

## Summary

Project No.		Project Description	Task		
B245773G		Suffolk Strategic Network and Storage Enhancements Detailed Design Scheme 2	PCD assurance		
Company	Ref	Short description	Risk score	Reported Performance for PCD	
Northumbria n Water		Detailed design of Suffolk Strategic Network and Storage Enhancements and Lowestoft Reuse were identified in the company's dWRMP24 preferred programme. This brings forward delivery by two years to 2028 and 2030 respectively. Detailed design and planning enhancements go beyond standard investigations and appraisals, which are funded through base expenditure allowances. These allowances cover solution design and cost-benefit analyses, ensuring sufficient evidence for inclusion in strategic planning frameworks and business plan submissions.	A	30%	
Findings Summary		<p>General Findings:</p> <ul style="list-style-type: none"><li>There are delays within this project. The original completion date was March 2029. Commissioning and completion are now expected in 2033. There are many unknowns in the DCO programme, posing further risks to the project.</li></ul> <p>Issues:</p> <ul style="list-style-type: none"><li>The design capacity of the strategic pipeline delivers 15 ML/d dry year water available for use (WAFU) gain, but the split has changed slightly. The split in design capacity has not been approved by Ofwat yet.</li><li>Only desk based assessments are complete, no other surveys have been complete.</li><li>Only conceptual design has been carried out so far.</li><li>No agreements on land have been made yet.</li><li>Ofwat have increased the penalties with the associated the new completion date, which NWL are challenging (through CMA process).</li></ul>			
Emerging risks/issues		No emerging risks were identified that may impact future reporting NWL is reporting correctly however there are risks to the delivery of the project.			
Date of audit	Jacobs Team		Client Team		
28/04/2025	Rose Walton & Graham Hindley		Andy Sefton, Daniel Wilson		
Revision	Date	Description	Author	Checked	Reviewed
1.0	04/06/2025	Feedback sent	RW	GDH	SH

## Risk Scores

Score	Meaning
A	Low reporting risk – criteria are fully met (no weaknesses in the methodology - no actions)
B	Low to medium reporting risk – criteria are not fully met (weaknesses exist but they are not material - must have action)
C	Medium to high reporting risk – criteria are only partially met (material weakness or several minor weaknesses with material effect).
D	High reporting risk – criteria are not met (two or more material weaknesses in the methodology).
NA	Not audited as it was outside our scope

### Guidance on risk and materiality:

The score reflects the level of reporting risk for the process and is based on the overall opinion of the auditors. In general, a weakness is material if it has the potential to impact the quality of the reported number to a greater degree than assumed by the confidence grade. All weaknesses (material and non-material) are described below (issues) and have been given a corresponding action.

Issues and Actions

No actions.

Ref	PCD Reference	Issue	Action	Impact (Material or non-material)

