

Network Rail Safe System of Work Pack

Proof of concept on the Wessex route.

First stage brief: to visual translate existing text-heavy SSOWPs into a simpler, clearer information pack centred on a map and hazard symbols, to increase staff understanding and therefore their safety on-track.

Second stage brief: to review and improve the processes surrounding the issue and use of SSOWPs, developing the information materials in line with findings.

The pilot SSOWPs have been very well received by S&T, PWAY and Off-Track staff.

All staff liked the new style documentation describing it as clear, concise and a big improvement.

Next steps

The project team will develop further within the detailed mapping process; develop and refine the design and format, investigate IS options for production and mapping, and research in-office production options.

Project Team

Stuart Browning, *Route Safety Improvement Manager, South Western Railway, Network Rail*

Kate Parsons, *Visual Communication Consultant*

Dr. Michelle Rogers, *Corven*

02 January 2013

3

Third iteration

Issued as 2-part pack. *Team Pack: inner pages*

S&T, Off Track and PWAY: Strongly supported map and consider it simpler and clearer than current materials. Felt it would help deliver more effective briefings. Symbols were praised as intuitive. A 'trip or fall hazard' symbol was requested.

Project Team: Have created new symbol, will investigate need for further symbols at next stage.

S&T, Off Track and PWAY: Strongly supported landmark identifiers (signals, bridges etc.) to help locate correct location of the work. However, each section found different identifiers useful (track circuit IDs versus signal box mileages, road names, catch-pit numbers etc).

Project Team: Researching network mapping technologies that allow for selection of information overlays

Where to work.
 Start 20m 30ch
 End 20m 40ch

TAKE TIME to understand the map

Work area safety zones

- Green zone
- Red zone
- Red zone barred

Work area hazard warnings

- Extended hazard area
- Extended hazard within a green zone
- Extended hazard within a red zone
- Hazard at specific location
- Danger of electric shock
- Injury hazard from infrastructure
- Buried services below work area
- Danger from flooding or risk of drowning
- Severe injury from passing trains
- Health hazard: environmental hazard, asbestos, lead paint, chemicals or fumes
- Danger of injury from falling
- Natural hazard: wildlife, hazardous plants, or natural gas

Work site and non-hazardous route information

- Make sure your mobile phone is on
- Start of work area
- End of work area
- Walking route
- Access or agree to work area
- Gradient upwards
- Gradient downwards
- Emergency telephone
- Pedestrian access to rail
- Vehicle access to rail

S&T, Off Track and PWAY: The maps must be 100% accurate

Project Team: available mapping references are not accurate and/ or do not show all information (landmarks, signalling etc) necessary. Accurate mapping must be sourced or created for SSOW for new style documentation to succeed.

Off Track: Suggested map orientation on the page reflects view from access point.

Suggested all access points are marked, and mileages given.

Project Team: Researching network mapping technologies.

Available references did not include all access points as requested, mileages are given but will be made more prominent.

3

Third iteration

Issued as 2-part pack. *Team Pack: outer pages*

Staff: would welcome larger text size

Project Team: will review text size in relation to extent of information and physical pack size.


Your safety carrying out the task
TAKE TIME to think about...

- 4 Am I fit to work today?
- 5 Have I thought about the relevant life saving rules?
- 6 Do I have the correct PPE for the task?
- 7 Are all required tools and equipment on site, fit for purpose and free from defects?

Your safety in the work area
TAKE TIME to think about...

- 8 Am I at the right location and in the asset being worked on in the expected condition?
- 9 Do I have safe access to the work site, as well as a safe escape route?
- 10 Do I know what to do in an emergency?

Talk to the COSS if you answer 'NO' to any of these questions.



Emergency contact numbers.
Make sure your phone is on when you reach the work area.

Working	Swinggate 98 (SS)	SCR Eastleigh
01480 754808	01258 478708 07 00180	023 8001 3264 080 7472 / 7547

First Aider	WDC	Close call reports
	08 573004 030 7870 3004	01908 720000


THIS SPACE FOR CURRENT
SAFETY CAMPAIGN
MESSAGE OR LATEST
RELEVANT NEWS

The team's contact numbers.
The COSS's details are highlighted in orange.

Co-worker	Adrian Levin			
Contact No.	07917 857482			
Serial No.				

Co-worker				
Contact No.				
Serial No.				

Key task and safety information PT104



Work details

Job number	10023707	Work Specification	Drainage works (see blockage on Up Slow)
Start time	04/12/2012 01:00h	End time	04/12/2012 05:00h

Task information.


Risk of Weil's Disease

There is a high risk of contracting Weil's Disease when working near contaminated water or rat urine. Weil's Disease can kill. Bacteria can get into your body through cuts and scratches, through your mouth and eyes.


Cover all cuts with plasters before you start work. Wear the right PPE including gloves.

Wash your hands before you drink, eat or smoke. Avoid rubbing your face while working.


A Lift catch pit cover. If water is high or not flowing, drainage work is necessary.



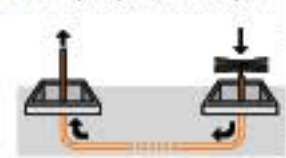
B Make drainage rod long enough to stretch between catch pits by connecting sections.



C Feed the rod between catch pits. Crossed the brush when rod emerges at second catch pit.



D Pull rod with brush attached back out through first catch pit. Repeat C and D as required.



TAKE TIME to think about...

- 1 Am I qualified and competent to carry out the task in hand?
- 2 Is there a clear and valid method for the work to be carried out?
- 3 Do I understand it and my role in implementing it?

