

# **Work Instruction**

# Risk Categorisation Roles & Responsibilities for Submitting Drinking, Recycled and Waste Water Design Packages.

# 1. Overview

# 1.1. Objective

This work instruction provides the process that the WSC is to follow to answer the risk categorisation questions to submit a design package in e-Developer. This instruction also provides the framework of how Sydney Water will progress that design package based on the risk categorisation.

# 1.2. Scope

# **Covered in this Work Instruction**

The risk categorisation of designs applies to Drinking Water, Recycled Water and Waste Water Designs that are submitted in e-Developer.

This instruction also addresses where the Designer is required to submit specialist engineering certification for their Design proposal when the design does not use Deemed To Comply Drawings.

UG is to utilise the guidance that the existing Water and Sewer Design Audit Checklists provide for the areas of risk.

# Not covered in this Work Instruction

- This work instruction does not change the current process for reviewing Storm Water design packages. These will continue to follow the existing process.
- This work instruction does not attempt to define how the risk areas are audited. This is to be carried out as detailed in the existing Water and Sewer Design Audit Checklists.
- This work instruction provides **guidance only** for how Operations could address risk areas that are identified. They will need to adopt and manage their Design review and acceptance process with operational and maintenance consideration.



# 1.3. Summary

The accredited WSC will answer the risk categorisation questions in e-Developer with specific input from the designer for the works. The WSC will then submit their design for Sydney Water stakeholder review through e-Developer.

The questions will align a design's key risk areas into two categories, medium and high.

Medium categorisation will not display on work items generated after the submit design package.

High risk areas will display on work items from review design package through to review PCP.

Sydney Water will then review the high risk areas as identified in the design submission and conduct a risk based audit approach on the areas of risk.

Most Design packages will either only be audited on the areas of high risk. Where there are a number of high risk areas, the design may be required to have a full design audit review carried out.

# 2. Roles and responsibilities

The Roles and responsibilities apply for the WSC are after the detailed design has been produced. It is required that the Designer will liaise directly with the WSC to accurately answer these risk questions. In all cases, for the **WSC**, **DSO** and **Operations**, these questions are prompts that align with existing policies, processes and work instructions. They should be read in with existing documentation.

The questions in italics only appear if "Yes" is selected for the head question. They are not accessible where "no" is selected.

Where a question is answered and the predetermined risk category is medium, the answer will not appear for future work items.



# 3. Design Package Risk Questions

Refer to Section 3.1 Drinking Water, 3.2 Recycled Water & 3.3 Waste Water (By holding Control & clicking on one of the numbered headings above, it will take you straight to that section in the document.)

# 3.1. Drinking Water

**Questions:** 

- 1. Green Field Development?
- **WSC:** Select if design is in undeveloped land/release areas or in Brown field/existing Developed area.
- **DSO:** Will only show as High risk where brown field is chosen OR is Green Field and NOT in a SW endorsed Sizing plan. Both are for awareness only.
- **OP'S:** If "no" to green field or Green Field without endorsed sizing plan, may be other existing services, connection issues etc or awareness only.
- **1b** Is design in release area with existing SW endorsed sizing plan? (Only Appears if "Yes is chosen in "Green Field Development?")
- **WSC**: Select if design has been developed consistent with a SW endorsed sizing plan/scheme for an area. (If unsure or you don't have access to it, select no.)
- **DSO:** If "no", check if a sizing plan/scheme exists and review against existing sizing plan. If no plan DSO awareness only.
- **OP'S**: Awareness only

# 2. Are Works an Amplification or deviation?

- **WSC**: Select if design is a amplification or deviation. Where deviation attach flow schedule and request a bond. (Where it is an amplification a bond may be required. Refer to existing instructions.)
- **DSO**: If "Yes" check if bond has been requested and is required.
- **OP'S:** Awareness only for Operational Review and Flow management requirements.

# 3. Is proposed water main in contaminated land or slip areas?

**WSC**: Where in an identified contaminated or land slip areas, the answer to this question is generated from Hydra. When the answer is auto-populated to "yes", the WSC cannot change this. If it is in one of these areas and it hasn't been auto-selected as "yes"; WSC to select where within these areas.