DRAFT

## Test 1 – Detailed Design, Output Measurement and Reporting

Audit Test			Risk Score (A, B, C or D)
See criteria below			A
Criteria	Y, N or NA	Notes	
1.1	Y	<p>Does the design capacity of the strategic pipeline deliver 15 ML/d dry year water available for use (WAFU) gain?</p> <p>Yes, although there has been a change to split, as described below, they equal 15 ML/d.</p> <p>See the screenshot section for a high level network schematic.</p>	
1.2	N	<p>If so, is that split correctly between Hartismere WRZ (8.5 ML/d) and Blyth WRZ (6.5 ML/d).</p> <p>There has been a slight change to the split. It has been changed to 8 ML/d (Barsham) and 7 ML/d (Saxmundham) but still equates to 15. This is currently being presented as part of solution models to NWL and there are some pending comments from NWL. This hasn't yet gone to Ofwat for approval.</p>	
1.3	N	<p>Have the relevant surveys and reports been completed? Please list these in the notes.</p> <p>Within the WRMP, Holton is noted as the preferred solution, but this has been changed to Lodgewood, as a more efficient solution. See screenshots for the reasoning. Due to the changed location, now Lodgewood, there are no rail crossings. There are railway crossings at Sizewell C power station, but this falls outside the WRMP scope.</p> <p>Ecology surveys have not started and require 2 years to allow for Development Consent Order (DCO) process and statutory consultation.</p> <p>An engagement strategy has been set up for the first phase of site walkovers, for purposes such as land access etc. These surveys are underway.</p> <p>All desk based assessments are complete. Sites and routes around reservoirs have received a RAG score. See screenshots for evidence. NWL are approximately 90% way through the assessments, with the final workshop 30<sup>th</sup> April 2025.</p> <p>No other surveys are complete.</p>	
1.4	N	<p>Have the relevant agreements and approvals been granted? Please list these in the notes</p> <p>No agreements have been made on land, but they are in progress. This will be confirmed following statutory consultation in March 2026.</p> <p>Once the scheme is classified as a DCO for planning purposes, NWL will have powers to have agreement and approval granted e.g. compulsory purchase order.</p>	
1.5	N	<p>Has the relevant internal assurance been completed? Please demonstrate this.</p> <p>NWL will be doing their own assurance. This is taking place in May in parallel in stage 2 report. This is an additional assurance, due to DCO process. Progress is reported monthly to steering board and there is evidence of the steering board meeting from the 24<sup>th</sup> October 2024. See screenshot section for evidence.</p>	

1.6	Has the delivery of the outputs been reported and monitored through the existing APR process ?	Y	Progress is reported monthly to the Steering Board and there is evidence of the Steering Board meeting from the 24 <sup>th</sup> October 2024. See screenshot section for evidence.
<b>Additional Guidance</b>			
<a href="https://www.ofwat.gov.uk/wp-content/uploads/2023/04/Appendix-2-Accelerated-Delivery-Project-Final-Decisions-2023.pdf">https://www.ofwat.gov.uk/wp-content/uploads/2023/04/Appendix-2-Accelerated-Delivery-Project-Final-Decisions-2023.pdf</a>			

## Detailed Observations to justify assurance decisions

*To enable a person not involved in audit to understand the risk scores allocated above. Include screenshots and document references as appropriate.*

See screenshots.

## Test 2 - Conditions of scheme

Audit Test			Risk Score (A, B, C or D)
See criteria below			A
Criteria		Y, N or NA	Notes
2.1	Is the company on track to deliver its PR19 water enhancement programme in full?	Y	The ESW WRMP19 included just one new water supply scheme which was the Abberton to Langford Pipeline. This scheme was delivered prior to the PR19 Business Plan regulatory deadline of 31 March 2025. The scheme will allow Abberton reservoir raw water to be transferred to Langford WTW bankside storage for treatment at Langford WTW.
2.2	Have all PR19-funded benefits been delivered on time as expected to meet the supply-demand balance?	Y	As above.
2.3	Are the updated timings of the benefits of this scheme (WAFU) including any implications for the rest of the programme consistently taken account of in the company's final WRMP24?	N	<p>WRMP24 was published in October 2024. Progress with WRMP24 supply scheme delivery will be tracked by the following groups / meetings:</p> <ul style="list-style-type: none"><li>• Water Service Planning Leadership Team</li><li>• Quarterly ESW / Environment Agency Liaison Meeting</li><li>• Quarterly Environment Agency / ESW Senior Managers (Directors) Meeting.</li><li>• AMP8 Water Resources Scheme Steering Group - chaired by Monisha Gower (NWL Assets Director)</li></ul> <p>Regulators will be formally updated on any variance to delivery of WRMP24 supply schemes via the WRMP24 Annual Review report which is submitted to Defra, EA and Ofwat by 30 June each year.</p> <p>Water Resources is responsible for maintaining an up to date supply demand balance for each ESW water resource zone. Updates to the supply demand balance will be made annually to take account of outturn and progress with supply and demand management schemes and if and when scheme delivery dates change.</p> <p>We noted that the original completion date was March 2029. The team indicated that commissioning and completion is currently expected by 2033.</p>
2.4	Have any components of this scheme been excluded from future WRMPs?  If so, has the company ceased work on those elements immediately with no further work being funded?	N	The scheme will be included in the future WRMPs as it will deliver required WAFU.
Additional Guidance			
<a href="https://www.ofwat.gov.uk/wp-content/uploads/2023/04/Appendix-2-Accelerated-Delivery-Project-Final-Decisions-2023.pdf">https://www.ofwat.gov.uk/wp-content/uploads/2023/04/Appendix-2-Accelerated-Delivery-Project-Final-Decisions-2023.pdf</a>			