Talk to the COSS if you answer 'NO' to any of these questions.

first reveal

front page

Inclusion of 'Take Time' questions prompting staff to think about risks and their responses to them.

Staff: liked inclusion of questions, felt to be useful at briefings



Third iteration

Issued as 2-part pack.

Permit (issued to COSS)

Off-track and PWAY:
"Nothing is lost by moving away from extensive documentation."
Highlights job specific information.
Clear and useful layout.

PWAY:
Requested addition of postcode.

Project team: Included in next iteration

Off-track and PWAY:
Raised questions about ease of photographing assets.

Project team:
Will consider as part of detailed process mapping.

Off-track and PWAY:
Supported description of current asset.

NetworkRail

Permit issuing authority Adrian Fuller Off-track Section Manager, Guildford	Permit holder Adrian Lavin Lineside Inspector, Guildford
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Permit to Work in a Secure Environment [Pilot 1]

Important: The person named as Permit holder must read through this document and ensure that all information is understood by themselves and the team. The Permit is only valid for the period of time indicated and after it has been signed by the Permit holder and Permit issuing authority.

Section A: About the work environment

Part 1: This section covers the specifics of the work you must understand before you enter the environment.

1a: What this work is.

Job number	Work Specification
10323707	Drainage works (line blockage on Up Slow)

1b: When to work.

Start time	End time
04/12/2012 0110h	04/12/2012 0550h

Permit revalidation? No Yes

1c: Where to work.

Location	Details
Deepcut (Downside Cess)	
Start	29m 30ch
End	33m 40ch

1d: Simultaneous operations.

Other work taking place at, or near, the work site.	Details	Additional details provided by the Permit holder
	None identified	

page 1

1e: Current condition of the work site.

Photo of current condition

Description

1f: Certificates required for this environment.

Permit holder to fill in the issue number for each Certificate.

Certificate details		Issue number
Name	Engineering supervisors certificate	
Ref.	GO/RT/3199	
Name	Conductor Rail permit	
Ref.	GO/RT/3091	
Name		
Ref.		
Name		
Ref.		

Part 2: This section details hazards associated with the environment and safety controls in place.

Permit holder to ensure they are satisfied with the measures detailed below.

2a: Emergency contacts

Woking	Basingstoke SB (BE)	ECR Eastleigh	First Alder	WICC	Close call reports
01483 714898	01256 478758	023 8061 3314		08 573904	01908 723500
	07 50193	089 7472 / 7547		020 7979 3904	

page 2



Third iteration

Issued as 2-part pack.

Permit (issued to COSS)

Off-track and PWAY:
"Much clearer than current inclusion of hazard directory."

PWAY:
Requested addition of section for lookouts and sighting distances

Project team:
Implemented at next iteration

2b: Safe System of Work zones and hazards. See map for more information

	1	2	3	4
Zone or Hazard	Safeguarded Green Zone	Contaminated Water	Contact with thorns, brambles, wire fencing, etc.	Snake bites, slings
Look outs				
Map symbols				
Detail	<p>You must:</p> <ul style="list-style-type: none"> • arrange for all movements to be stopped on all lines not within the ES's work site • reach a clear understanding with the ES that each movement within your site of work will be made at extreme caution and will not exceed walking pace • make sure you and your group, are in a safe position whilst any movement or operation of an engineering train or OTP takes place within your site of work • sign the RT3199 Engineering Supervisor's Certificate. 	<p>Additional PPE to be worn including disposable gloves, waders/Wellington boots (as required) and eye protection to BS EN166.F</p>	<p>Check for dangerous weeds such as giant hogweed, Himalayan balsam. Beware of the presence of utility services – identify any at risk and report to the Person in Charge and Infrastructure Fault Control. Where necessary they shall be protected moved or isolated. Do not carry out any inspection work which could damage these services</p>	<p>Check for hazards such as snakes, bee or wasp nests prior to commencing any detailed inspection or measuring</p>
Start	29m 30ch	29m 30ch	29m 30ch	29m 30ch
End	33m 40ch	33m 40ch	33m 40ch	33m 40ch

page 3

Project team:
Detail to be edited for clarity

Off-track and PWAY:
"More spaces for larger teams"

Off-track and PWAY:
Raised concerns about having Section Manager – who will not have sight of detailed planning and risks – as Permit issuer. Could encourage culture of 'auto-pilot' sign off as person other than Section Manager will have reviewed the paperwork.

Project team: To consider as part of the detailed mapping process.

Part 3: This section contains declarations that must be signed.
It is your responsibility to ensure that everybody on the team understands the hazards involved with the work environment and the Safe System of Work. Each co-worker must sign below.

3a: The work team

Co-worker	Adrian Lavin			
Contact No.	07917 857462			
Sentinel No.				
	Signature	Signature	Signature	Signature
Co-worker				
Contact No.				
Sentinel No.				
	Signature	Signature	Signature	Signature

Part 4: Permit authorisation.
This section must be signed by you and the Permit issuing authority, before you and the team enter the environment.

4: Acceptance of responsibility for Safe System of work on this job

Issuer of this Permit	Permit holder
Adrian Fuller	Adrian Lavin
Signature	Signature
	I confirm that all permit conditions specified are clearly understood and will be adhered to.
Date	Date
Time	Time

page 4

3

Third iteration

Issued as 2-part pack.

Permit (issued to COSS)

Off-track and PWAY:

Raised concerns about inclusion of task diagrams feeling they were not valuable for experienced, competent staff, and not useful for routine, simple tasks.

