CLINICAL GUIDELINE FOR THE RISK ASSESSMENT OF VENOUSTHROMBOEMBOLISM (VTE) DURING PREGNANCY, LABOUR AND THE POST PARTUM PERIOD

1. Aim/Purpose of this Guideline

1.1. This gives guidance to midwives and obstetricians in the timing of risk assessments for venousthromboembolism (VTE) during pregnancy, labour and post natal period and the referral pathway for those women identified as being at risk

1.2. This gives guidance to obstetricians on the planning and prescribing of thromboprophylaxis for women who have an intermediate or high risk of VTE in pregnancy, labour and post natal period.

1.3. Please also note out of date information in the hand held notes risk assessment tools. For women with High/intermediate risk of VTE and with a low bleeding risk, if the woman accepts LMWH, she will **not** require antiembolitic stockings. (TEDS). However, if the woman declines LMWH she will require antiembolitic stockings. (TEDS).

2. The Guidance

2.1. Assessment of risk: Pregnancy, labour and delivery are associated with a ten fold increase in the risk of VTE.[1] Therefore all women should undergo a documented assessment of risk factors for VTE as follows:

2.2. At booking

Risk assessment for VTE will be performed, on all women, at booking. The pathway for referral should be followed as per the risk assessment tool, which is integral to the maternity hand held notes. (appendix 1)
If referral to joint Obstetric and haematology clinic is required the referral form (appendix 2) should be completed and attached to the stork printout.
If a referral to a consultant clinic is required this should be indicated on the stork printout as per 'clinical guideline for booking, ante natal care and information giving'[2].

2.3. Ante natal inpatient admission.

All antenatal women admitted to RCH should be risk assessed at each admission for VTE and bleeding risk. The risk assessment tool is integral to the maternity hand held notes.(appendix 3) For those women who are at high or intermediate risk of VTE the admitting or clerking doctor should use the table on the back of the risk assessment tool (appendix 4) to plan and prescribe the appropriate thromboprophylaxis, in discussion with the woman. Risk can alter with subsequent admissions. For those women who become high risk a referral should be made to the joint Obstetric and haematology clinic on the appropriate referral form (appendix 2). A baseline full blood count (FBC) result should be obtained for those who are started on low molecular weight heparin (LMWH). A repeat FBC is not necessary unless the woman develops rashes or becomes ill.

2.4. Those women admitted for induction of labour, early labour and established labour will be exempt from risk assessment until post delivery.[3]

2.5. Post delivery:

After delivery a risk assessment for VTE and bleeding is to be made by the person conducting the delivery by completing the postnatal VTE risk assessment form, which is integral to the maternity hand held notes. (appendix 5)

If intermediate or high risk this must be communicated to a doctor who will prescribe/ offer appropriate prophylaxis in discussion with the woman, using the table on the back of the risk assessment proforma. (appendix 6)

If the woman accepts prophylaxis a baseline FBC should be taken and the result obtained prior to administration of fragmin.

2.6. Women delivering at home or birthing centre All women regardless of the mode or place of delivery should be risk assessed. The midwife conducting the delivery will be risk assessed as above. Those who are at high risk or intermediate risk of VTE, should be offered prophylaxis for 7 days and if this is accepted they will be referred to the day assessment unit (DAU) at RCHT within the next 24hours or Wheal Rose if week end.

2.7. The first dose of fragmin can be given:

- When result of FBC received and platelets are greater than 75
- When there is no active bleeding
- After 4 hours of epidural catheter removal and spinal.
- Then daily following the first dose

2.8. Documentation of management plans for VTE or thromboprophylaxis

- For women seen at the joint obstetric/haematology clinic a letter will be sent to the woman's community midwife, consultant obstetrician, consultant anaesthetist and woman's GP informing them of the plan of care for this woman.
- The plan of care should also be documented on the 'maternity management plan' page of the maternity hand held notes.
- For women seen by the consultant obstetrician team either as an out patient or and ante natal inpatient the plan of care should also be documented on the 'maternity management plan' page of the maternity hand held notes.
- Any management plan which relates to labour, delivery and the post natal period should be copied to the 'risk file' on delivery suite.