## Test 3 – Forecast Deliverables

Audit Test			Risk Score (A, B, C or D)
Have the data checks identified any issues?			A
Criteria		Y, N or NA	Notes
3.1	Have the outputs specified by 31 March 2025 been met? If not, can this been explained?	N	Ofwat target for 2024/25 is 60% progress on deliverables for the scheme. NWL estimates 30% at the present time.
3.2	Have the outputs specified by 31 March 2027 been met? If not, can this been explained?	N	<p>There is a large amount of uncertainty. E.g the tender process is to be decided based on decisions on the procurement strategy.</p> <p>Statutory consultation will take place in April 2027.</p> <p>DCO submission of planning, falls outside dates (2028). All of EIA screening etc. will be reviewed before then.</p> <p>In terms of expenditure, the overall value is £130m. NWG have currently spent £3.2m and forecast £8.7m by 2027 (forecasting includes the network extension to Sizewell C). NWL is currently on track with expenditure.</p>
3.3	Has the scheme's detailed design and planning met the required percentage completion for each associated year? If not, can this be explained?	N	No, as only the conceptual design has been completed so far.
Additional Guidance			
<a href="https://www.ofwat.gov.uk/wp-content/uploads/2023/04/Appendix-2-Accelerated-Delivery-Project-Final-Decisions-2023.pdf">https://www.ofwat.gov.uk/wp-content/uploads/2023/04/Appendix-2-Accelerated-Delivery-Project-Final-Decisions-2023.pdf</a>			

## Test 4 – Forecast benefits

Audit Test			Risk Score (A, B, C or D)
See criterion below			A
Criteria		Y, N or NA	Notes
4.1	Does the detailed design of the strategic pipelines meet the forecasted WAFU delivery?	Y	15 ML per day is the forecast WAFU, however the scheme is not currently expected to meet the delivery date set out in Ofwat's AID document.
Additional Guidance			
<a href="https://www.ofwat.gov.uk/wp-content/uploads/2023/04/Appendix-2-Accelerated-Delivery-Project-Final-Decisions-2023.pdf">https://www.ofwat.gov.uk/wp-content/uploads/2023/04/Appendix-2-Accelerated-Delivery-Project-Final-Decisions-2023.pdf</a>			



## Test 5 – Data Checks (record of checks made)

No data to check – audit was an overview of the project and the current status/progress.

Document reference	Details of check	Findings

**Sample Checks - approach**  
*State the level of sampling carried out in this audit, the justification for the level of sampling and any recommendations for further sampling:  
(consider – level of sampling already undertaken by the company within process, complexity reporting process, significance of measure, number of errors found, time available, significant over/under performance, ODI value)  
[Risk-based sample checking of data or records for each PCD back to source (internal company source data only). Assurance should prioritise PCDs which cover a larger amount of expenditure and/or where there is no regulatory oversight other than Ofwat]*

**We sample checked the following items back to source:**

Unique identifier	Source of data	Details of check	Findings

## Detailed Observations to justify assurance decisions

To enable a person not involved in audit to understand the risk scores allocated above. Include screenshots and document references as appropriate.

