

WORK PLANNING PROCESS

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PURPOSE AND SCOPE

This document describes the overall process for developing a single, deliverable work plan from 7 years+ ahead, for the delivery of work by, or on behalf of, National Grid Electricity Transmission.

Throughout this document the term 'work' encompasses the following:

- Licensed work - Capital works, routine inspections and maintenance, repairs, modifications and outage work for National Grid Electricity Transmission assets.
- Unlicensed work – Capital works, routine inspections and maintenance, repairs, modifications and outage work on the assets of Customers, 3rd parties and other National Grid businesses.

The geographical scope of the work is England and Wales.

National Grid Electricity Transmission's ability to achieve its' licensed and unlicensed obligations including the enduring maintenance of a safe, secure, efficient transmission system for all its' customers is dependent on the delivery of this work plan.

The overall, end-to-end work planning process described in this document has the following key objectives:

- Development of an optimised, deliverable work plan.

- Alignment of capital & maintenance works.
- Maximising the utilisation of resources and outage opportunities.
- Managing changes to the work plan through change control arrangements which are appropriate to the stage of the work planning process.

These objectives will only be achieved by application of the following key principles, which are embodied within this document:

- Providing sufficient lead time for the development and design of capital works, to ensure individual and interactive schemes are deliverable.
- Adherence to the defined work planning Milestones, which are crucial to determining the deliverability of the plan.
- Adherence to cross-Transmission change control processes, to ensure that potential changes to the plan are systematically assessed, agreed and implemented.
- Application of effective cross-Transmission governance, to ensure that the processes are adhered to and their effectiveness continually reviewed.

This procedure interacts with a number of other Transmission Procedures, and in particular the Network Development Process Map Enabling Document UKBP/TP500, which initiates all the capital work coordinated by this work planning process.

To achieve the above, UKBP/TP205 describes:

- The overall processes and governance arrangements which enable a single, integrated view of planned work to be provided to the business, enabling its' deliverability to be assessed and where necessary modifications made to the plan and contingencies put in place.
- The specific processes. The process are: identification of outage and resource requirements, via the Scheme Requirements Document (SRD), work prioritisation, change control, projects at risk and demand at risk.

More detailed procedures may be produced within parts of the business, where it is considered that a fuller description of their internal processes are required to enable them to discharge their responsibilities associated with this Transmission Procedure.

PART 1 - PROCEDURAL

1 WORK PLANNING PROCESS ROLES & RESPONSIBILITIES

The roles and responsibilities for the work planning process are shown in Figure 1 – Work Planning Process Roles and Responsibilities and described in detail below.

