19. Visit 3 - Baseline - Date of Visit 3 - Baseline

Number	Question	Answers
19.1	Date of Visit 3 - Baseline	[ ] [ ] [ ] *(dd-mm-yyyy)*
19.2	Is Visit 3 date 14 to 30 days after Visit 1 date and 4 to 10 days after Visit 2 date?	Automatic Calculation on Castor

20. Visit 3 - Baseline - SOPHIST Cardiac Magnetic Resonance (CMR) Sub-study

Number	Question	Answers
	Only to be completed by Tayside, Grampian, Guys & St Thomas	
20.1.2	Is participant taking part in sub-study?	◯ YES ◯ NO
20.2.1	Date of sub-study consent	[ ] [ ] [ ] *(dd-mm-yyyy)*
	CMR Sub-study Eligibility Criteria	
	Inclusion Criteria	
20.2.4	Able to comply with sub-study procedures.	◯ YES ◯ NO
20.2.5	Written informed consent.	◯ YES ◯ NO
	Exclusion Criteria	
20.2.7	Non-CMR compatible implantable cardiac device i.e. pacemaker, implantable defibrillator.	◯ YES ◯ NO
20.2.8	Metallic foreign bodies, including suspicion of.	◯ YES ◯ NO

20.2.9	Claustrophobia or inability to remain still during imaging.	○ YES ○ NO
20.2.10	Contra-indication to intravenous adenosine as judged by the investigator, i.e. asthma; severe chronic obstructive lung disease; decompensated heart failure; long QT syndrome; second- or third-degree AV block and sick sinus syndrome; severe hypotension.	○ YES ○ NO
20.2.11	Contra-indication/allergy to gadolinium contrast media.	○ YES ○ NO
20.2.12	Estimated glomerular filtration rate (eGFR) <30mL/min/1.73m2.	○ YES ○ NO
	Eligibility	
20.1.2.2	Is the participant eligible to take part in the sub-study?	○ YES ○ NO
20.1.2.2.1	Was eligibility signed off by a delegated doctor prior to MRI	○ YES ○ NO
20.1.2.2.2	Name of PI or delegated doctor	
20.1.2.2.3	Date of signature	*(dd-mm-yyyy)*
	MRI	
20.2.14	Has MRI been done?	○ YES ○ NO

20.4.1	Date of MRI		*(dd-mm-yyyy)*
20.4.2	Haematocrit value (this will be from a full blood count test that is to be obtained at the time of the scan)		L/L

21. Visit 3 - Baseline - Weight

Number	Question	Answers
21.1	Weight	kg

22. Visit 3 - Baseline - Concomitant Medications

Number	Question	Answers
22.1	Concomitant Medications **Please complete Concomitant Medications Log**	

23. Visit 3 - Baseline - Adverse Events

Number	Question	Answers
23.1	Adverse Events **Please complete Adverse Events Log**	

24. Visit 3 - Baseline - Glucose Review

Number	Question	Answers
24.1	Was Glucose Management Assessed? *If Glucose Management not assessed, this is a Protocol breach.*	○ YES ○ NO
24.2	Insulin administration	○ Subcutaneous injections ○ Pump
24.3	Daily basal insulin dose (average of last 7 days)	[ ] units/day
24.4	Daily bolus insulin dose (average of last 7 days)	[ ] units/day
24.5	Total daily insulin dose (average of last 7 days)	Automatic Calculation on Castor
	CGM summary data from previous 2 weeks	
24.6	Are summary data from CGM readings over the 2 weeks prior to this visit available?	○ YES ○ NO
24.6.1	Number of days CGM worn over preceding 14 days	[ ] days
24.6.2	Percentage of time CGM was active over preceding 14 days	[ ] %