## Additional Notes

Information on reporting process, assumptions, etc. to enable a person not involved in audit to understand the risk scores allocated above. Include **screenshots** and document references as appropriate

## Record of Evidence Reviewed

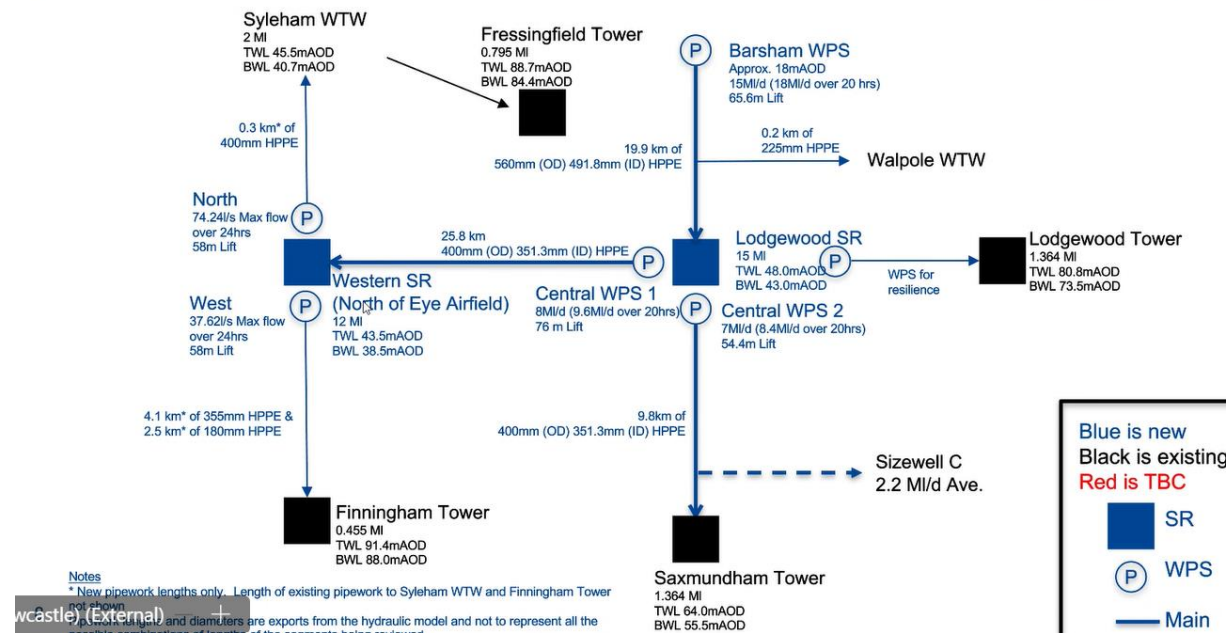
### List of all documents reviewed as part of the audit:

1. Network schematics
2. Risk register for asset locations
3. Project programme
4. Steering Board minutes

## Screenshots

### HIGH LEVEL NETWORK SCHEMATIC

### SUFFOLK STRATEGIC NETWORK & STORAGE ENHANCEMENT (23/04/2025)



## PCD Data Assurance Feedback

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	A	B	C	D	E	F	G	H	I	J	K	L	M	N
1	Site	Initial NWG Sign Off			NWG comments					Stantec Actions/Comments	Final NWG Sign Off			
2		Average	Peak Day	Peak Week	Notes						Average	Peak Day	Peak Week	
3	Holton	N	N	N	ADD - Res Level is too low. Output flow too high - above sustained high alarm Peak - Res Level is too low. Output flow too high - above sustained high alarm Peak Week- Res Level is too low. Output flow too high - above sustained high alarm					ADD - Achieved better balance between Shaddingfield & Holton SR levels, at compromise if needed with flows. PD & PW ok.	Y	Y	Y	
4	Shaddingfield Tower	N	N	N	PD & PW - Tower level slightly too high compared to Scada. Flow profile to Holton doesn't match - consistently pumps to Holton 06:00-15:00 approx. Are we happy that spike flows aren't accounted for?					PD & PW too low - Achieved better balance between Shaddingfield & Holton SR levels, at compromise if needed with flows. Previously ADD ok? Comment still remains - ADD ok.	Y	Y	Y	
5	Alder Carr	Y	Y	Y							Y	Y	Y	
6	Walpole				All pumps signed off except for Halesworth South as won't run in MI/d					Doesn't need to be resolved as part of SZ04.				
7	Halesworth Tower	Y	Y	Y							Y	Y	Y	
8	Southwold Tower	Y	Y	Y							Y	Y	Y	
9	Kessingland Tower	Y	Y	Y							Y	Y	Y	
10														