2.9. References

1. Confidential enquiry into maternal and child health. (Dec 2007) **Saving mothers lives. The seventh report**. CEMACH. London
2. RCHT July 2012: **clinical guideline for booking, ante natal care and information giving'**
3. RCOG 2009: **Reducing the risk of thrombosis and embolism during pregnancy and the puerperium**. Guideline No. 37. November 2009. RCOG, London: 2009

Appendix 1

ANTENATAL VTE RISK ASSESSMENT AND MANAGEMENT AT BOOKING

(This page to be completed at booking by Community Midwife)

Patient Label

Place of risk assessment:……
Date: …… Gestational age:……

Thrombosis risk:

- **1**. Previous VTE with known *thrombophilia
- **2**. Previous VTE & VTE in first relative (mother/father/sibling)
- **3**. Recurrent VTE

Single risk factor → **HIGH RISK**

- Recommend antenatal thromboprophylaxis with LMWH
- **Refer to Combined Obstetric-Haematology clinic where an

- **1**.Single previous VTE with no family history or thrombophilia
- **2.**Thrombophilia + no VTE
- **3**.Significant medical Co-morbidities e.g. Heart/ lung / kidney disease, SLE/cancer/ inflammatory conditions/sickle cell

Single risk factor → **INTERMEDIATE RISK**

- Consider antenatal thromboprophylaxis with LMWH
- **Offer referral to Combined Obstetric Haematology clinic for advice for 1 and 2(appointment or letter of advice will be send on case to case basis). For 3 refer to Consultant clinic.

- Age > 35 years
- Obesity (BMI > 30)
- Parity 4 or more
- Smoker
- Gross Varicose veins
- Current systemic infection
- Immobility more than 3 days/ -Long haul flight for more than 4 hours within 2 weeks
- Dehydration, hyperemesis
- Ovarian hyper stimulation
- Hypertension

3 or more risk factors → **INTERMEDIATE RISK**

- Refer to respective Consultant clinic

<3 risk factors → **LOWER RISK**

- Mobilisation and avoidance of

VTE Risk Assessment - Low/Intermediate/High

Outcome: Intermediate/High- **Referral: Sent/Referral Declined**

Signature……Name……..Date……

***Thrombophilia is defined tendency to thrombosis (eg. Factor V Leiden, antiphospholipid antibodies **Referral to the Combined Obstetric Haematology Clinic should be made by completing referral proforma to and attaching to stork notes**

Appendix 2

Referral form to combined obstetric and haematology clinic

Phone: 01872 252501
Fax: 01872 253237

PATIENT LABEL

Condition needing referral/current
Tick as necessary:

High risk for VTE ☐
Previous VTE with thrombophilia ☐
Previous VTE with VTE first relative ☐
Recurrent VTE ☐

Intermediate risk for VTE
Single VTE with no family history/thrombophilia ☐
Recent PE/VTE ☐

Other haematological conditions

On Warfarin/Heparin ☐
Haemophilia ☐
Bleeding disorder – specify ☐
Thrombocytopenia ☐
Thrombophilia ☐

Weeks gestation

Parity

EDD

BMI (if known)

Age

Gross varicose veins

Current systemic infection

Immobility more than 3 days days/ long haul flight within 2 weeks

Dehydration/hyperemisis

Ovarian hyperstimulation

Consultant Responsible……

Midwife……

GP……

Medications

Please attach form to Stork Booking Sheet if Community, fax to Haematology Clinic if In-patient.
NB: Isolated family history is not considered as risk factor unless there is family history of thrombophilia and the lady wishes to have screening

Signed……Date……

Appendix 3

ANTENATAL VTE ASSESSMENT AND MANAGEMENT ON ADMISSION.
(Excluding labour/induction of labour)
(To be completed on any admission by Doctor / Midwife)