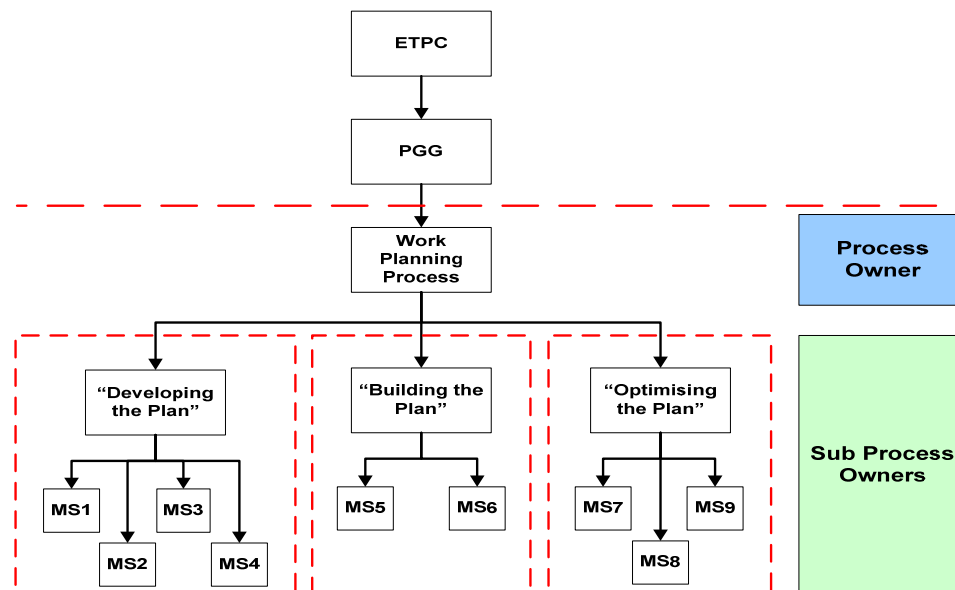


Figure 1 – Work Planning Process Roles and Responsibilities

1.1 Planning Governance Group (PGG)

The Planning Governance Group (PGG) is a sub-committee of and reports to the Transmission Performance Committee (TPC) and is chaired by the Electricity Transmission Asset Management, Operational Support Manager. The PGG members are a selection of Band B and C Managers from across the Transmission business with key responsibilities related to this process.

PGG is accountable for the governance and monitoring of performance of the end to end work planning process. PGG is responsible for ensuring the effective collaboration across Electricity Transmission Asset Management, Market Operation, Transmission Network Services, Capital Delivery and Delivery Units and ensuring the entire planning process is carried out effectively. The PGG will provide performance information and assurance to Transmission Performance Committee (TPC) highlighting issues and recommending remedial and improvement actions for the overall planning framework.

1.2 Sub Process and Milestone Owners

There are three sub processes within the work planning process as described within Table 1 below.

Sub Process	Milestone	Milestone Date	Sub-Process & Milestone Owner	Responsible Team(s)
“Developing the Plan”	1	September (week 39)	ETAM Portfolio Cost Manager	Portfolio Cost Team
	2	January (week 4)		
	3	April (week 14)		
	4	November (week 46)		
“Building the Plan”	5	January (week 4)	Operations Planning Manager	Operations Planning
	6	December (week 50)		
“Optimising the Plan”	7	Rolling (13 weeks ahead of delivery)	Operations Delivery Manager	Operations
	8	Rolling (4 weeks ahead of delivery)		
	9	Rolling (1 week ahead of delivery)		

1.3 The sub process owner is responsible for:

- Reviewing the performance of the relevant part of the sub process against the corresponding KPIs with a view to ensuring target levels of performance are achieved, taking remedial action where necessary to do so.
- Identifying and proposing improvements to the sub process to the PGG.

1.3.1 Electricity Transmission Asset Management – Investment Management, Portfolio Cost Team (PCT)

The function of Plan Development is carried out within the Portfolio Cost team within Investment Management. This team is responsible for identifying resource and outage constraints based on volumes of work being identified and planned for the electricity transmission system.

Their role is to volumetrically collate a single work plan from seven years (and beyond) prior to handover at two years ahead. The objective is to bundle work together, maximising the use of outages, reducing inefficient planning of work and usage of resources, to reduce abortive cost and improve work efficiency.

1.3.2 Electricity Transmission Asset Management – Operations Planning (OP)

In the “Build the Plan” phase OP work closely with Transmission Network Services - Electricity Network Development. OP are responsible for planning outages, sequencing resource to resolve any pinch points or conflicting works, moving work where necessary between delivery years and supporting the prioritisation process. OP’s role in “Optimising the Plan” is to further refine work in a continuous process until delivery. OP aim to make best possible use of available resource, outage opportunities and deliver the maximum

possible volumes of work. They also prioritise work on a national basis, manage system access changes and work not done during “delivery”

1.3.3 Electricity Transmission Asset Management – Operations Planning, National Initiatives Team (NIT)

NIT is responsible for defining the implementation strategy for approved changes to the Electricity Transmission network maintenance policy in Ellipse. NIT will manage implementation of Risk & Criticality driven work into Ellipse using the Decision Support Tool (DST). NIT also agrees (with ETAM, Network Engineering) the implementation strategy for new Operational Engineering Safety Bulletins (OESB) and Engineering Modification Instructions (EMI), and will raise the necessary work orders for placing the work into the plan. NIT is also responsible for maintenance of Ellipse standing data (MST alignment, Outage Equipment Lists and Bay Equipment Lists).