24.6.3	Mean blood glucose level over preceding 14 days		mmol/L
24.6.4	Blood glucose percentage time above 13.9 mmol/L over preceding 14 days		%
24.6.5	Blood glucose percentage time from 10.1 to 13.9mmol/L over preceding 14 days		%
24.6.6	Blood glucose percentage time from 3.9 to 10.0 mmol/L over preceding 14 days		%
24.6.7	Blood glucose percentage time from 3.0 to 3.8 mmol/L over preceding 14 days		%
24.6.8	Blood glucose percentage time below 3.0 mmol/L over preceding 14 days		%
24.6.9	Do blood glucose percentage times spent in each range add up to 100%?	Automatic Calculation on Castor	
24.6.10	Glycaemic variability index over preceding 14 days		%CV

24.1.1	Does the participant report any level 2 or level 3 hypoglycaemic events since last visit?	○ YES ○ NO

If there has been a level 3 hypoglycaemic event since last visit, participant is ineligible for trial.
Complete the hypoglycaemic repeating data.

Level 3 hypoglycaemic event is defined as requiring hospitalisation and/or assistance of another person to actively administer carbohydrate, glucagon, or other resuscitative actions. These episodes may be associated with sufficient neuroglycopaenia to induce seizure or coma. Plasma glucose measurements may not be available during such an event, but neurological recovery attributable to the restoration of plasma glucose to normal is considered sufficient evidence that the event was induced by a low plasma glucose concentration

Hypoglycaemic Events

24.1.1.2 Hypoglycaemic Events

Please record any level 2 or 3 hypoglycaemic events in the Hypoglycaemic Events Log

24.1.3	Does the participant report any other symptomatic hypoglycaemic events in the last 2 weeks?	○ YES ○ NO
24.1.3.1	If Yes, specify	
24.7	HbA1c performed?	Automatic Calculation on Castor
24.7.1	HbA1c units used?	Automatic Calculation on Castor
24.7.2	HbA1c level	Automatic Calculation on Castor
24.7.1.1	Is HbA1c result lower than 58 mmol/mol?	Automatic Calculation on Castor
24.7.1.2	Is HbA1c result lower than 7.5%?	
24.7.1.2.1	If yes, was insulin reduced by 10%? *If insulin not reduced by 10%, this is a Protocol breach*	○ YES ○ NO

24.7.1.1.1 If yes, was insulin reduced by 10%?
If insulin not reduced by 10%, this is a Protocol breach

- ○ YES
- ○ NO

25. Visit 3 - Baseline - Ketone Review

Number	Question	Answers
	Ketone Readings	
25.1	Have there been Ketone measures since the last visit?	○ YES ○ NO
25.1.1	Number of ketone measurements taken since last visit	
25.1.2	Number of episodes with ketone levels between 0.6 and 1.5 mmol/L (inclusive of endpoints).	
	A distinct episode is a period where ketones have gone above the threshold (0.6mmol/L) and then come down below this. If it then went up again that would be a new distinct event.	
25.1.4	Number of episodes with ketone levels greater than 1.5 mmol/L	
	A distinct episode is a period where ketones have gone above the threshold (1.5mmol/L) and then come down below this. If it then went up again that would be a new distinct event.	
25.1.6	Have there been any DKA events since the last visit?	○ YES ○ NO
	If there has been a DKA event since last visit, participant is ineligible for trial. Complete the DKA Log.	
	If the participant has experienced any DKA events please complete the DKA Events Log	
	DKA Events	

25.1.6.2 DKA Events

Repeating Data 'Vital Signs'

Form Vital Signs

Number	Question	Answers
	Complete Vital Signs form	
1.1	Blood Pressure - Systolic	mmHg
1.2	Blood Pressure - Diastolic	mmHg
1.3	Pulse	bpm

27. Visit 3 - Baseline - Questionnaires

Number	Question	Answers
27.1	Has the KCCQ questionnaire been completed?	○ YES ○ NO
27.1.1	Add KCCQ	Performed in Castor
27.2	Has the DTSQs questionnaire been completed?	○ YES ○ NO
27.2.1	Add DTSQs	Performed in Castor
27.3	Has the EQ-5D-5L questionnaire been completed?	○ YES ○ NO
27.3.1	Add EQ-5D-5L	Performed in Castor

28. Visit 3 - Baseline - 6-Minute Walk Test

Number	Question	Answers
	Please complete 6-Minute Walk Test	
28.1	Was 6-Minute Walk Test completed?	○ YES ○ NO
28.1.1	Distance walked in 6 minutes?	..... m
28.1.2	Number of stops?	.....