- DSO: Audit for suitability of pipe type/steep grades, embedment and code requirements. Where contaminated ground/land slip areas refer to Senior DSO for direction.
- **OP'S**: Audit Operationally for Designers design option to address the risk to SW.

#### 4. Is design in a Mine Subsidence area?

- WSC: Where in identified Mine Subsidence areas, the answer to this question is generated from Hydra. When the answer is auto-populated to "yes", the WSC cannot change this. If it is in a mine subsidence area and it hasn't been auto-selected as "yes"; WSC to select.
- DSO: Awareness only review on next question.
- **OP'S**: Awareness only review on next question.

# 4b Has Designer incorporated specific mine subsidence requirements into your design?

- **WSC**: Where the designer has incorporated the specific mine subsidence requirements into the design preparation the answer is "yes" where "no" the WSC does not submit the design or submits written reason with design.
- **DSO:** Where "no" and there is not a valid written reason, return package to WSC with CAR on Designer. Ensure specific Mine Subsidence Board requirements are reflected in design and qualified advice has been sought in preparation of the design.
- **OP'S**: Audit Operationally for Designers design option to address the risk of mine subsidence to SW

#### 5. Are any Works in Rail or RMS (RTA) or Council property?

- **WSC**: Select if design is in Rail, RMS (RTA) or Council property. (This does not include Council nature strips (SW allocations) or RMS roads. This question is focusing on specific dedicated land owned by these stakeholders.)
- **DSO:** Awareness only, PTE required if Developer and owner not the same. Look for alternate route where possible to avoid this situation.
- **OP'S**: Awareness only
- 6. Proposed main size equal or greater than DN250?
- **WSC**: Select if design has proposal for mains DN250 or greater.



- **DSO:** Check that main the design is connecting into is the same size or larger & question "**Connecting into mains equal or greater than DN250?**", has been answered "yes"; if **not** return package to WSC with CAR on Designer.
- **OP'S**: Operational Review for suitability of design option, layout and relevant operational requirements.

#### 7. Are existing mains AC?

- **WSC**: Select if any part of design, including service connections, is connecting into or replacing sections that are/were AC. (Follow existing process for detailed instructions)
- **DSO**: Where "yes" awareness only
- **OP'S**: Audit package according to Operational Requirements and Designer's compliance with detailed instructions when working with AC mains.

#### 8. Connecting into mains equal or greater than DN250?

- **WSC:** Select if design is connecting into mains DN 250 or larger. Follow existing Asset Isolation Flow Management (HSP 070) process.
- **DSO:** If yes and full package, confirm that Form A attached in "Ancillary Design" field. If not attached raise CAR on WSC and return package. *If "yes" and partial package, be aware that form A must come in with ITP or via project variation prior to commencement.*
- **OP'S**: Where attached in Ancillary Design, review and progress as detailed in existing instructions. Where not attached and Form A is required, note in Operational review.

# 9. Is Protection of Assets equal or greater than DN250 required?

- **WSC:** Select if design is affecting existing water assets DN250 or larger, WSC selects "Yes".
- **DSO:** Where "yes" DSO to review and audit for requirements, e.g. bonding for pipe replacement before protective measures etc Specific Critical Asset requirements. Refer to SNR DSO or Asset Services for advice where required.
- **OP'S:** Review for Operational requirements and Designers design option for protection.

#### 10. Is Design in a current/future Dual Water Area?



WSC: Where in identified Dual Water areas, the answer to this question is generated from Hydra. When the answer is auto-populated to "yes", the WSC cannot change this. If it is in a Dual Water area and it hasn't been auto-selected as "yes"; WSC to select "yes" where applicable.

Where the WSC selects "no" sub question 10b is shown.

Where the WSC selects "yes" the sub question 10c is shown.