In some cases the task's skill relates to preparatory calculations and assessments (e.g. calculating the volume of chippings for lifting and packing), thus calculation tables could be a valuable addition in place of task method diagrams

Off-track:

If diagrams do remain, more space would be needed (for larger and more complicated jobs). COSS suggested this section be separate from the Permit.

Suggested a section could be added to indicate plant and RRVs required for the job in the form of a checklist with symbols.

Project team: Next design iteration, based on a continual feed printing process, allows for additional sections to be included as and when needed. Content that will be available to planners will be considered as part of development of materials

Off-track and PWAY:

Raised concerns about the feasibility of carrying out a site inspection as part of the hand back.

Project team: Will consider as part of the detailed mapping process

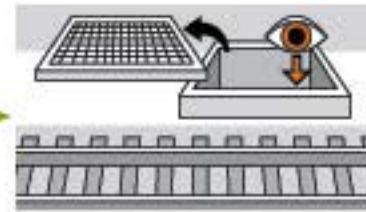
Section B: About the task

Risk of Weil's Disease

There is a high risk of contracting Weil's Disease when working near contaminated water or rat urine. Weil's Disease can kill. Bacteria can get into your body through cuts and scratches, through your mouth and eyes.

Cover all cuts with plasters before you start work. Wear the right PPE including gloves. Wash your hands before you drink, eat or smoke. Avoid rubbing your face while working.

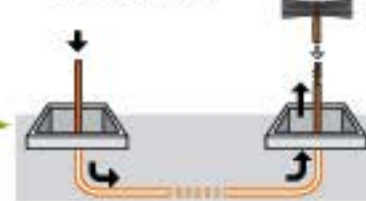
A Lift catch pit cover. If water is high or not flowing, drainage work is necessary.



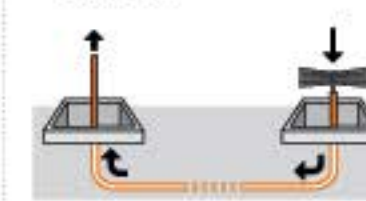
B Make drainage rod long enough to stretch between catch pits by connecting sections.



C Feed the rod between catch pits. Connect the brush when rod emerges at second catch pit.



D Pull rod with brush attached back out through first catch pit. Repeat C and D as required.



5b: Additional Certificates for the task.

Permit holder to fill in the issue number for each additional Certificate.

Are additional Certificates required for the task? No Yes

Certificate details	Issue number
Name	
Ref.	
Name	
Ref.	
Name	
Ref.	
Name	
Ref.	

page 5

Section C: Hand back

Part 6: This section is about hand back at the end of your work.

6a: Hand back of the work.

Has the work been completed as planned?
 Yes Give details of the current status (optional)
 No You must describe the current status of the job

6b: Hand back of the work area.

Adrian Lavin Signature
 I am handing back the work area and declare that I am satisfied it is in a safe condition.
 Date Time

Describe the current status of the work site
 Take a photo of the work site with your phone and text to 07615 823267.

Adrian Fuller Signature
 I declare that I have inspected the job and the job site has been left in a safe condition.
 Date Time

Issues log

Off-track and PWAY: welcomed the issues log as an opportunity to raise and action issues.

page 6

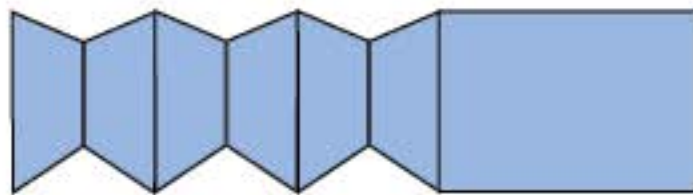
4

Fourth iteration

Printed materials to be produced on a continual feed printer, folded then bound, to enable the extent of the pages to expand as necessary. Both Permit and Team Pack to be produced in the same way.



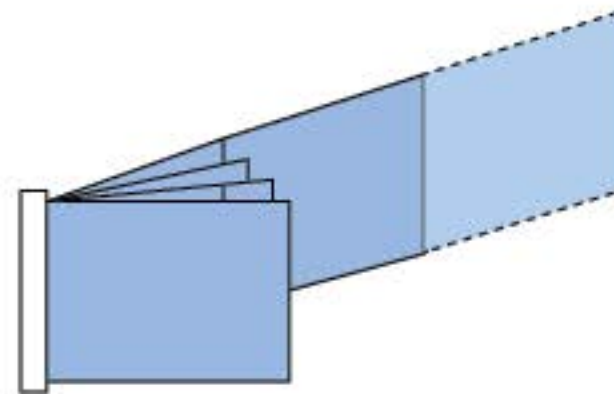
Continuous feed printer. Paper roll perforated in A5 landscape sections.



Paper is printed on one side only and folded so all printed faces are 'outward'



Folded 'pages' are gathered at one end and bound with a sliding plastic binder



Map pages are left unbound so they can be extended for viewing

In-office printers and waterproof papers and/or plastic wallet and binding options to be researched.

kateparsons

4

Fourth iteration:

Team pack. Extent of pages adjusts to flexible content.