Repeating Data 'Safety Bloods'

Visit 3 - Samples - Form Safety Bloods

Number	Question	Answers
1.1	Date of blood sample	☐☐ ☐☐ ☐☐☐☐ *(dd-mm-yyyy)*
1.2	Haemoglobin	☐☐☐☐
1.3	Haemoglobin Unit	○ g/L ○ g/dL
1.4	Is the haemoglobin value within the expected range?	
1.5	Sodium	☐☐☐☐ mmol/L
1.6	Potassium	☐☐☐☐ mmol/L
1.7	Urea	☐☐☐☐ mmol/L
1.8	Creatinine	☐☐☐☐ µmol/L
1.9	Glucose	☐☐☐☐ mmol/L
1.10	eGFR	☐☐☐☐ mL/min/1.73m2

29. Visit 3 - Baseline - Samples

Number	Question	Answers
29.1	**Urine Pregnancy Test**	
	Pregnancy test performed	
29.2		○ YES ○ NO ○ N/A
29.2.1	Pregnancy test result Without a negative pregnancy test result, the participant is not eligible to take part in the trial.	○ Positive ○ Negative
29.2.2	Is the participant either permanently sterilized or post-menopausal?	○ YES ○ NO
	Urine Sample	
29.3	Urine Sample	
29.4	Were research bloods taken and processed as per laboratory manual?	○ YES ○ NO
29.4.1	If answered No, give reason	

Repeating Data 'Urine Sample'

Form Urine sample

Number	Question	Answers
1.1	Date of urine sample	[ ] [ ] [ ] *(dd-mm-yyyy)*
1.2	Albumin	[ ] mg/L
1.4	Creatinine	[ ]
1.5	Creatinine Units	○ µmol/L ○ mmol/L
1.6	Urine albumin/creatinine ratio	[ ] mg/mmol creat
1.7	Sodium	[ ] mmol/L

30. Visit 3 - Baseline - Inclusion Criteria

Number	Question	Answers
30.1	Age 18 years to <85 years	◯ YES ◯ NO
30.2	Type 1 Diabetes	Automatic Calculation on Castor
30.3	Insulin dose greater than or equal to 0.5 units/kg body weight at screening or BMI equal to or greater than 25kg/m2 at screening	Automatic Calculation on Castor
30.4	Using continuous glucose monitor at screening or willing to use one for the duration of the trial	Automatic Calculation on Castor
30.5	Diagnosis of heart failure (HF), defined as one or more of the following:	Automatic Calculation on Castor
	Previous HF hospitalisation where HF was documented as the primary cause of hospitalisation and there was a requirement for loop diuretics.	
	Impaired left ventricular function (i.e. LVEF <50% by any imaging modality) at any time.	
	Preserved LV systolic function (LVEF ≥50%) with left atrial enlargement (2-dimensional measurement of left atrial width ≥3.8cm or left atrial length ≥5.0 cm or left atrial area ≥20cm2 or left atrial volume index >29 ml/m2) within the last 24 months.	
	Preserved LV systolic function (LVEF ≥50%) with left ventricular hypertrophy (2-dimensional measurement of end-diastolic interventricular septal diameter ≥1.2cm or end-diastolic left ventricular posterior wall diameter ≥1.2cm) within the last 24 months.	
	Preserved LV systolic function (LVEF ≥50%) with diastolic dysfunction (septal e' <7cm/sec or lateral e' <10cm/sec or average E/e' ≥15) within the last 24 months.	
30.6	New York Heart Association Class II-IV at screening	Automatic Calculation on Castor
30.7	Elevated N-terminal pro-B-type natriuretic peptide (≥400 ng/L for those in atrial fibrillation/flutter, ≥250 ng/L for those in all other rhythms) or B-type natriuretic peptide (≥100 ng/L for those in atrial fibrillation/flutter, ≥75 ng/L for those in all other rhythms) within 12 months of screening	◯ YES ◯ NO