- 10b All proposed pipe DICL Class PN35 or PVC Class PN16?
- **WSC:** Needs to confirm all pipe type and class used and answer this question as "yes" or "no".
- **DSO:** When "no" DSO to review for compliance of appropriate pipe class. Refer to Design Audit Checklist & Code for information.
- **OP'S:** Review for Operational requirements for pipe type and class in area.
- 10c All proposed pipe DICL Class PN35?
- **WSC**: Drinking water mains in Dual water areas need to be DICL class PN 35, except in cases of special SCL water main crossings. WSC to confirm all pipe type and class used and answer this question as "yes" or "no".
- **DSO:** When "no" DSO to review for compliance of appropriate pipe class. Generally all drinking water mains are required to be DICL class PN35. Refer to Design Audit Checklist & Codes for information. Where another pipe type and class is chosen, and not specifically related to a detailed services crossing, DSO to raise a CAR on the Designer for choice of pipe and WSC for Document Control.
- **OP'S**: Where "no" Review for Operational requirements for pipe type and class in recycled water areas.
- 11. Is Whole design laid at standard depth and maintaining minimum cover and clearances?
- **WSC**: Select if design is **all** laid at standard depth while maintaining minimum cover and clearances. WSC selects "Yes" or "No" depending on design.
- **DSO:** Only sees this if "no" is selected. Conduct quick review with reference to question 12 below & ensure that where minimum cover cannot be achieved that appropriate design protection has been provided.
- **OP'S**: Review for Operational requirements



- 12. Where mains laid under services, are all crossings as per DTC for Service crossings?
- **WSC:** WSC to select whether SW's DTC's can be utilised for relevant design crossings. Where not able to be applied, the WSC is to select "no" and answer question 13 below. (Question 13 will only be visible when the WSC selects "No" in this question.)
- **DSO:** Only see's this if "No" is selected. For information only. Refer to Question 13 below.
- **OP'S**: For information only, refer to Question 13 below.

#### 13. Does Design Use DTC Drawings for all relevant components?

- **WSC**: Where the Designer has assessed that there are relevant DTC drawings that can be applied to their design, and it has been ato meet design requirements at every applicable application; the WSC is to select "yes". Where DTC are not deemed to be suitable or only some DTC's could be applied the WSC is to select "no".
- **DSO:** DSO will only see this when the WSC has selected "no" to this question. This answer is Information only; refer to question 13b below for action.
- **OP'S:** For Information only. Refer to Question 13b below for specific requirements.

# 13b Has Designer attached an engineer's certification with the Design for Non-DTC design solutions?

- **WSC:** WSC to answer this question if Engineering Certification has been submitted with the design package. Where certification for each/all relevant components have been supplied, the WSC is to Select "yes" and attach the certification with the design plan. Where the answer is "no" the WSC is to not submit the design to SW until Certification has been obtained **OR** provide a written letter of when it will be.
- **DSO:** Will only see this is the WSC has selected "no". You should review this design package to ensure that there is either a request for an in-principle design OR you should reject the package with a CAR on the Designer instructing them to provide the relevant engineering certification with their detailed design solution. (Review ACDP 0363 review Work Instruction "Reviewing designs not using Deemed To Comply design solutions.)
- OP'S: Review for Operational requirements only. Where the Designer has assessed that a DTC is not applicable for use, the Designer **shall** attach a design that contains similar information as the DTC's. (That is suitable for construction.) The Designer will also supply their Engineering Certification with the relevant WARNING Document current at time of printing or downloading. Controlled Version is in BMIS.



components that could not use DTC's. **UG is responsible to send these components to Engineering Services for Assessment.** Ops to review for Operational Requirements.

# 3.2. Recycled Water

Questions:

- 1. Green Field Development?
- **WSC:** Select if design is in undeveloped land/release areas or in Brown field/existing Developed area.
- **DSO:** Will only show as High risk where brown field is chosen OR is Green Field and NOT in a SW endorsed Sizing plan. Both are for awareness only.
- **OP'S**: If "no" to green field or Green Field without endorsed sizing plan, may be other existing services, connection issues etc or awareness only.
- **1b** Is design in release area with existing SW endorsed sizing plan? (Only Appears if "Yes is chosen in "Green Field Development?")
- **WSC**: Select if design has been developed consistent with a SW endorsed sizing plan/scheme for an area. (If unsure or you don't have access to it, select no.)
- **DSO:** If "no", check if a sizing plan/scheme exists and review against existing sizing plan. If no plan DSO awareness only.
- **OP'S**: Awareness only

# 2. Are Works an Amplification or deviation?

- **WSC**: Select if design is a amplification or deviation. Where deviation attach flow schedule and request a bond. (Where it is an amplification a bond may be required. Refer to existing instructions.)
- **DSO**: If "Yes" check if bond has been requested and is required.
- **OP'S:** Awareness only for Operational Review and Flow management requirements.