TAKE TIME to understand the map

Work area safety zones

- Lookout warning by touch
- More than one lookout on site
- Single lookout on site
- Lookout at distance
- Automated warning ATWS, TOWS or PeaWee
- Lookout warning with whistle or hoister (LOW5)
- No refuges
- Limited clearance

Work area hazard warnings

- Danger of electric shock
- Buried services below work area
- Beware of injury from passing trains
- Danger of injury from falling
- Trip or fall hazard
- Injury hazard from infrastructure
- Danger from flooding or risk of drowning
- Health hazard: asbestos, lead paint, chemicals, fumes
- Natural hazard: wildlife, plants, natural gas

Work site and non-hazardous route information

Key task and safety information [Pilot 5]

Work details

Job number: 10409985		Work Specification	
Start time: 19/12/2012 0800h		End time: 20/12/2012 1600h	
Lift and pack wet beds on the Down Reading line.			

Emergency contacts

Working	Basingstoke SB	First Aider	WICC	Close call reports
01483 714898	01256 476758		08 573904	01908 723500
	07 50193		020 7979 3904	

TAKE TIME to think about...

Your role in carrying out the task

- 1 Am I qualified and competent to carry out the task in hand?
- 2 Is there a clear and valid method for the work to be carried out?
- 3 Do I understand it and my role in implementing it?

Your safety carrying out the task

- 4 Am I fit to work today?
- 5 Have I thought about the relevant life saving rules?
- 6 Do I have the correct PPE for the task?
- 7 Are all required tools and equipment on site, fit for purpose and free from defects?

Your safety in the work area

- 8 Am I at the right location and is the asset being worked on in the expected condition?
- 9 Do I have safe access to the work site, as well as a safe escape route?
- 10 Do I know what to do in an emergency?

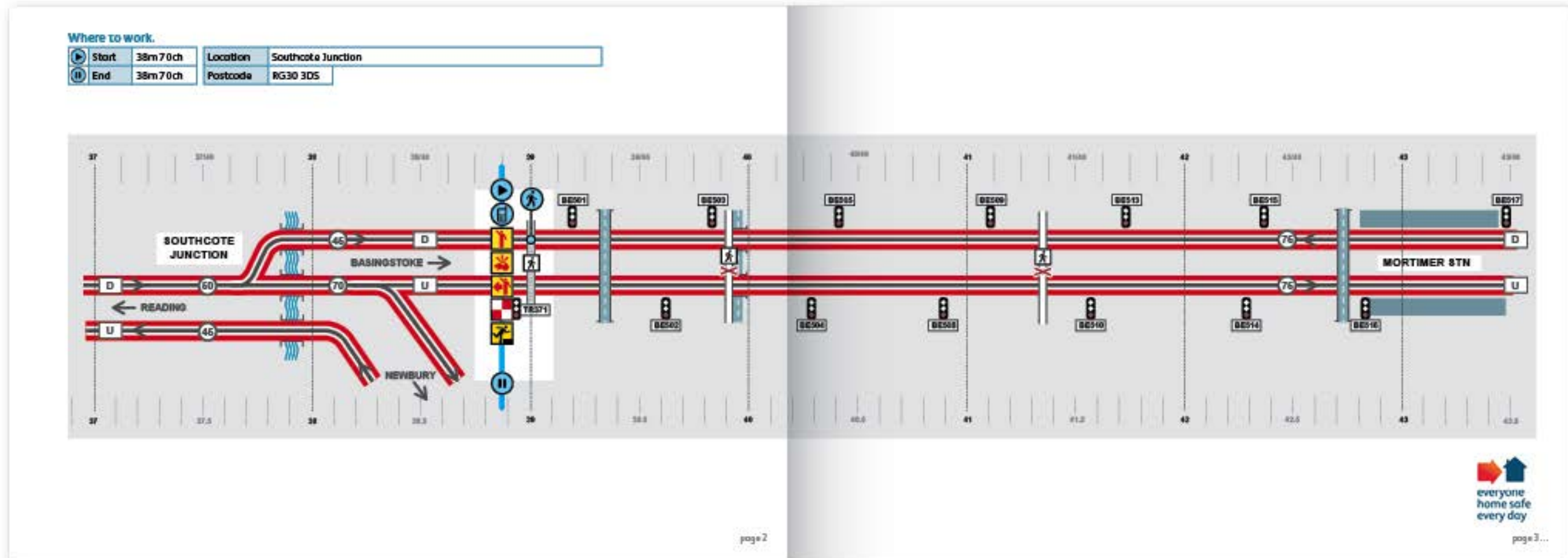
Talk to the COSS if you answer 'NO' to any of these questions.

Task method diagram omitted (this task's skill is in its calculations), replaced with Take Time questions on front page, reducing extent to four pages

4

Fourth iteration:

Team pack. Extent of pages adjusts to flexible content.



Mixed response to each staff member carrying a map and Take Time assessment. Some felt it would not be looked at during work, however most agreed it would be a useful addition to briefings

4

Fourth iteration:

Permit

Extent of pages adjusts to flexible content.

In this pilot no task diagrams were needed, however it has been decided that a schematic diagram will always be included:


1. choice from a library of task diagrams, safety campaigns, incident alerts
2. if no choice is made, the space will be automatically populated by one of the above.

S&T, Off-track and PWAY: said they did not feel this was useful or practicable.
Suggested this space could be used for showing access points or areas of limited clearance.

Project team: Access points are clearly shown on map only (text area could be added); Limited clearance already included in Hazards section. We have agreed a two-option approach:

1. include photo where conducive and useful.
2. where condition of asset photo not useful, alternative to be included e.g. access point, particular hazard etc.

Inclusion of a photo will act as verification that a site visit has taken place.