30.8	Kansas City Cardiomyopathy clinical summary score less than 85 at screening.	Automatic Calculation on Castor

31. Visit 3 - Baseline - Exclusion Criteria

Number	Question	Answers
31.1	Cardiac surgery (coronary artery bypass graft or valve replacement), type 1 myocardial infarction, implantation of cardiac device (including biventricular pacemaker) or cardiac mechanical support implantation within 1 month of screening, or between screening and randomisation, or planned during the trial.	◯ YES ◯ NO
31.2	End-stage heart failure requiring left ventricular assist devices, intra-aortic balloon pump, or any type of mechanical support at the time of randomisation.	◯ YES ◯ NO
31.3	Documented primary severe valvular heart disease, amyloidosis or hypertrophic cardiomyopathy as principal cause of heart failure as judged by the local investigator.	◯ YES ◯ NO
31.4	Respiratory disease thought to be the primary cause of dyspnoea as assessed by the local investigator.	◯ YES ◯ NO
31.5	Chronic kidney disease with estimated glomerular filtration rate <25ml/min/1.73m2 at screening.	◯ YES ◯ NO
31.6	Moderate or severe hepatic impairment (e.g. Child-Pugh B and C) at screening as judged by the local investigator.	◯ YES ◯ NO
31.7	Use of sotagliflozin or any SGLT2 inhibitor within 1 month of screening or between screening and randomisation.	◯ YES ◯ NO
31.8	Previous hypersensitivity/intolerance to SGLT2 inhibitors.	◯ YES ◯ NO
31.9	Presence of malignancy with expected life expectancy less than 1 year at screening	

31.10	Severe hypoglycaemia (hospitalisation for hypoglycaemia or episode requiring external assistance to treat) within 1 month prior to screening or between screening and randomisation.	◯ YES ◯ NO
31.11	One episode of diabetic ketoacidosis or nonketotic hyperosmolar state within 1 month of screening or between screening and randomisation, or greater than or equal to 2 diabetic ketoacidosis or nonketotic hyperosmolar state events within 6 months of screening.	◯ YES ◯ NO
31.12	Pregnant or lactating women	◯ YES ◯ NO
31.13	Women of childbearing age or male partners of women of childbearing age and not practicing a method of acceptable birth control.	
31.14	On a ketogenic diet.	◯ YES ◯ NO
31.15	Unwilling/unable to share glucose and ketone monitoring data.	◯ YES ◯ NO
31.16	Use of any investigational drugs within five times of the elimination half-life after the last dose or within 30 days, whichever is longer. Current enrolment in non-interventional, observational studies will be allowed.	◯ YES ◯ NO

32. Visit 3 - Baseline - Eligibility

Number	Question	Answers
	Eligibility must be checked prior to randomisation by a doctor delegated this task in the Delegation Log.	
32.1	Is the participant eligible to take part in the trial?	○ YES ○ NO
32.2	Was eligibility signed off by a delegated doctor prior to randomisation?	○ YES ○ NO
32.3	Name of PI or delegated doctor	
32.4	Date of signature	*(dd-mm-yyyy)*
32.5	Date of signature between date of visit 3 and date of randomisation?	Automatic Calculation on Castor

33. Visit 3 - Baseline - Randomisation

Number	Question	Answers
33.1	Has the participant been randomised?	○ YES ○ NO
33.1.1	Date of Randomisation	[ ] [ ] [ ] *(dd-mm-yyyy)*
33.1.2	Is date of randomisation after date of consent (Visit 1) and on or after date of eligibility sign-off (Visit 3)?	Automatic Calculation on Castor

34. Visit 3 - Baseline - Dispensing of IMP

Number	Question	Answers
34.1	Was IMP dispensed at visit?	○ YES ○ NO
34.1.1	If answered No, give reason?	