Patient label

Place of risk assessment…… Date:…… Gestational age:……

VTE risk at booking: High/intermediate/low

- Previous VTE with known thrombophilia
- Previous VTE with VTE in first degree relative (mother/father/sibling)
- Recurrent VTE

Single risk factor

- Single previous VTE with no family history or thrombophilia
- Thrombophilia + no VTE
- Significant medical Co-morbidities e.g. Heart/ lung / kidney disease, SLE/cancer/ inflammatory conditions/sickle cell disease

2 or more risk factors

HIGH RISK

- *Prescribe antenatal thromboprophylaxis with LMWH
- **Refer to Combined Obstetric- Haematology clinic if not already done.

Single risk factor

- Age > 35 years
- Obesity (BMI > 30)
- Parity 4 or more
- Smoker
- Gross Varicose veins
- Current systemic infection
- Immobility more than 3 days/ -Long haul flight for more than 4 hours within 2 weeks
- Pre-eclampsia
- Dehydration,
- hyperemesis
- Ovarian hyper stimulation

2 or more risk factors

INTERMEDIATE RISK

- *Consider antenatal thromboprophylaxis with LMWH for duration of admission/longer if prolonged immobility
- **Offer referral to Combined Obstetric Haematology clinic for advice (appointment or letter of advice will be

One risk factor

LOWER RISK

- Mobilisation and avoidance of dehydration

***Assess bleeding risk as follows and withhold LMWH if one of the following identified**

- Platelets<75, Inherited bleeding disorders
- Active bleeding- Placenta praevia/ abruption
- Uncontrolled blood pressure (200/110), Acute Fatty liver, HELLP with low platelets
- Induction of labour, delivery or regional analgesia expected within 12hours

Signature……Name……Date……

****Referral to the Combined Obstetric Haematology Clinic should be made by completing referral proforma and faxing to join obstetric haematology clinic**

Appendix 4

VTE ASSESSMENT AND MANAGEMENT AT ADMISSION- OUTCOME (to be filled by the Doctor clerking the woman)

Risk of VTE- please tick	Thromboprophylaxis
High/intermediate risk of VTE (with low bleeding risk)	• LMWH • early mobilisation • adequate hydration
High/intermediate risk of VTE (with significant risk of bleeding or woman has declined fragmin	• Antiembolitic stockings (TEDS) • early mobilisation • adequate hydration
Low risk of VTE	• Early mobilisation • adequate hydration

If LMWH prescribed- Dose and duration (please specify)…….

Drug chart checked/ woman informed (please circle)

FBC checked/ performed before prescription (please circle)

<u>Dosage of LMWH for VTE prophylaxis</u>: Dose depends on booking weight

< 50kg 2,500 units daily, S/C
50 – 90 kg 5,000 units daily, S/C
90 – 130 kg 7,500 units daily, S/C
130+ kg 10,000 units daily, S/C

<u>Epidural / spinal analgesia</u>: Placement or removal of catheter should be delayed for 12 hours after administration of LMWH. LMWH should not be given sooner than 4 hrs after catheter removal.

Women admitted for APH are at risk of bleeding and hence will not qualify for pharmacological prophylaxis with Fragmin irrespective of the degree of risk for VTE and will receive only TEDS / mobilisation/ hydration after risk stratification until the bleeding risk has subsided.

Signed…….. Name…….. Date…….

Designation (SHO/ REG/ STAFF GRADE/ CONSULTANT)