# PCD Data Assurance Feedback

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D18 fx BT utilities from LSBUD, Note that Oil/aviation fuel pipeline is missing)

	A	B	C	D	E	F	G	H	I	J	K	L
11			or the addition or removal of water. [Class C]									
12		Amber	Shrink Swell: Ground conditions predominantly medium plasticity. [Class C]									
13		Green	Soluble Rocks: Soluble rocks are either not thought to be present within the ground, or not prone to dissolution. Dissolution features are unlikely to be present.									
14		Green	Man-made Cavities: No constraints identified.									
15		Amber	Aggressivity (worst-case of Ferrous Corrosivity & Sulfate / Sulfide Score): Ferrous Aggressivity									
16	Infrastructure	Red	Crosses Halesworth Road (A144), (52.401161°, 1.4952879°), 2 Public Rights of Way (52.413204°, 1.5004771°, 52.405862°, 1.4993511°), Becks Green River (52.413249°, 1.5013779°) and surface water line crossing (52.406287°, 1.499294°).									
17	Trenchless Construction Complexity	Amber	Crosses Halesworth Road (A144), (52.401161°, 1.4952879°), Becks Green River (52.413249°, 1.5013779°); most likely will need to do a trenchless crossing for A144, but enough space to do this (no major constraints within the 40m working corridor). Geology not suitable for trenchless crossing (Lowestoft formation)									
18	Utilities	Amber	Crosses 11kv UKPI overhead lines at 2 locations (52.404753°, 1.4991310°, 52.399979°, 1.4944886°), crosses ESW distribution main (1.495390°, 52.401264°)	BT utilities from LSBUD, Note that Oil/aviation fuel pipeline is missing)								
19												

AutoSave On 24OCT24: Steering Group - Suffolk OFWAT WRMP Schemes - Meeting Minutes 27.06.2024 (1) General • Saved Search Andy Sefton

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AMP8 Acc. Programme: ESW Strategic Water Supply Schemes - Programme Board

**Project/File:** ESW Schemes Steering Board Meeting  
**Date/Time:** 24<sup>th</sup> October 2024 / 10:30-11:30 AM  
**Location:** Teams  
**Next Meeting:** TBC  
**Attendees:** Kieran Ingram (KI), Izzy Felstead (IF), Claire Sorrin (CS), Andy Sefton (AS), Lisa Conner (LC), Daniel Wilson (DW), Mike Walker (MW), Frank Bingham (FB), Sam Okegbenro (SO), Srimali Dixon (SD), Katie Davis (KD), Phil Hicks (PH), Peter Hartridge (PHa), Ross Williams (RW), Paul Kelly (PK), Amy McFarlane (AM)  
**Absentees:** Chris Fulton (CF), Claire Tyrell (CT), Will Robison (WR), Richard Seales (RS), Lee Neal (LN)  
**Distribution:** As above  
**Purpose:** Steer the three schemes to achieve the overall strategic commitments of the WRMP.

**Steering Group Role**

- I. Steer the project teams to meet the overall strategic commitments of the WRMP.
- II. Make decisions or provide steer on issues escalated by the project teams.
- III. Make decisions in terms of the adaptive pathway.