1.3.4 Electricity Transmission Asset Management – Investment Management (IM)

Investment Management is responsible for the following in relation to TP205:

- a) Reviewing the programme of schemes against the planning Milestones and working with Investment Delivery Engineers (IDEs) and the PCT to correct inconsistencies.
- b) Providing clear information on changes to the plan that have been agreed through due governance mechanisms, and/or the relevant sanction body.
- c) Ensuring that adequate, accurate and up to date planning information is provided on all schemes in the plan presented to the relevant sanction body.

1.3.5 Electricity Transmission Asset Management – Network Engineering (Asset Policy Team)

Asset Policy’s responsibilities in relation to TP205 are setting and monitoring the maintenance policy for Electricity Transmission assets. Changes to policy are passed to NIT as identified in 1.3.3. AP is also responsible for compiling the requirements for minor schemes identified by Operations.

1.3.6 Electricity Transmission Asset Management – Asset Integrity (AI)

AI’s responsibilities in relation to TP205 are the development of OESBs and EMIs.

1.3.7 Electricity Transmission Asset Management – System Design (SD), Investment Portfolio (IP) & Investment Delivery (ID)

SD, IP and ID are the groups within ETAM which are responsible for sponsorship of Capital and Non-Recurring Revenue (NRR) investments from initiation to closure. Responsibilities for sponsoring the different types of investment are described in TP500 Section 4.

1.3.8 Electricity Transmission Asset Management – Operations

Operations liaise with OP with regard to planning decisions. The Optimisation Engineer is the usual point of contact for Planning within Operations. Operations are the owners of and are accountable for the delivery of the work identified in the plan within 4 week ahead of delivery (MS 8). If conflicts within 4 weeks of delivery cannot be resolved within Team, then the first escalation point is with Optimisation Engineer. Ownership reverts back to OP if circumstances change that cannot be resolved by Operations without impacting other work.

1.3.9 Transmission Network Services – Electricity Network Development (TNS END)

TNS END creates a secure and economic outage plan for construction, maintenance and third party system access 1+ year ahead of delivery. PCT and OP work closely with TNS END to verify outage requirements for planned work 7 to 1 years ahead of delivery.

1.3.10 Market Operations – Network Access Planning (NAP)

NAP provide secure additional system access in current year and manage outage change.

1.3.11 Capital Delivery

Capital Delivery are responsible for the co-ordination of all capital works in National Grid Electricity Transmission and work with ETAM Operational Support to co-ordinate capital and maintenance work.

During the 4.2 phase of a project ETAM Investment Management are responsible for the submission of the SRD. After Milestone 5 the responsibility transfers to the Project Development function within Capital Delivery to update and re-submit the SRD in line with the planning milestones set out in this procedure. To provide a single point of contact for an ETAM zone Capital Delivery has established a team of outage planners in the Construction function who will liaise between Project Development and ETAM Operational Support. The single point of contact will be maintained by the outage planning function in Construction. The outage planning team in Construction has a primary role of submitting SRDs and OCRs to keep the outage process moving. The Project Controls team are responsible for taking an overview of the programme which spans multiple delivery functions as they create an integrated schedule.

The delivery functions are geographically organised and the Senior Project Manager is accountable for co-ordination between projects in their own area.

1.3.12 Delivery Units

Various types of Delivery Units can deliver National Grid's Electricity Transmission capital construction work; they are responsible for the development and delivery of the planned capital work.

Lead Project Manager

In the case of investments requiring the collaboration of two or more Delivery Units, Capital Delivery will identify a lead Project Manager and gain endorsement from the Investment Team Leader. For an investment which is highly interactive with other works the Lead project manager may be reassigned for different periods. If this arrangement is required it will be determined and proposed by Capital Delivery at Gate Reference B (4.3) within Network Development Policy (TP500)

The Lead Project manager shall be responsible for the co-ordination of all the required investment and work planning documentation post milestone 5, these activities may be enacted via the Construction Programming Team within Capital Delivery.

This will include:

- a) Co-ordinating the production of all SRDs, and any changes to existing SRDs, for the nominated group of interrelated schemes.(prior to MS6)
- b) Submitting a single co-ordinated SRD to the PCT or OP as appropriate (prior to MS6).
- c) Submission of OCR's within the delivery year (Post MS6)

1.4 Data Management & Systems

One of the key drivers to make the work planning process effective across the National Grid Electricity Transmission business is data management. The measure of good data management is to have readily available up to date accurate information.