Appendix 5

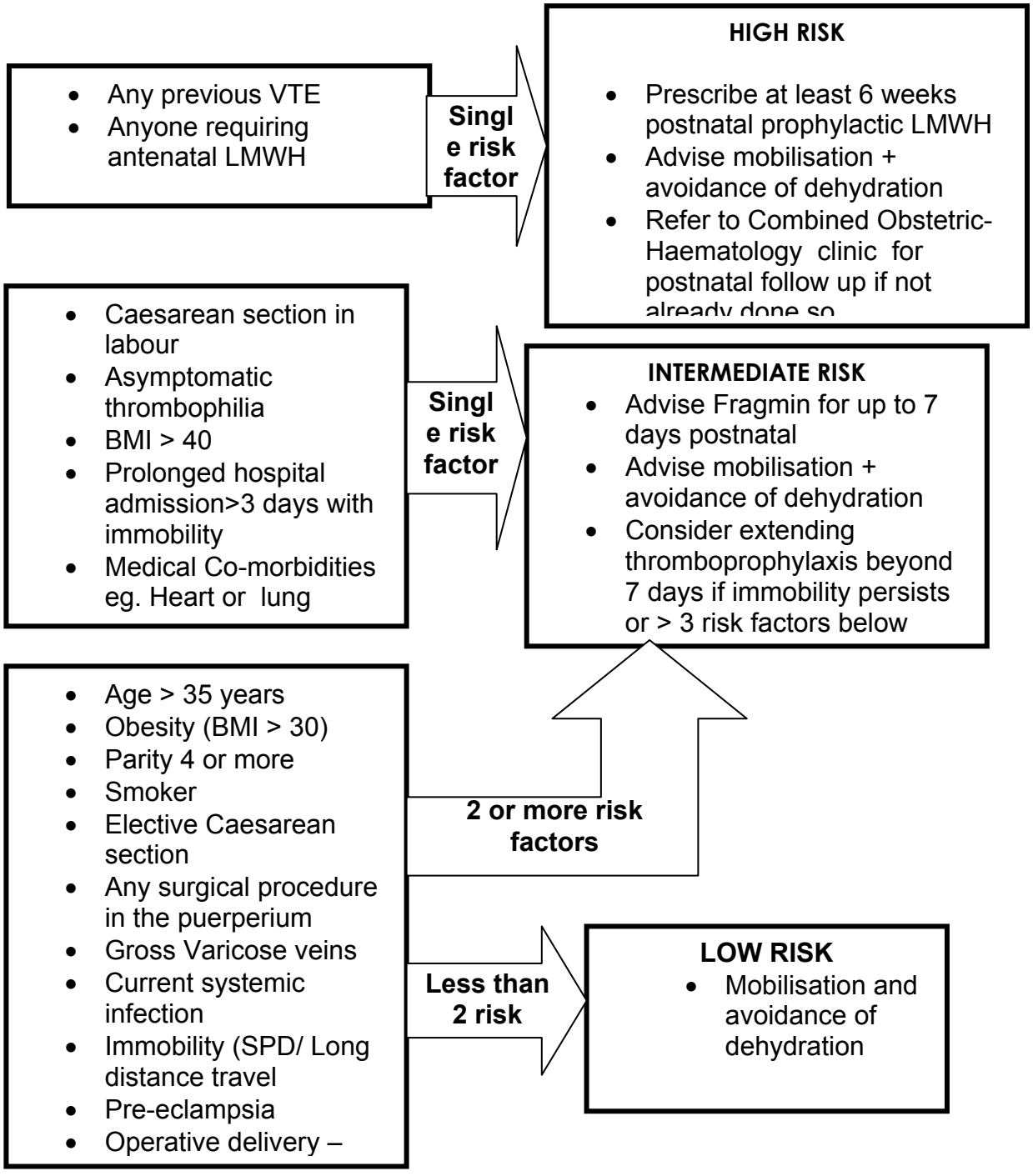
Patient label

POSTNATAL VTE ASSESSMENT

(To be completed after delivery by person conducting the delivery)

Place of risk assessment……..Date……

Thrombosis risk:



Bleeding risk: Platelets<75, Active PPH, within 4 hrs of epidural / spinal

VTE Risk Assessment: - Low/Intermediate/High (please circle)

Signature……Name……Date

Appendix 6

VTE ASSESSMENT AND MANAGEMENT AFTER DELIVERY- OUTCOME (to be filled by the Middle grade/ SHO/ Consultant on call on delivery suite)

Risk of VTE- please tick	Thromboprophylaxis
High/intermediate risk of VTE (with low bleeding risk)	• LMWH • early mobilisation • adequate hydration
High/intermediate risk of VTE (with significant risk of bleeding or declines fragmin)	• TEDS stockings • early mobilisation • adequate hydration
Low risk of VTE	• Early mobilisation • adequate hydration

If LMWH prescribed- Dose and duration (please specify)…….