**Meeting Frequency**

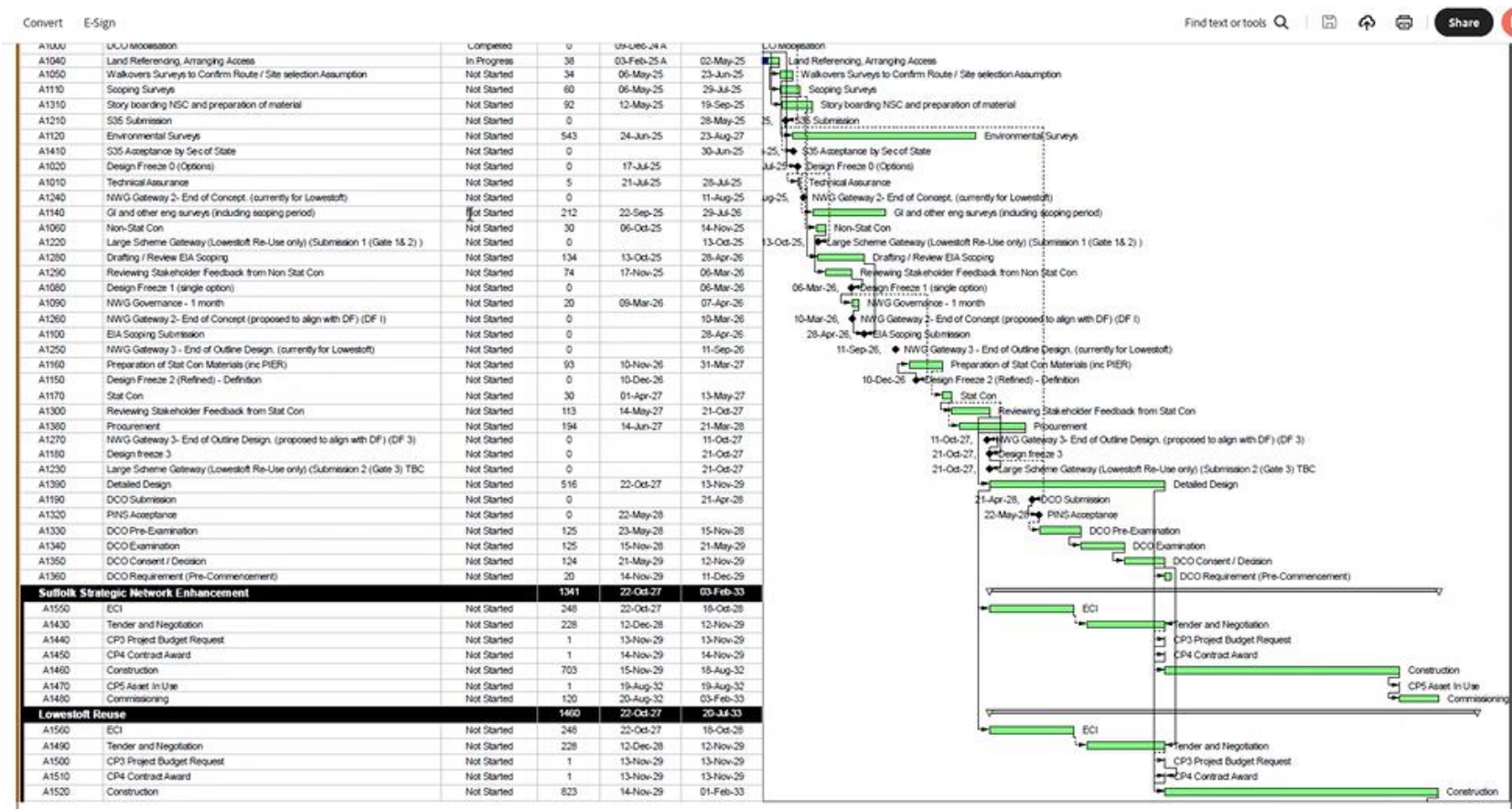
- Proposed to meet every 3 months unless there is a need arise, where an ad-hoc steering group meeting will be scheduled – revised to initially 1 month, then review
- Additional steering group members will be invited where decisions are required from specific disciplines. For example, Estates and Environmental.

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**Agenda 24<sup>th</sup> October 2024:**

1. Key Actions from last meeting
2. Planning Advice and the potential impact

PCD Data Assurance Feedback





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