1.4.1 Data Management relevant to the Work Planning Process is described within the following:

- a) UKPM/TP210 – Transmission Asset Investment & Work Management Processes
- b) UKBP/TP109 – Numbering and Nomenclature of HV Apparatus
- c) UKBP/TP169 – MIMS Asset Data Structure
- d) NSPM203 – Management of Maintenance Policy
- e) UKBP/TP500 – Network Development Process Map Enabling Document
- f) UKBP/TP220 - Management of The Safety Risks to Personnel From H.V Equipment Retained in Service With Overdue Maintenance
- g) UKBP/TP193 – Project Management, Planning and Project Control

1.4.2 The systems used to store the required data throughout the work planning process are as follows:

- a) **Ellipse:** Is the UK Transmission Asset and Work Management System, which is used as the work management Asset Register for the Scheduling of Maintenance work, issuing Work Orders and also for holding key Scheme (Project) details (principally asset details and key Milestone and outage dates for each scheme). Also it covers Major Schemes, Minor Schemes, Maintenance, Connections and Ad Hoc works.
- b) **Primavera:** Is the proprietary project planning and scheduling tool used by Construction and all the Capital Delivery Units for planning capital work, base lining and cost/performance monitoring.
- c) **Work Book:** Is the reporting tool based on data extracted from Ellipse and focuses on programme and timing of scheme data. It holds details of Scheme (Project) workload for any given Capital Delivery Vehicles.
- d) **Optimiser:** Is the tool owned by the Portfolio Cost Team which allows an overall delivery plan, incorporating maintenance and capital works to be assessed from 7-2 years ahead. Operations resources, system access and capital spend delivery are included. The tool enables the identification of delivery pinch-points and running of delivery scenarios and uses data derived from Ellipse.
- e) **RPO:** Resource Plan Overview is a tool used by OP and Operations to assign Operations resources to the required work requirements. The RPO updates overnight into MyCalendar, MyCalendar is the portal used by Operations to review the entries in the RPO.
- f) **TOGA:** The outage planning system which holds details of all outages on the Network, from 'Year Ahead' onwards. ETAM Operational Support is responsible for creating new TOGA basic data entries each time a new circuit is commissioned. MO is responsible for ensuring coding in TOGA is correct.
- g) **WORDS (Work and Outage Requests Tracking System):** Is the planning system used by Operations to identify and request new work, new outages and outage changes (OCR) for consideration and prioritisation by OP. Also the Capital Delivery Vehicles

and Capital Delivery use WORTS to identify Scheme Requirements for outages and ETAM resources using the Scheme Requirements Document (SRD) and new outages and outage changes for consideration and prioritisation by OP within Milestones 7, 8 and 9.

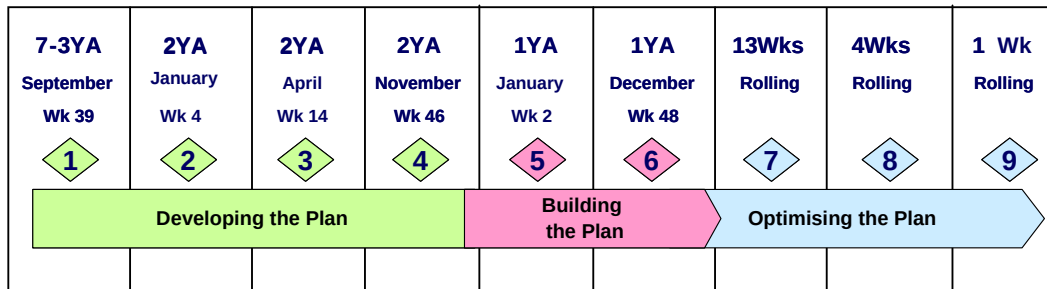
- h) **Scheduling & Mobile solution:** Are the tool used to assign work to Operations teams and to dispatch work to the team members.
- i) **DST (Decision Support Tool):** Is the tool used to identify opportunities for maintenance deferral when implementing Risk & Criticality policy