Drug chart checked/ woman informed (please circle)

FBC checked / performed before prescription (circle)

<u>Dosage of LMWH for VTE prophylaxis</u>: Dose depends on booking weight

< 50kg 2,500 units daily, S/C
50 – 90 kg 5,000 units daily, S/C
90 – 130 kg 7,500 units daily, S/C
130+ kg 10,000 units daily, S/C

<u>Epidural / spinal analgesia</u>: Placement or removal of catheter should be delayed for 12 hours after administration of LMWH. LMWH should not be given sooner than 4 hrs after catheter removal.

If woman delivered at home or in birthing centre and accepts Fragmin – refer to DAU for FBC & Prescription

There is no need to repeat FBC for 7 days prophylactic Fragmin, unless the woman reports with rashes.

Signed……..Name……

Date……..

Designation (SHO/ REG/ STAFF GRADE/ CONSULTANT)

3. Monitoring compliance and effectiveness

Element to be monitored	• The audit will take into account record keeping by obstetricians and midwives • The results will be inputted onto an excel spreadsheet • The audit will be registered with the Trust's audit department
Lead	• Maternity Risk Management Midwife
Tool	• Was a booking risk assessment completed. • If an ante natal admission (non labour related) was a risk assessment completed • Was a post delivery risk assessment completed • If assessed as intermediate or high was the appropriate referral made to the joint haem/obs team or consultant clinic • If the woman required thromboprophylaxis was an appropriate management plan documented in her notes
Frequency	1% or 10 sets, whichever is the greater, of all health records of women who have delivered following thromboprophylaxis during the antenatal and/or post natal period will be audited over a 12 month period
Reporting arrangements	• A formal report of the results will be received annually at the maternity risk management and clinical audit forum, as per the audit plan • During the process of the audit if compliance is below 75% or other deficiencies identified, this will be highlighted at the next maternity risk management and clinical audit forum and an action plan agreed.
Acting on recommendations and Lead(s)	• Any deficiencies identified on the annual report will be discussed at the maternity risk management and clinical audit forum and an action plan developed • Action leads will be identified and a time frame for the action to be completed by • The action plan will be monitored by the maternity risk management and clinical audit forum until all actions complete
Change in practice and lessons to be shared	• Required changes to practice will be identified and actioned within a time frame agreed on the action plan • A lead member of the forum will be identified to take each change forward where appropriate. • The results of the audits will be distributed to all staff through the risk management newsletter/audit forum as per the action plan

4. Equality and Diversity

4.1. This document complies with the Royal Cornwall Hospitals NHS Trust service Equality and Diversity statement.

4.2. Equality Impact Assessment

The Initial Equality Impact Assessment Screening Form is at Appendix 2.

Appendix 7. Governance Information

Document Title	Clinical guideline for the risk assessment of venousthromboembolism (VTE) during pregnancy, labour and post natal period				
Date Issued/Approved:					
Date Valid From:					
Date for Review:	October 2015				
Directorate / Department responsible (author/owner):	Dr Aylur Rajasri Obs and Gynae directorate				
Contact details:	01872 252729				
Brief summary of contents	This gives guidance to midwives and obstetricians in the timing of risk assessments for venousthromboembolism (VTE) during pregnancy, labour and post natal period and the referral pathway for those women identified as being at risk This gives guidance to obstetricians on the planning and prescribing of thromboprophylaxis for women who have an intermediate or high risk of VTE in pregnancy, labour and post natal period.				
Suggested Keywords:	VTE risk assessment, thromboprophylaxis				
Target Audience	RCHT	PCT	CFT		
	✓				
Executive Director responsible for Policy:					
Date revised:	October 2012				
This document replaces (exact title of previous version):	Risk assessment for thromboprophylaxis during pregnancy,labour and after delivery				
Approval route (names of committees)/consultation:	Maternity guidelines group Obs and Gynae directorate meeting				
Divisional Manager confirming approval processes					
Name and Post Title of additional signatories					
Signature of Executive Director giving approval	{Original Copy Signed}				
Publication Location (refer to Policy on Policies – Approvals and	Internet & Intranet	✓	Intranet Only		