#### 3. Is proposed water main in contaminated land or slip areas?

**WSC**: Where in an identified contaminated or land slip areas, the answer to this question is generated from Hydra. When the answer is auto-populated to "yes", the WSC cannot change this. If it is in one of these areas and it hasn't been auto-selected as "yes"; WSC to select where within these areas.



- DSO: Audit for suitability of pipe type/steep grades, embedment and code requirements. Where contaminated ground/land slip areas refer to Senior DSO for direction.
- **OP'S**: Audit Operationally for Designers design option to address the risk to SW.

#### 4. Is design in a Mine Subsidence area?

- WSC: Where in identified Mine Subsidence areas, the answer to this question is generated from Hydra. When the answer is auto-populated to "yes", the WSC cannot change this. If it is in a mine subsidence area and it hasn't been auto-selected as "yes"; WSC to select.
- DSO: Awareness only review on next question.
- **OP'S**: Awareness only review on next question.

# 4b Has Designer incorporated specific mine subsidence requirements into your design?

- **WSC**: Where the designer has incorporated the specific mine subsidence requirements into the design preparation the answer is "yes" where "no" the WSC does not submit the design or submits written reason with design.
- **DSO:** Where "no" and there is not a valid written reason, return package to WSC with CAR on Designer. Ensure specific Mine Subsidence Board requirements are reflected in design and qualified advice has been sought in preparation of the design.
- **OP'S**: Audit Operationally for Designers design option to address the risk of mine subsidence to SW

#### 5. Are any Works in Rail or RMS (RTA) or Council property?

- **WSC**: Select if design is in Rail, RMS (RTA) or Council property. (This does not include Council nature strips (SW allocations) or RMS roads. This question is focusing on specific dedicated land owned by these stakeholders.)
- **DSO:** Awareness only, PTE required if Developer and owner not the same. Look for alternate route where possible to avoid this situation.
- **OP'S**: Awareness only
- 6. Proposed main size equal or greater than DN250?
- **WSC**: Select if design has proposal for mains DN250 or greater.



- **DSO:** Check that main the design is connecting into is the same size or larger & question "**Connecting into mains equal or greater than DN250?**", has been answered "yes"; if **not** return package to WSC with CAR on Designer.
- **OP'S:** Operational Review for suitability of design option, layout and relevant operational requirements.

### 7. Connecting into mains equal or greater than DN250?

- **WSC:** Select if design is connecting into mains DN 250 or larger. Follow existing Asset Isolation Flow Management (HSP 070) process.
- **DSO:** If yes and full package, confirm that Form A attached in "Ancillary Design" field. If not attached raise CAR on WSC and return package. *If "yes" and partial package, be aware that form A must come in with ITP or via project variation prior to commencement.*
- **OP'S:** Where attached in Ancillary Design, review and progress as detailed in existing instructions. Where not attached and Form A is required, note in Operational review.

#### 8. Is Protection of Assets equal or greater than DN250 required?

- **WSC**: Select if design is affecting existing water assets DN250 or larger, WSC selects "Yes".
- **DSO:** Where "yes" DSO to review and audit for requirements, e.g. bonding for pipe replacement before protective measures etc Specific Critical Asset requirements. Refer to SNR DSO or Asset Services for advice where required.
- **OP'S:** Review for Operational requirements and Designers design option for protection.

#### 9. All proposed pipe Lilac PVC Class PN16?

- **WSC**: Recycled water mains need to be Lilac PVC class PN 16, except in cases of special SCL water main crossings. WSC to confirm all pipe type and class used and answer this question as "yes" or "no".
- **DSO:** When "no" DSO to review for compliance of appropriate pipe class. Generally all recycled water mains are required to be Lilac PVC class PN16. Refer to Design Audit Checklist & Codes for information. Where another pipe type and class is chosen, and not specifically related to a detailed services crossing, DSO to raise a CAR on the Designer for choice of pipe and WSC for Document Control.