2 OVERVIEW OF THE WORK PLANNING PROCESS

2.1 Process

The end to end work planning process is split into three Sub Processes: Developing the Plan; Building the Plan; Optimising the Plan. The work within the plan is referred to in terms of plan years i.e. the year the work is planned to be delivered. A plan year runs from the first week in April to the last week in March of the following year. Resource and outage requirements for the work will be co-ordinated and planned for delivery in specific plan years

2.2 Work Planning Milestones



2.3 Work Planning Overview

	Milestone 1
Description	First collated view of 3 to 7 years ahead work plan.
When	September (week 39): 7 to 3 Years ahead of delivery
Objective	• Gather site related information and feedback to inform scope and timing of work • Review investment based long term work plan, 7 to 3 years ahead against available resource and system access • Inform the business of pinch points & prompt action to address them • Enable early work rationalisation • Provide a single consolidated view of all known capital and refurbishment work
Process Input	• Scheme milestones, outage and resource data in Ellipse and SRDs • Current view of work 7 to 3 years ahead indicating pinch points • Additional investment and refurbishment based information derived from forecasts • Capital Plan
Process Output	• Milestone report identifying the current planning position based on the input data highlighting resource and outage positions. • Recommendations to resolve potential conflicts with the current planning position in terms of resource and outage. • Network outage requirements • Local/site factors • Supply Chain volumes
Process Decisions	• Prioritise work, move work or resource if required to resolve pinch points. • Initiation of long term resource level adjustment • Prioritise Network outage requirements to resolve pinch point

	Milestone 2
Description	Start of physical plan build, optimising outages and resources
When	January (week 4): 2 Years ahead of delivery
Objective	- Align all work (both schemes and maintenance) to minimise repeated outages, moving individual jobs +/- one year if required - Provide a view of the physical plan deliverability highlighting constraints against resource and outage - Provide a "Line of Sight" for Plan Build
Process Input	- Output of MS 1, 3 years ahead view of work - Current work deliverability view 2 years ahead indicating pinch points - Details of bundled and potential bundled work - Details of new work 2 years ahead since last MS 1 meeting.
Process Output	- Milestone report identifying the current planning position based on the input data highlighting resource and outage positions. - Recommendations to resolve potential conflicts with the current planning position in terms of resource and outage. - Network outage requirements - Local/site factors - Supply Chain volumes
Process Decisions	- Prioritise and move work if required to resolve pinch points. - Agreement on strategy to be taken with regard to developing and aligning the plan - Prioritise Network outage requirements to resolve pinch point

	Milestone 3
Description	Point at which all identified construction work from MS 2 and new construction work entering the plan must have been In TP500 stage 4.2.
When	April (week 14): 2 Years ahead of delivery
Objective	- Review all work intended to be delivered 20 months after the MS 3 meeting - Confirm all construction works are instructed to proceed to Project Brief, with expectation that the required planning details will be produced by MS 5 with an agreed SRD. - Ensure schemes are included within the Capital Delivery Workbook. - Provide an updated more certain view of the physical work plan deliverability highlighting constraints against; finance, resource, and outage.
Process Input	- List from Ellipse of all construction jobs intended to be in delivery in 2 years time, with current status (ie has it been instructed to Project Brief or not; and planned instruction dates for those not yet instructed) - Output of MS 2 process including all decisions made. - Details of new work entering the work plan since the last MS 2 meeting. - Current view of the work indicating progress and pinch points "What if" scenario plans to provide suggested solutions for pinch points
Process Output	- Milestone report identifying the current planning position based on the input data highlighting finance, resource and outage positions. - Recommendations to resolve potential conflicts with the current planning position in terms of finance, resource and outage.
Process Decisions	- Resolve future resource pinch points - Prioritise and move work if required to resolve pinch points. - Prioritise Network outage requirements to resolve pinch point - Accept / reject: - new work entered since MS 2 - output of change control decisions - Schemes from the plan that have not complied with the MS requirement