Ratification):				
Document Library Folder/Sub Folder	Midwifery and obstetrics			
Links to key external standards	CNST 3.8			
Related Documents:	RCHT July 2012: clinical guideline for booking, ante natal care and information giving'			
Training Need Identified?				

Version Control Table

Date	Version No	Summary of Changes	Changes Made by *(Name and Job Title)*
June 2007	1.0	Initial document	Dr Aylur Rajasri Consultant Obstetrician
February 2011	1.1	Updated in line with new RCOG guidance and added compliance monitoring	Dr Aylur Rajasri Consultant Obstetrician
October 2012	1.2	Change to compliance monitoring only	Dr Aylur Rajasri Consultant Obstetrician

Appendix 8.Initial Equality Impact Assessment Screening Form

Name of service, strategy, policy or project (hereafter referred to as *policy)* to be assessed: **Clinical guideline for the risk assessment of venousthromboembolism (VTE) during pregnancy, labour and post natal period**	
Directorate and service area: **Obs and gynae directorate**	Is this a new or existing Procedure? **Exisiting**
Name of individual completing assessment: Jan Clarkson	Telephone: 01872 252270
1. Policy Aim*	To give guidance to midwives and obstetrician on risk assessing for VTE and management of thromboprophylaxis
2. Policy Objectives*	Ensure women at risk of VTE are identified and managed
3. Policy – intended Outcomes*	Prevention of VTE in pregnant woman
5. How will you measure the outcome?	Compliance monitoring tool
5. Who is intended to benefit from the Policy?	Pregnant women
6a. Is consultation required with the workforce, equality groups, local interest groups etc. around this policy? b. If yes, have these groups been consulted? c. Please list any groups who have been consulted about this procedure.	

*Please see Glossary

7. The Impact

Please complete the following table using ticks. You should refer to the EA guidance notes for areas of possible impact and also the Glossary if needed.

- Where you think that the *policy* could have a **positive** impact on any of the equality group(s) like promoting equality and equal opportunities or improving relations within equality groups, tick the 'Positive impact' box.
- Where you think that the *policy* could have a **negative** impact on any of the equality group(s) i.e. it could disadvantage them, tick the 'Negative impact' box.
- Where you think that the *policy* has **no impact** on any of the equality group(s) listed below i.e. it has no effect currently on equality groups, tick the 'No impact' box.

Equality Group	Positive Impact	Negative Impact	No Impact	Reasons for decision
Age	Yes			All pregnant woman
Disability	Yes			All pregnant woman
Religion or belief	Yes			All pregnant woman
Gender	Yes			All pregnant woman
Transgender	Yes			All pregnant woman
Pregnancy/ Maternity	Yes			All pregnant woman
Race	Yes			All pregnant woman
Sexual Orientation	Yes			All pregnant woman
Marriage / Civil Partnership	Yes			All pregnant woman

You will need to continue to a full Equality Impact Assessment if the following have been highlighted:

- **A negative impact and**
- **No consultation (this excludes any *policies* which have been identified as not requiring consultation).**

8. If there is no evidence that the *policy* promotes equality, equal opportunities or improved relations - could it be adapted so that it does? How?	Full statement of commitment to policy of equal opportunities is included in the policy

Please sign and date this form.

Keep one copy and send a copy to Matron, Equality, Diversity and Human Rights, c/o Royal Cornwall Hospitals NHS Trust, Human Resources Department, Chyvean House, Penventinnie Lane, Truro, Cornwall, TR1 3LJ

A summary of the results will be published on the Trust's web site.

Signed Jan Clarkson

Date 16th October 2012