- **OP'S:** Where "no" Review for Operational requirements for pipe type and class in recycled water areas.
- 10. Is Whole design laid at standard depth and maintaining minimum cover and clearances?
- **WSC**: Select if design is **all** laid at standard depth while maintaining minimum cover and clearances. WSC selects "Yes" or "No" depending on design.
- **DSO:** Only sees this if "no" is selected. Conduct quick review with reference to question 12 below & ensure that where minimum cover cannot be achieved that appropriate design protection has been provided.
- **OP'S**: Review for Operational requirements
- 11. Where mains laid under services, are all crossings as per DTC for Service crossings?
- WSC: WSC to select whether SW's DTC's can be utilised for relevant design crossings. Where not able to be applied, the WSC is to select "no" and answer question 13 below. (Question 13 will only be visible when the WSC selects "No" in this question.)
- **DSO:** Only see's this if "No" is selected. For information only. Refer to Question 13 below.
- **OP'S**: For information only, refer to Question 13 below.

# 12. Does Design Use DTC Drawings for all relevant components?

- **WSC**: Where the Designer has assessed that there are relevant DTC drawings that can be applied to their design, and it has been ato meet design requirements at every applicable application; the WSC is to select "yes". Where DTC are not deemed to be suitable or only some DTC's could be applied the WSC is to select "no".
- **DSO:** DSO will only see this when the WSC has selected "no" to this question. This answer is Information only; refer to question 13b below for action.
- **OP'S**: For Information only. Refer to Question 13b below for specific requirements.
- 13b Has Designer attached an engineer's certification with the Design for Non-DTC design solutions?
- **WSC:** WSC to answer this question if Engineering Certification has been submitted with the design package. Where certification for each/all relevant components have been supplied, the WSC is to Select "yes" and attach the certification with the design plan. Where the answer is "no" the WSC is to not submit the



design to SW until Certification has been obtained **OR** provide a written letter of when it will be.

- **DSO:** Will only see this is the WSC has selected "no". You should review this design package to ensure that there is either a request for an in-principle design OR you should reject the package with a CAR on the Designer instructing them to provide the relevant engineering certification with their detailed design solution. (Review ACDP 0363 review Work Instruction "Reviewing designs not using Deemed To Comply design solutions.)
- OP'S: Review for Operational requirements only. Where the Designer has assessed that a DTC is not applicable for use, the Designer **shall** attach a design that contains similar information as the DTC's. (That is suitable for construction.) The Designer will also supply their Engineering Certification with the relevant components that could not use DTC's. UG is responsible to send these components to Engineering Services for Assessment. Ops to review for Operational Requirements.

# 3.3. Waste Water

#### **Questions:**

- 1. Green Field Development?
- **WSC:** Select if design is in undeveloped land/release areas or in Brown field/existing Developed area.
- **DSO:** Will only show as High risk where brown field is chosen OR is Green Field and NOT in a SW endorsed Sizing plan. Both are for awareness only.
- **OP'S**: If "no" to green field or Green Field without endorsed sizing plan, may be other existing services, connection issues etc or awareness only.
- **1b** Is design in release area with existing SW endorsed sizing plan? (Only Appears if "Yes is chosen in "Green Field Development?")
- **WSC**: Select if design has been developed consistent with a SW endorsed sizing plan/scheme for an area. (If unsure or you don't have access to it, select no.)
- **DSO:** If "no", check if a sizing plan/scheme exists and review against existing sizing plan. If no plan DSO awareness only.
- **OP'S**: Awareness only
- 2. Does Design comply with low Infiltration sewer requirements?
- **WSC**: Select if design is in a Low Infiltration area or has that requirement on it.



- **DSR**: If "no" and design should be low infiltration, return package to WSC with CAR. If not in a low infiltration area Awareness only.
- **OP'S:** You will not see this as a risk area if the WSC selects "Yes". If you do not see this in the risk area in the Audit Design work item you need to review this plan operationally for Low infiltration requirements.