	Milestone 4
Description	Point at which all identified construction work from MS 3 and new construction work entering the plan must have been in TP500 Stage 4.3 and an SRD submitted.
When	November (week 46): 2 Years ahead of delivery
Objective	- Review all work intended to be delivered 16 months after the MS 4 meeting - Confirm all construction works are instructed to proceed to Project Execution Plan and have an SRD submitted with expectation that the required planning details will be produced and agreed by MS5. - Provide an updated more certain view of the physical work plan deliverability highlighting constraints against; finance, resource, and outage - Ensure schemes are included within the Capital Delivery Workbook.
Input	- Output of MS 3 process including all decisions made. - Current view of the work indicating Project Execution Plan, SRD status and pinch points - Details of new work entering the work planning process since the last MS 3 meeting. - Details of the escalation process resulting from MS 3 and current resolution of the work "What if" scenario plans to provide suggested solutions for pinch points
Output	- Milestone report identifying the current planning position based on the input data highlighting finance, resource and outage positions. - Recommendations to resolve potential conflicts with the current planning position in terms of finance, resource and outage.
Decisions	- Resolve future resource pinch points - Prioritise and move work if required to resolve pinch points. - Prioritise Network outage requirements to resolve pinch point - Accept / reject: - new work entered since MS 3 - output of change control decisions - Remove schemes from the plan that have not complied with the MS requirement

	Milestone 5
Description	Point at which all planning information for work to be delivered must be available and agreed to allow the "Building the Plan" process to commence. All Capital work must have an agreed SRD.
When	January (week 4): 1 Year ahead of delivery
Objective	- Review all work for plan year starting April, 14 months after the MS5 meeting - Confirm all construction works have an agreed SRD submitted with the required planning information - Provide an optimised plan of work which is deliverable with the available resource, outage and finance. - Provide sufficient time for the Plan Build process to start - Allow time to challenge work priorities to ensure maximum work deliverability. - Allocation of all critical resources and resource profiles developed
Minimum Input Data Required	Work Requirements Equipment - Definition of the equipment required to have access, split into equipment rather than full circuit. Duration - Realistic length for each job that builds up the whole scheme or part to be delivered in the outage year Sequence - Identification of whether outages for a project must take place in a particular sequence ERTS - Realistic ERTS from the Capital Delivery Unit for all projects requiring outages in the year. This should be profiled as work changes the situation Clearance - As much information as possible associated with clearance outage requirements for jobs Commissioning - Commissioning methodology to assess outage requirements (e.g. CT line ups) Schedule of work - Schedule of the jobs proposed and duration

	<u>Resource Requirements</u> • Location - Specific location of where the job is to be carried out • Skilled resource - Details of what skilled resource is required and for what task and when • Commissioning programme - Methodology for resource allocation
Process Input	• Output of MS4 process including all decisions made. • Output of the work plan handover from PCT to OP. • Current view of work indicating scheme progress and pinch points • Details of new work entering the work planning process since the last MS4 meeting. • Agreed SRD documents for all construction work • Details of the escalation process resulting from MS4 and current resolution of the work • "What if" scenario plans to provide suggested solutions for pinch points
Process Output	• A detailed plan to include: ○ Confirmed outage requirements defined for all work; ○ Confirmed resource requirements defined for all work • Confirm any anticipated Zone resource pinch points and matching theoretical transfer opportunities to resolve. • Confirm detail of all schemes with work requirements in subject plan year together with confirmation of SRD availability, status and any risks. • Provide detail of any Schemes rejected/removed/deferred from the subject plan year in 7 to 2 year timescales. Identify any remaining or potential system access boundary constraints and any priority guidance to resolve.
Process Decisions	• Prioritise and move work if required to resolve pinch points. • Acceptance / rejection of new work entered since MS4 including decisions made • Resolve future resource pinch points

