REASON FOR UPDATE: Updated Notes –Removed reference to PPD system and replaced with Priority Product Innovation System. Removed F036 Design Checklist.

ASSOCIATED DOCUMENTS:
FMP Ref: N/A
F-Form Ref: F035. JWC F515 Product Risk Register
QPD Ref: QPD 06 QPD164

1. PURPOSE

1.1 To provide a documented procedure for design and development control.

2. SCOPE

2.1 This document applies to all those involved in design and development control.

3. RESPONSIBILITY

3.1 The Technical Director is responsible for updating and communicating the details within this procedure.

4 WHAT CONSTITUTES DESIGN?

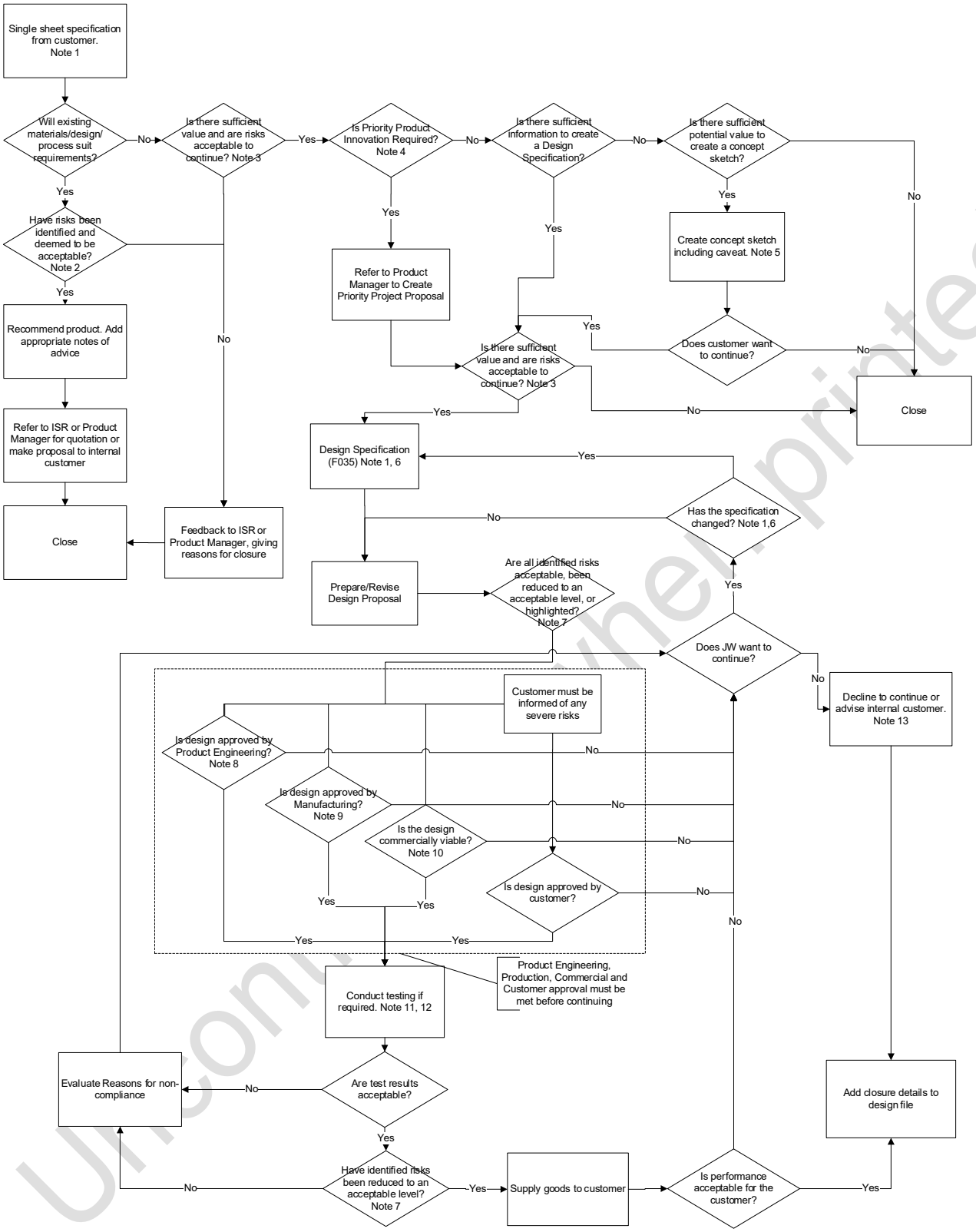
4.1 Design and development of new products, including tools.

4.2 Designs that are variants of existing products outside of their 'published' operating envelope (size, operating conditions, capability, etc.).

4.3 Product or material recommendations for existing products, which require technical decisions, which fall outside published information, are excluded, but details must be formally recorded for future reference.