#### 3. Are Works an Amplification or deviation?

- **WSC**: Select if design is a amplification or deviation. Where deviation attach flow schedule and request a bond. Where it is an amplification a bond may be required. Refer to existing instructions.
- **DSR**: If "Yes" check for Flow Schedule & if bond has been requested and required.
- **OP'S:** Awareness only.

#### 4. Is permission to enter required?

- **WSC**: Select if entry into land not owned by the developer is required. Follow existing process.
- **DSR**: Ensure that PTE is attached if it is a full package. If full package and PTE not attached, return package to WSC with CAR. Where not attached and a partial package, WSC should have identified PTE required and is being negotiated.
- **OP'S:** Awareness only.

#### 5. Is design in a Mine Subsidence area?

- WSC: Where in identified Mine Subsidence areas, the answer to this question is generated from Hydra. When the answer is auto-populated to "yes", the WSC cannot change this. If it is in a mine subsidence area and it hasn't been selected as "yes"; WSC to select.
- DSR: Awareness only review on next question.
- **OP'S:** Awareness only review on next question.
- 6. Has Designer incorporated specific mine subsidence requirements into your design?
- **WSC**: Where the designer has incorporated the specific mine subsidence requirements into the design preparation the answer is "yes" where "no" the WSC does not submit the design or submits written reason with design.
- **DSR**: Where "no" and there is not a valid written reason, return package to WSC with CAR.



### **OP'S:** Awareness only for Operational Review

#### 7. Are any Works in Rail or RMS (RTA) or Council property?

- **WSC:** Select if design is in Rail, RTA or Council property. (This does not include Council nature strips (SW allocations) or RMS roads. This question is focusing on specific dedicated land owned by these stakeholders.)
- **DSR**: Awareness only, PTE required if Developer and owner not the same.
- **OP'S:** Awareness only

#### 8. Proposed main size equal or greater than DN300?

- **WSC**: Select if design is DN300 or greater.
- DSR: Check that "connect" into main is the same size or larger & question Connecting into mains equal or greater than DN300? Has been answered "yes" if not return package to WSC with CAR
- **OP'S:** Awareness only for Operational Review

#### 9. Is sewer equal or greater than invert of 6m (including PFSL)?

- **WSC**: Select if design has sewers with invert including PFSL of equal or greater than 6.0m
- **DSR**: Conduct audit for compliance for deep sewers, connections, M/H construction
- **OP'S:** Awareness only for Operational Review

#### 10. Are new vents proposed or existing vents affected by design?

- **WSC**: Select if design is impacting (removing or moving) and existing vent line. Where removal, you must attach authorisation for that removal or request in writing with design for removal. Generally removal is not approved.
- DSR: If "yes" confirm that vent line is being relocated or that written request to remove or documented permission is attached with design for removal. Removal is generally not approved.
- **OP'S:** Review and assess as required.

#### 11. Connecting into mains equal or greater than DN300?

**WSC:** Select if design is connecting into mains DN 300 or larger. Follow existing HSP 070 process.



- **DSR**: If yes and full package, confirm that Form A attached. If not attached raise CAR and return package. *If "yes" and partial package, be aware that form A must come in with ITP or via project variation prior to commencement.*
- **OP'S:** Where attached in Ancillary Design, review and progress as detailed in existing instructions. Where not attached and Form A is required, note in Operational review.

# 12. Is Protection of Assets equal or greater than DN300 required?

- **WSC**: Select if design is affecting existing sewer assets DN300 or larger. Ensure design and supporting documentation/certification is attached with design package
- **DSR**: Where the answer is "Yes", you will need to complete and audit of the relevant risk areas and complete "Engineering Services Request Form" for Engineering Services review of Design solution
- **OP'S:** Advise and recommend in Operational review. Assess as required

# 13. All design pipe type u-PVC, PP or GRP low infiltration?

- **WSC**: WSC answers if the Design is Low infiltration and the design complies with that specification on pipe material.
- **DSR**: You will only see this if "No" is answered. Review if in a low infiltration area. If it is CAR the Designer and return Package to WSC. Where not in Low Infiltration, review for compliance and where appropriate send to Operations.
- **OP'S:** For Information only for Operational review