Permit issuing authority	Permit holder
<input type="text"/>	John Jacob
	COSS

Permit to Work in a Secure Environment [Pilot 5]

Important:
The person named as Permit holder must read through this document and ensure that all information is understood by themselves and the team. The Permit is only valid for the period of time indicated after it has been signed by both the Permit holder and Permit issuing authority.

Section A: About the work environment

Part 1: This section covers the specifics of the work you must understand before you enter the environment.

1a: What this work is.

Job number	Work Specification
10409985	Lift and pack wet beds on the Down Reading line.

1b: When to work.

Start time		End time	
20/12/2012	0800h	20/12/2012	1600h
Permit revalidation?		No <input type="radio"/>	Yes <input type="radio"/>

1c: Where to work.

Location	Details
Southcote Junction	Down Reading Line between Southcote Junction and Mortimer at 38m 70ch. Access at Small Meads overbridge at 39m 00ch.
Postcode	RG30 3DS
Start	38m 70ch
End	38m 70ch

1d: Simultaneous operations.

Other work taking place at, or near, the work site.	Details	Additional details provided by the Permit holder

page 1

1e: Current condition of the work site.

1f: Certificates required for this environment.
Permit holder to fill in the Issue number for each Certificate.

Certificate details		Issue number
Name	Record of work arrangements	
Ref.	RT9909	
Name	Line blockage form	
Ref.	RT3181	
Name		
Ref.		
Name		
Ref.		

Description of current condition

Part 2: This section details hazards associated with the environment and safety controls in place.
Permit holder to ensure they are satisfied with the measures detailed below.

2a: Emergency contacts

Working	Basingstoke SB	First Aider	WICC	Close call reports
01483 714898	01256 478758		08 573904	01908 723500
	07 50193		020 7979 3904	

page 2

S&T, Off-track and PWAY: Much clearer and an improvement on existing table. Easier to use.
 Asked for reworking to include "if time exceeds 45 seconds, job should be stopped".
 Questioned the addition of the last 10 seconds.
 Suggested addition of rows for more lines (ie up and down fast and slow)

Project team: Will address this at next stage

Work zone and lookout information now separated from hazards for greater clarity and to implement feedback from previous iteration

S&T, Off-track and PWAY: Much clearer, more useful.
 Requested creation of symbols for green zone method of control (safeguarded, fenced etc)

Project team: Will address this at next stage

2b: Calculating Sighting distances and escape times. Refer to your sighting distance tables.

	Time needed		+5 seconds	+5 seconds	+ 10	=	+ 10	=
	Stop work and down tools	Everyone to reach safe place						
UP line								
DOWN line								

If lookout checks both directions
 If working without lookout
 Appoint more lookouts as required
 +5 seconds each lookout

Calculate the escape time using your Sighting Distance Chart. Is sighting distance available equal to or more than total?
 NO
 YES → Proceed with work

2c: Safe System of Work zones. See map for more information.

	Safe zone	Start	End	Lookouts	Map symbols	Sighting distance	Escape time
1	Red zone	37m 76ch	43m 13ch	Single lookout – warning by whistle/horn, flag or touch.			
2							
3							
4							
5							

page 3

2d: Work hazards.
 See map for more information.

	Hazard	Start	End	Map symbols	Details
1	Trip or fall hazard				
2	Limited clearance	38m 01ch	41m 14ch		
3					
4					
5					
6					
7					
8					
9					
10					

page 4

S&T, Off-track and PWAY: Welcomed additional spaces for larger work teams and larger signature spaces than existing materials

S&T: Raised the question of maximum number of individuals a COSS should safely be asked to supervise.

Project team: Agreed a maximum number of staff to be identified (task specific), working on a basis of ten people. We will amend Permit accordingly. If more than maximum number of staff required, a second COSS and Permit must be assigned

Part 3: This section contains declarations that must be signed.
 It is your responsibility to ensure that everybody on the team understands the hazards involved with the work environment and the Safe System of Work. Each co-worker must sign below.

3a: The work team

Co-worker	John Jacob			
Contact No.	07967 668826			
Sentinel No.				
	Signature	Signature	Signature	Signature
Co-worker				
Contact No.				
Sentinel No.				
	Signature	Signature	Signature	Signature
Co-worker				
Contact No.				
Sentinel No.				
	Signature	Signature	Signature	Signature
Co-worker				
Contact No.				
Sentinel No.				
	Signature	Signature	Signature	Signature

page 5

S&T: Advised that if additional authority is required on a job which runs over time, authority is often given as a matter of course, without a real conversation about the risks. They felt the new Permit would address this.

S&T: Recommended COSS name not be pre-populated, but space left to be written in, as COSS often assigned only on the day of work.

Project team: Will consider as part of detailed process mapping

Part 4: Permit authorisation.
 This section must be signed by you and the Permit issuing authority, before you and the team enter the environment.

4: A acceptance of responsibility for Safe System of work on this job

Issuer of this Permit	Permit holder
Signature	John Jacob Signature
Date	Date
Time	Time

I confirm that all permit conditions specified are clearly understood and will be adhered to.

Section B: About the task

5a: Additional Certificates for the task.
 Permit holder to fill in the Issue number for each additional Certificate.

Are additional Certificates required for the task? No Yes

Certificate name	Reference no.	Issue no.
Certificate name	Reference no.	Issue no.
Certificate name	Reference no.	Issue no.
Certificate name	Reference no.	Issue no.
Certificate name	Reference no.	Issue no.

page 6

S&T: Suggested an additional space to feedback non job specific issues

Section C: Hand back

Part 6: This section is about hand back at the end of your work.

6a: Hand back of the work.