4. PROCEDURE

4.1 See flow chart on following page.



5. NOTES

- Note 1
  - The Technical Design File Manager who initiates the design project will liaise with the Sponsor and obtain confirmation that brief is correct.
  - The customer could be external to the company or point of contact in the company
- Note 2
  - The business, safety and environmental risks may be present if operating at the limits of published literature. Informal risk assessment to be completed based on published literature, written test data and personal competency. Notes of advice to be added to drawing and/or correspondence. Review JWC F515 Product Risk Register where the product is likely to be already listed
- Note 3
  - The method of determining the value of the enquiry is to be determined. If there is uncertainty as to the value of the enquiry work, please discuss this with the relevant Sales Representative or Technical Manager.
  - For Priority Product Innovations and those of strategic importance the Product Manager should sponsor the project through the Priority Product Innovation system. The Priority Product Innovation system is governed by the Steering Committee who will assess value and risk.
  - Informal risk assessment to be completed based on published literature, written test data and personal competency. The risks must be deemed low enough to continue when compared against value and resource levels required to complete the development.

- Note 4
  - To distinguish between business as normal and new product development the following guidance should be used. Only items that are potentially new product development projects should be entered into the new Priority Product Innovation.

Opportunity Type	Example	Business as Normal	Priority Product Innovation
Standard items and manufacturing process. No requirement for testing	• Enquiry for a standard Solosele KB manufactured using compression moulding. • Enquiry for a standard Insulion gasket manufactured using established manufacturing techniques. • Enquiry for a standard SEPL seal manufactured using established machining techniques.	X	
Non-standard items within approved size ranges, or designed using established rules, within current manufacturing capability. **No requirement to complete internal or 3rd party testing.**	• Solosele KB design, sized in-between chart rows, manufactured using compression moulding. • Enquiry for an Insulion gasket, sized in-between chart rows, manufactured using established manufacturing techniques. • The design of composite clamps using established rules.	X	
Non-standard items outside approved size ranges, and/or outside manufacturing capability. **Any requirement to complete internal or 3rd party testing.**	• Solosele KB design with a section and depth too small for diameter using compression moulding. • Enquiry for a gasket required 3rd party validation. • SEPL seal at a diameter larger than the design standard allows.		X
New design, material and/or manufacturing process	• Request or requirement for a new design, material and/or manufacturing process.		X
New idea for product, material or manufacturing process	• Opportunity to work on new ideas from James Walker colleagues		X

- Note 5
  - If the Design proposal is specific to an individual customer and application, relevant operating conditions should be added to TA sketches provided no confidentiality is breached, where appropriate to the proposal/recommendation and not recorded elsewhere such as Form 035
  - The following caveat must be applied to drawings when no design brief has been completed.
    - 'FOR DISCUSSION PURPOSES ONLY. THIS SKETCH HAS BEEN PRODUCED SOLELY TO CONVEY A CONCEPT. FURTHER APPLICATION INFORMATION WILL BE REQUIRED TO DEVELOP THIS CONCEPT OR TO ALLOW THE SUPPLY OF THE ITEM(S) SHOWN. CONTACT THE DESIGN AUTHORITY FOR FURTHER INFORMATION'
- Note 6
  - Obtain Customer's approval ether by signature on Design File Document or by written agreement.
  - Revise Design File Document or prepare new issue if changes are extensive and obtain confirmation of sponsor agreement with the changes. Clearly mark issues and retain all copies.
- Note 7
  - The Technical Design File Manager must ensure that the risks in the design and opportunity are managed. In the event of a minor design activity, an informal risk assessment is to be completed based on published literature, written test data and personal competency. If the risks are being managed in larger design activities through the Priority Product Innovation System, processes such as FMEA should be utilised.
- Note 8
  - The design must be checked to ensure that it is suitable for use in the application outlined in the relevant F035 Design Specification. The check must be carried out by an approved person as outlined in QPD 06 – Design Authorities
- Note 9
  - The design must be checked in the Manufacturing Review Meeting (MRM) to ensure that it can be manufactured using existing production capabilities, or a new process agreed. Checks would include factors such as tolerances, tool design and physical attributes which may cause difficulties in manufacture. The check must be carried out by an approved person as outlined in QPD 06 – Manufacturing Approval
- Note 10
  - Seek and record confirmation of commercial viability from an appropriate Business Development Manager, Product Manager or Sales Representative.
- Note 11
  - Inform Customer of the results and obtain written confirmation that they are satisfied.
- Note 12
  - This could be a "Field Trial" for new generic product, or production item for a specific customer.
  - Any special requirements for physical testing, validation **must** be agreed with the Customer as part of the brief before accepting any orders
- Note 13
  - Validate Design File Document with reason for future reference.