#### 14. Is design Pressure or vacuum sewer, sewer rising main or involve Sewer mining?

- **WSC:** WSC answers if the Design is Pressure or vacuum sewer, sewer rising main or involves Sewer mining.
- **DSR**: Where yes, conduct full design Audit with existing Design Audit Checklist.
- **OP'S:** Where "Yes" Review and Assess as required in Operational review.
- 15. Does design involve Sewer relining or Pipe bursting?
- **WSC**: WSC answers if the Design involves Sewer relining or Pipe bursting.
- **DSR**: Where Yes, for information only. Operational call on suitability of proposal.
- **OP'S:** Where "Yes" Review and Assess as required in Operational review.

#### 16. Are there proposed sewers mains or sewer structures in buildings?



- **WSC**: WSC answers if the Design involves sewers mains or sewer structures in buildings. WSC ensures that the designer has provided a detailed design Drawing and relevant engineers certification of proposal for review.
- **DSR**: Where "Yes", you will need to complete and audit of the relevant risk areas and complete "Engineering Services Request Form" for Engineering Services review of Design solution
- **OP'S:** Where "Yes" Review and Assess as required in Operational review.

# 17. Are there Steep Grades equal or greater than 15%?

- **WSC:** WSC answers if the Design has grades of 15% or greater.
- **DSR**: Where "Yes" audit this aspect of design. Refer to Sewage Code and associated Design Audit Checklist for compliance. Raise CAR's where Designer is not 100% compliant with Code requirements. Do not send to Operations when CAR is raised.
- **OP'S:** Awareness only for Operational Review

#### 18. Are there Critical Soffit Requirements or critical Drainage Limits?

- **WSC**: WSC answers if the Design has Critical Soffit Requirements or critical Drainage Limits.
- **DSR**: Where "Yes" audit this aspect of design. Refer to Sewage Code and associated Design Audit Checklist for compliance. Raise CAR's where Designer is not 100% compliant with Code requirements. Do not send to Operations when CAR is raised.
- **OP'S:** Awareness only for Operational Review

# 19. Does Design Use DTC Drawings for all relevant components?

- **WSC**: Where the Designer has assessed that there are relevant DTC drawings that can be applied to their design, and it has been ato meet design requirements at every applicable application; the WSC is to select "yes". Where DTC are not deemed to be suitable or only some DTC's could be applied the WSC is to select "no".
- **DSO:** DSO will only see this when the WSC has selected "no" to this question. This answer is Information only; refer to question 19b below for action.
- **OP'S**: For Information only. Refer to Question 19b below for specific requirements.



- 19b Has Designer attached an engineer's certification with the Design for Non-DTC design solutions?
- WSC: To answer this question if Engineering Certification has been submitted with the design package. Where certification for each/all relevant components have been supplied, the WSC is to Select "yes" and attach the certification with the design plan. Where the answer is "no" the WSC is to not submit the design to SW until Certification has been obtained **OR** provide a written letter of when it will be.
- **DSO:** Will only see this is the WSC has selected "no". You should review this design package to ensure that there is either a request for an in-principle design OR you should reject the package with a CAR on the Designer instructing them to provide the relevant engineering certification with their detailed design solution. (Review ACDP 0363 review Work Instruction "Reviewing designs not using Deemed To Comply design solutions.)
- **OP'S**: Review for Operational requirements only. Where the Designer has assessed that a DTC is not applicable for use, the Designer **shall** attach a design that contains similar information as the DTC's. (That is suitable for construction.) The Designer will also supply their Engineering Certification with the relevant components that could not use DTC's. **UG is responsible to send these components to Engineering Services for Assessment.** Ops to review for Operational Requirements.

# 3.4. References

| Document type           | Title   |
|-------------------------|---|
| Policies and procedures | Water Servicing Coordinators (Major Works) (PDF - 148KB)<br>Designers (PDF - 63KB)<br>Reviewing designs not using Deemed to Comply design solutions<br>(PDF - 57KB) |
| Forms and checklists    | SEWER DESIGN AUDIT CHECKLIST<br>WATER DESIGN AUDIT CHECKLIST  |
| Other documents         | Engineering Services Work Request   |