Has the work been completed as planned?

Yes Give details of the current status (optional)

No You must describe the current status of the job

Issues log

6b: Hand back of the work area.

Describe the current status of the work site

Name John Jacob Signature

I am handing back the work area and declare that I am satisfied it is in a safe condition.

Date Time

Name Signature

I declare that I have inspected the job and the job site has been left in a safe condition.

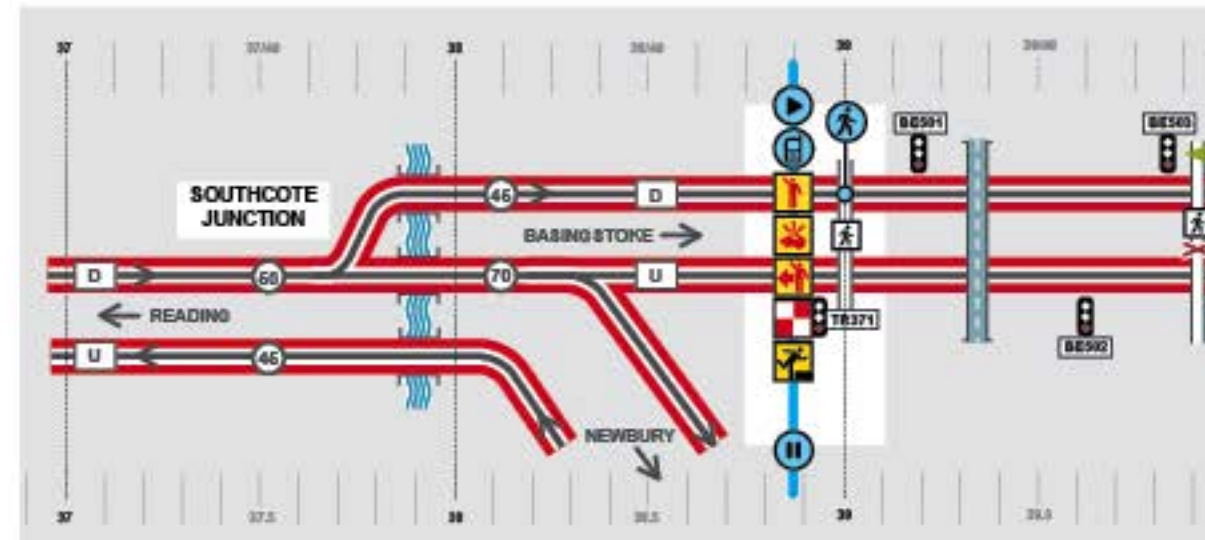
Date Time

Take a photo of the work site with your phone and text to 07515 623257



Where to work.

Start	29m 30ch	Location	Southcote Junction
End	33m 40ch	Postcode	RG30 3DS



S&T: Said type of signal not important.

Project team: Will devise generic symbol.

Physical design format

All staff commented that producing the pack in colour helped to alert them to important information.

All staff commented that the pack was easier to handle particularly liking the concertina approach and its pocket size

NB: map should not extend over more than three pages or too difficult to hold. In terms of being pocket size, staff trouser pockets were less deep than examples originally measured – format options will be considered at the next stage.

All staff supported the idea of waterproof paper for durability under weather and working conditions

All staff suggested pre-populating the information fields on the Permit as little as possible to facilitate local planning and risk assessment

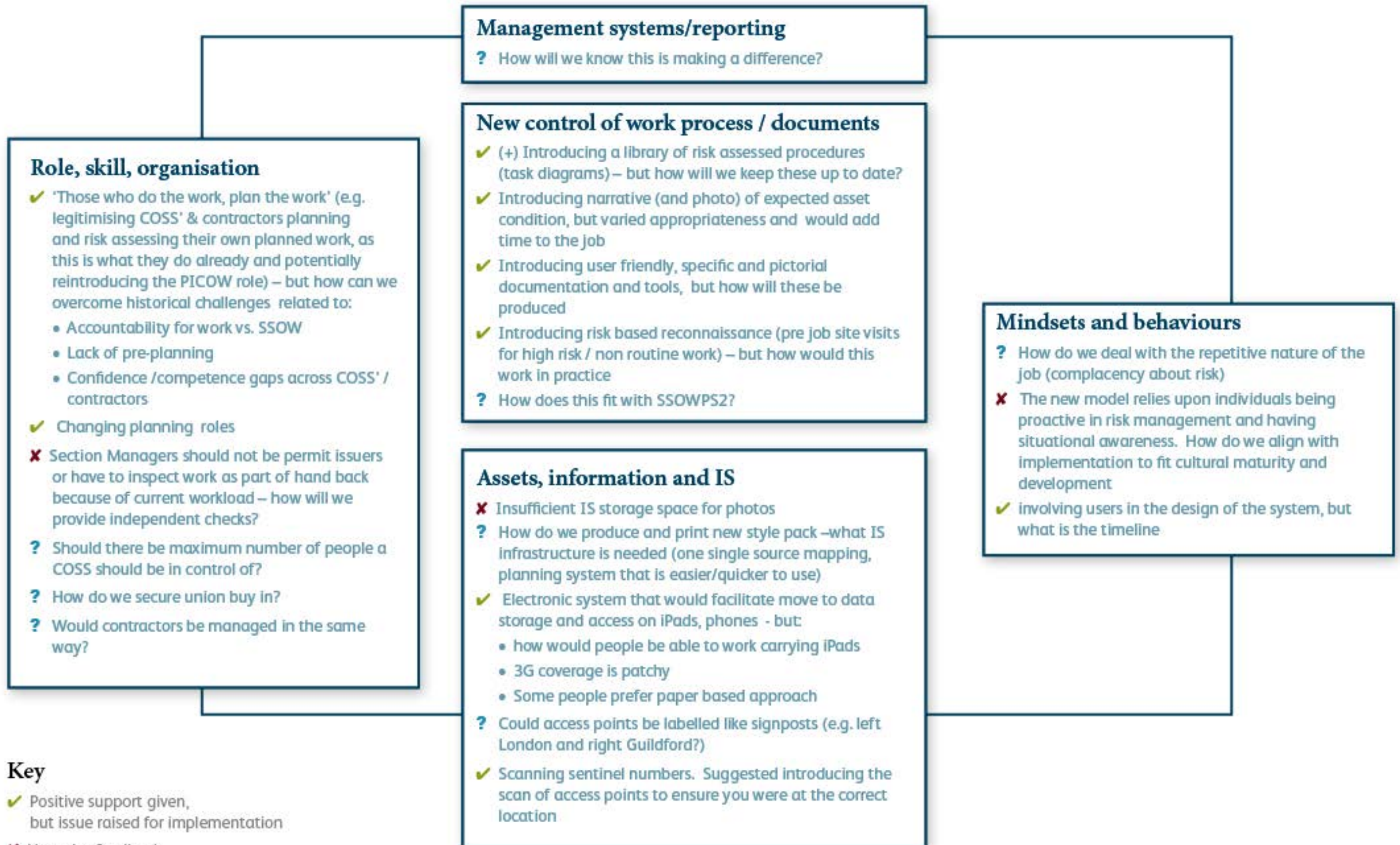
In the main, all staff expressed a preference for future SSWOPs to be electronic and compatible with displaying on iPads.