	Milestone 6
Description	Point at which a check is made that all work intended for delivery the following Plan Year is resourced with appropriate Operations staff and with the required outage granted and any 3rd Party agreements in place
When	December (Week 50) 1Year ahead of delivery
Objective	• Review all work intended to be delivered in the YA Plan starting 4 months after MS6 • Discuss and confirm the work plan is acceptable to Operations and includes key resources allocated to work
Minimum Input Data Required	<u>Outage Plan</u> • Dates – Start and end dates identified • Equipment – Definition of the equipment required to have access, split into equipment rather than full circuit. • ERTS – Times confirmed and agreed with Operations / Delivery Vehicle staff as appropriate • Work – All possible work under booking nested together • TOGA – Booking made • TNCC – Either actual or default start time and PFW time identified on booking were TNCC is required • Market Operation handover (TNS END to NAP Documentation – Outage sequence information recorded along with main risks and mitigating actions, operational instructions and changes in running arrangements plus project information summaries. However outline information must be available to fulfil BSIS forecast requirements and to give a clear indication of whether outages are available or not. <u>Resource Plan</u> • Named Resource – For Commissioning Engineer, SAP and PL requirements • Allocated Resource - For fitting requirements
Process Input	• Plan Build Handover Documentation – Total resource plan put together for all outage and non-outage work identifying resources and work requirements • Output of MS 5 process including all decisions made.

	- Current view of the work indicating progress and pinch points - Details of new work entering the work planning process since the last MS 5 meeting. - Details of the escalation process resulting from MS 5 and current resolution of the work “What if” scenario plans to provide suggested solutions for pinch points
Process Output	- A plan to include: - Confirm outage requirements defined for all work; equipment, duration, sequence, ERTS, clearance, commissioning, TNCC requirements - Confirm resource requirements defined; schedule of work, key resources, availability of resources
Process Decisions	Agree changes to the work plan are acceptable to Operations

Milestone 7	
Description	Point at which the resource Plan is firmly populated in the RPO and work packs are scheduled to resources confirming all work required for the period commencing in 13 weeks time.
When	Rolling - 13 Weeks ahead of delivery
Objective	- Discuss and confirm the work plan is acceptable to Operations and includes named members of staff allocated to work. - Communicate to staff members the location at which they will be working - Initiation of system studies to confirm the required outage can be granted by reflecting on latest network position. - Confirm agreed changes have been incorporated to the plan.
Input	- Output of the Building the Plan phase work plan. - Current view of the work indicating progress and pinch points - Requests for new work or change during the period - Details of the projects at risk - National prioritisation of work
Output	- Fully populated plan for Operations - Changes to plan addressed and systems updated
Decisions	- Prioritise and move work if required to resolve pinch points. - Agree changes to the work plan are acceptable to Operations - Incorporate output decisions from projects at risk

Milestone 8	
Description	Point at which the plan is handed from the MO-NAP Planning Placement to the MO-NAP Delivery. Point at which accountability for the plan moves from OP to Operations for delivery.
When	Rolling – 4 Weeks ahead of delivery
Objective	- Outages placing demand at risk are identified and mitigated. - Accountability for local plan given to Operations for scheduling within 4 weeks - Develop detailed system studies considering system, generation, and demand pattern changes.
Input	- Output of MS 7 (Plan Confirmation Meeting). - Detailed system studies - Current view of the work indicating progress and pinch points
Output	- Fully populated plan for Operations - Changes to plan addressed and systems updated
Decisions	- Prioritise and move work if required to resolve pinch points. - Agree changes into delivery - Incorporate output decisions from projects at risk

	Milestone 9
Description	Final outage plan handover from MO to TNCC
When	Rolling – 1 Week ahead of delivery
Objective	- MO provide a final check on deliverability of the plan, from the point of confirming that the outages required for the work in the plan can still be granted. - Provide a view to network control of all outage requirements and issues. - Confirm that demand @ risk has been mitigated.
Input	TOGA – outages and demand @ risk
Output	- MO Provide handover notes to control room including: - Contingency actions - Contract details - Impact Assessments
Decisions	Acceptance or rejection of planned outages

3 INTERACTION WITH INVESTMENT SCHEME PROCESS

The successful development of a deliverable Work Plan is inextricably linked with the Investment Process (UKBP/TP500). The tables below identify the relationship between the Work Planning process and the relevant phases of the investment process.

