289	1.8
Kick-Flo®	0.584	1.5
Mean Flow over Head Range	-	1.7

The hydrological calculations have been based on the Head/Discharge relationship for the Hydro-Brake® Optimum as specified. Should another type of control device other than a Hydro-Brake Optimum® be utilised then these storage routing calculations will be invalidated

Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)
0.100	1.6	1.200	2.1	3.000	3.2	7.000	4.7
0.200	1.8	1.400	2.2	3.500	3.4	7.500	4.9
0.300	1.8	1.600	2.4	4.000	3.6	8.000	5.0
0.400	1.8	1.800	2.5	4.500	3.8	8.500	5.1
0.500	1.7	2.000	2.6	5.000	4.0	9.000	5.3
0.600	1.5	2.200	2.7	5.500	4.2	9.500	5.4
0.800	1.7	2.400	2.9	6.000	4.4		
1.000	1.9	2.600	3.0	6.500	4.5		

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Storage Structures for Storm

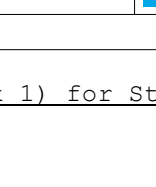
Cellular Storage Manhole: S5, DS/PN: S1.004

Invert Level (m) 33.240 Safety Factor 2.0
Infiltration Coefficient Base (m/hr) 0.00000 Porosity 0.95
Infiltration Coefficient Side (m/hr) 0.00000

Depth (m)	Area (m ²)	Inf. Area (m ²)	Depth (m)	Area (m ²)	Inf. Area (m ²)
0.000	25.0	0.0	1.076	0.0	0.0
1.075	25.0	0.0			

Manhole Headloss for Storm

PN	US/MH	US/MH
	Name	Headloss
S1.000	S1	0.500
S1.001	S2	0.500
S1.002	S3	0.500
S2.000	S4	0.500
S2.001	S5	0.500
S2.002	S6	0.500
S1.003	S4	0.500
S1.004	S5	0.500

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Summary of Critical Results by Maximum Level (Rank 1) for Storm

Simulation Criteria

Areal Reduction Factor	1.000	Additional Flow - % of Total Flow	0.000
Hot Start (mins)	0	MADD Factor * 10m³/ha Storage	2.000
Hot Start Level (mm)	0	Inlet Coefficient	0.800
Manhole Headloss Coeff (Global)	0.500	Flow per Person per Day (l/per/day)	0.000
Foul Sewage per hectare (l/s)	0.000		

Number of Input Hydrographs	0	Number of Storage Structures	1
Number of Online Controls	1	Number of Time/Area Diagrams	0
Number of Offline Controls	0	Number of Real Time Controls	0

Synthetic Rainfall Details

Rainfall Model	FSR	Ratio R	0.360
Region	England and Wales	Cv (Summer)	0.750
M5-60 (mm)	18.000	Cv (Winter)	0.840

Margin for Flood Risk Warning (mm)	300.0
Analysis Timestep	2.5 Second Increment (Extended)
DTS Status	ON
DVD Status	ON
Inertia Status	ON

Profile(s)	Summer and Winter
Duration(s) (mins)	15, 30, 60, 120, 180, 240, 360, 480, 600, 720, 960, 1440, 2160, 2880, 4320, 5760, 7200, 8640, 10080
Return Period(s) (years)	100
Climate Change (%)	40

PN	US/MH Name	Storm	Return Period	Climate Change	First (X) Surcharge	First (Y) Flood	First (Z) Overflow	Overflow Act.
S1.000	S1	180 Winter	100	+40%	100/15 Summer	100/15 Summer		
S1.001	S2	120 Winter	100	+40%	100/15 Summer	100/60 Winter		
S1.002	S3	120 Winter	100	+40%	100/15 Summer			
S2.000	S4	120 Winter	100	+40%	100/15 Summer	100/60 Winter		
S2.001	S5	60 Winter	100	+40%	100/15 Summer			
S2.002	S6	120 Winter	100	+40%	100/15 Summer			
S1.003	S4	120 Winter	100	+40%	100/15 Summer	100/60 Winter		
S1.004	S5	120 Winter	100	+40%	100/15 Summer			

PN	US/MH Name	Water Surcharged Flooded			Pipe		Status	Level Exceeded
		Level (m)	Depth (m)	Volume (m³)	Flow / Overflow Cap. (l/s)	Flow (l/s)		
S1.000	S1	34.510	0.570	9.832	0.24	5.0	FLOOD	17
S1.001	S2	34.600	0.770	0.172	0.63	10.8	FLOOD	4
S1.002	S3	34.791	1.221	0.000	0.49	10.7	SURCHARGED	
S2.000	S4	34.600	0.770	0.387	0.43	6.8	FLOOD	6

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Summary of Critical Results by Maximum Level (Rank 1) for Storm

PN	US/MH Name	Water		Surcharged		Flooded		Pipe		Status	Level Exceeded
		Level (m)	Depth (m)	Volume (m³)	Flow / Cap.	Overflow (l/s)	Flow (l/s)				
S2.001	S5	34.702	0.982	0.000	0.38		6.4			SURCHARGED	
S2.002	S6	34.787	1.227	0.000	0.31		5.4			SURCHARGED	
S1.003	S4	34.800	1.305	0.108	0.53		15.7			FLOOD	3
S1.004	S5	34.806	1.341	0.000	0.07		2.2			SURCHARGED	