However,

- Some expressed a preference for paper documents;
- Issues were raised about whether everyone would be able to work iPads;
- Issues were raised about the practicality of working whilst carrying iPads;
- Issues were raised around patchy 3G coverage.

02 January 2013

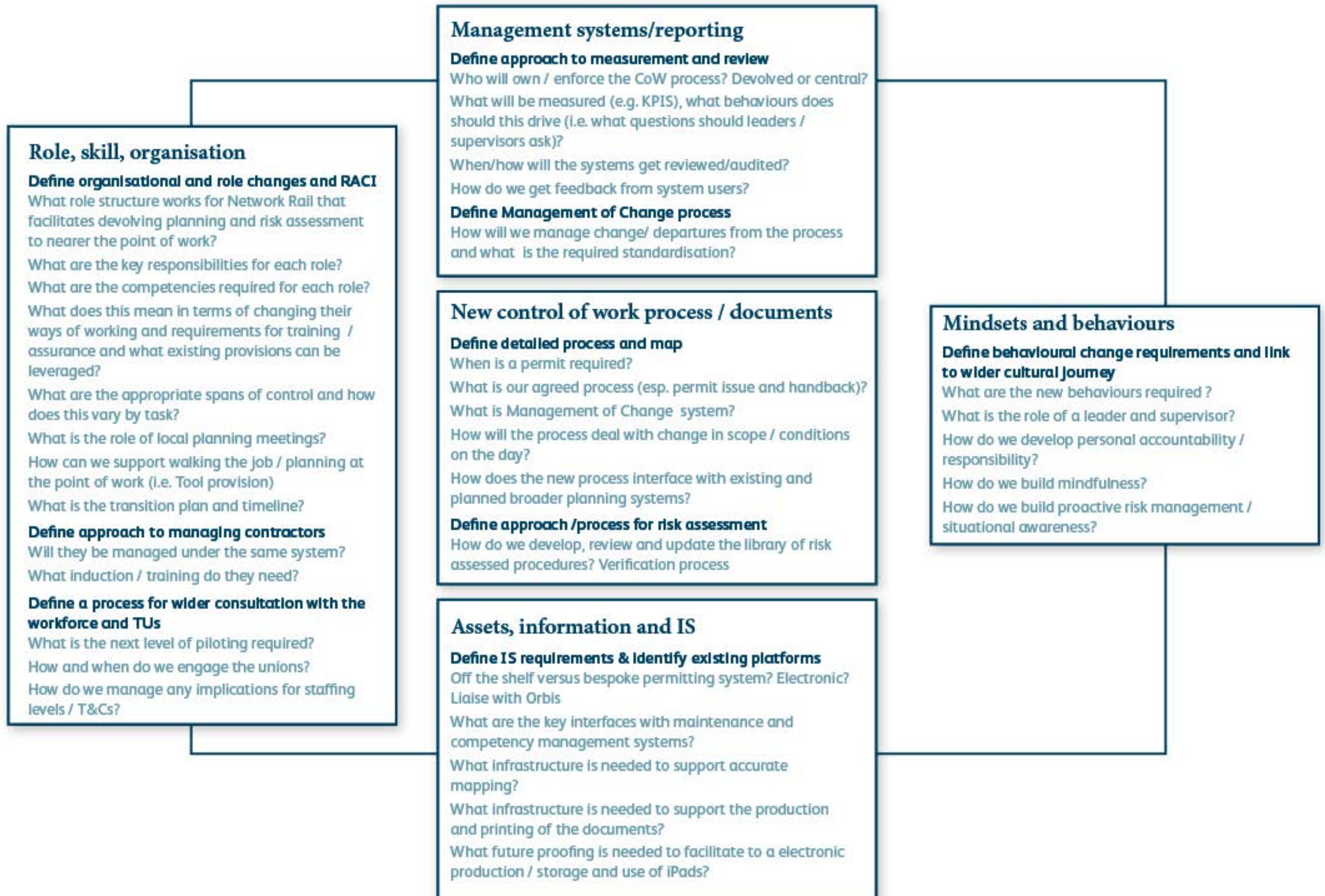
Issues and enablers for implementing a new CoW process identified during pilot