For work being progressed under TP500 the broad mapping of the 'gateways' is as follows:

Gate Reference	Gate Name	Work Planning Phase/Milestone	SRD Required
A1	Approval to make Customer Offer	Developing the Plan (2-7 years Ahead) (Milestones 1,2,3,4)	Yes
A2	Approval to develop Project brief	Developing the Plan (2-7 years Ahead) (Milestones 1,2,3,4)	Yes
B C	Approval to develop Project Execution Plan Sanction to execute project Execution Plan	Developing the Plan (2-7 years Ahead) (Milestones 1,2,3,4)	Yes
↓		Building the Plan (Year Ahead) (Milestones 5 to 6)	Yes
D	Approval to close Project	Post delivery (MS9)	No
E	Close Project (Financially)	Post delivery (MS9)	No

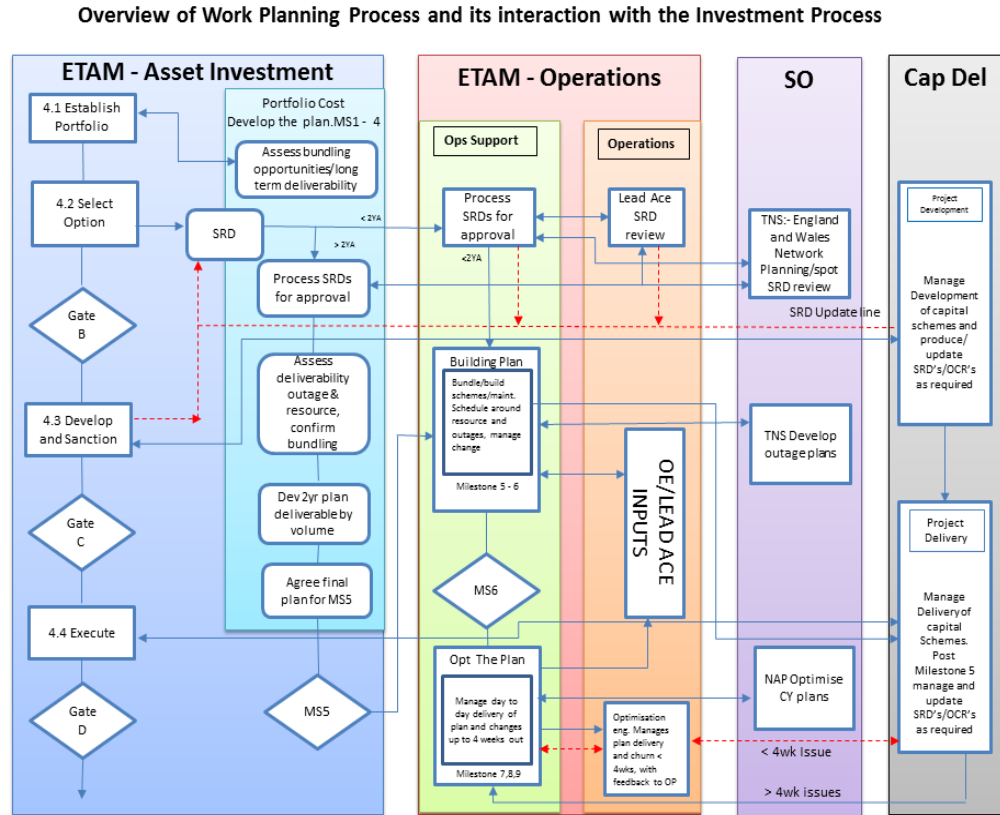


Figure 2 – Overview of Work Planning Process

3.1 Milestones

Throughout the end to end work planning process, checks must be carried out to understand progress with development of the plan and if the work can be delivered when intended.

3.2 Minimum Timescales for Scheme Development & Design

The activities for planning work can start as early in the process as required. However, for construction works, there are “no later than” timescales which must be met for a project to be included at the MS2 stage of planning and for an agreed SRD (of the required quality) to be available before MS5. The minimum scheme development and design duration will depend on the type and complexity of a scheme. This is illustrated in the table below. It should be noted that adoption of these minimum timescales would inhibit the production of a credible SRD due to lack of delivery vehicle input and hence potentially introduce unacceptable churn within the plan development process. For acceptable compliance with TP205 milestones and SRD requirements scheme development should be targeted to enable Gate C and tender a minimum of three months before MS5. Any subsequent submissions for change will be subject to change control procedures