Key

- ✓ Positive support given, but issue raised for implementation
- ✗ Negative feedback
- ? Question raised

Key decisions to address raised issues and enable implementation



We plan to be ready to introduce elements of the new process and tools in April 2013

November–December 2012

Ongoing development of enablers: (LSR, Executive Rule Programme, Comms and culture change programme, Competency programme)

What does good look like?

Completed an external benchmarking to identify best practices in the CoW

Could this work in NR?

Completed a pilot in Wessex to test proof of concept (engaged on the proposed high level process and used the new documentation for selected jobs)

January – April 2013

As a result of what we have learned we plan to:

Define CoW key principles and minimum requirements

Conduct detailed process mapping

Define what is required to make it work

Identify requirements (IS, role, competency, culture, etc)

Conduct high level gap analysis compared with current practice

Work with the routes to identify how to implement

Further refine and develop graphic and format design

Conduct a wider pilot across routes to identify:

Views of the process / tools and steps required to implement

(‘why would this not work for you?’)

Re-thinking the safety information for staff

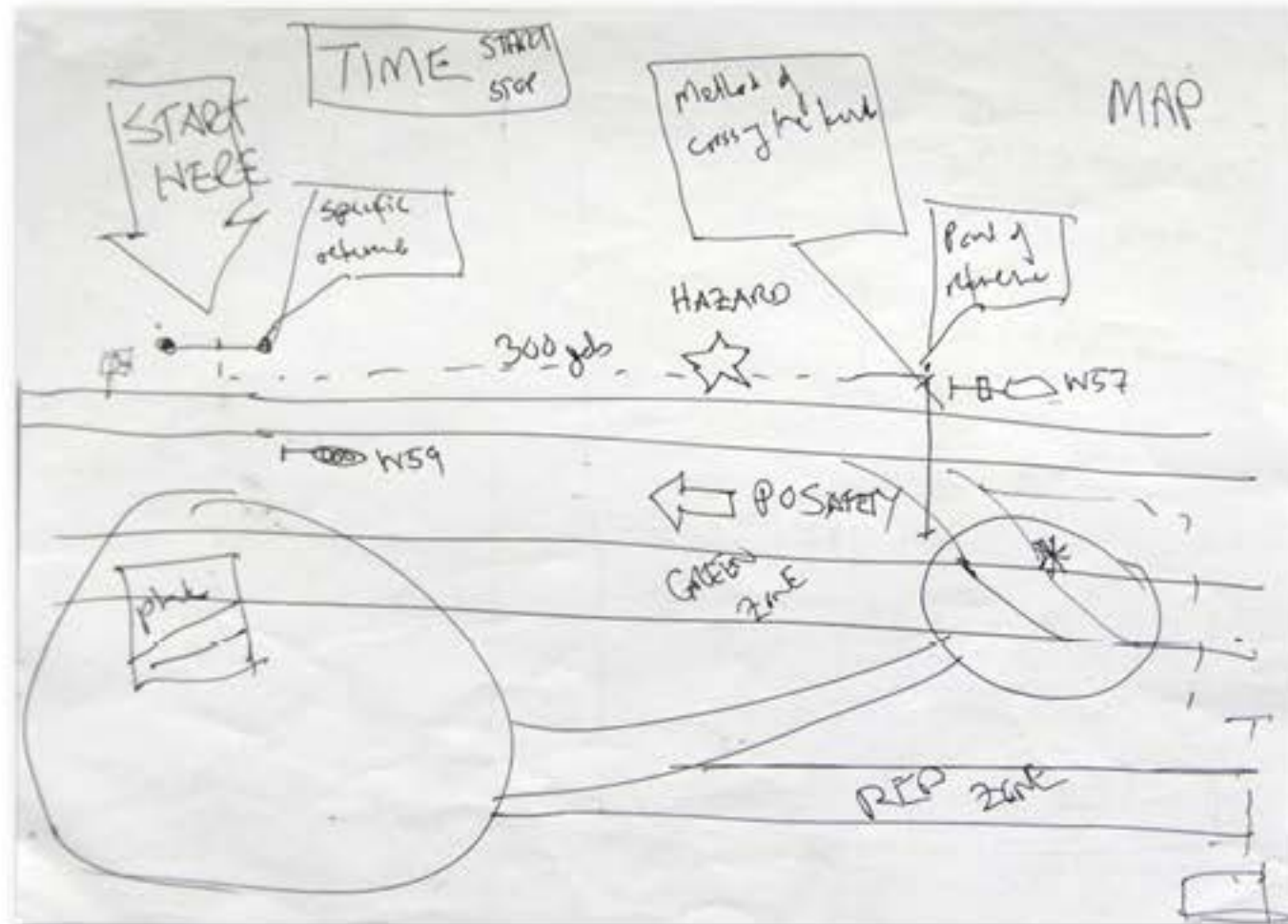
Brief: Visual translation of original SSOWP to produce 'at-a-glance', clear information considering staff with low reading ages.

Map, marking hazards, pertinent safety information and environmental landmarks to be central to the Pack.

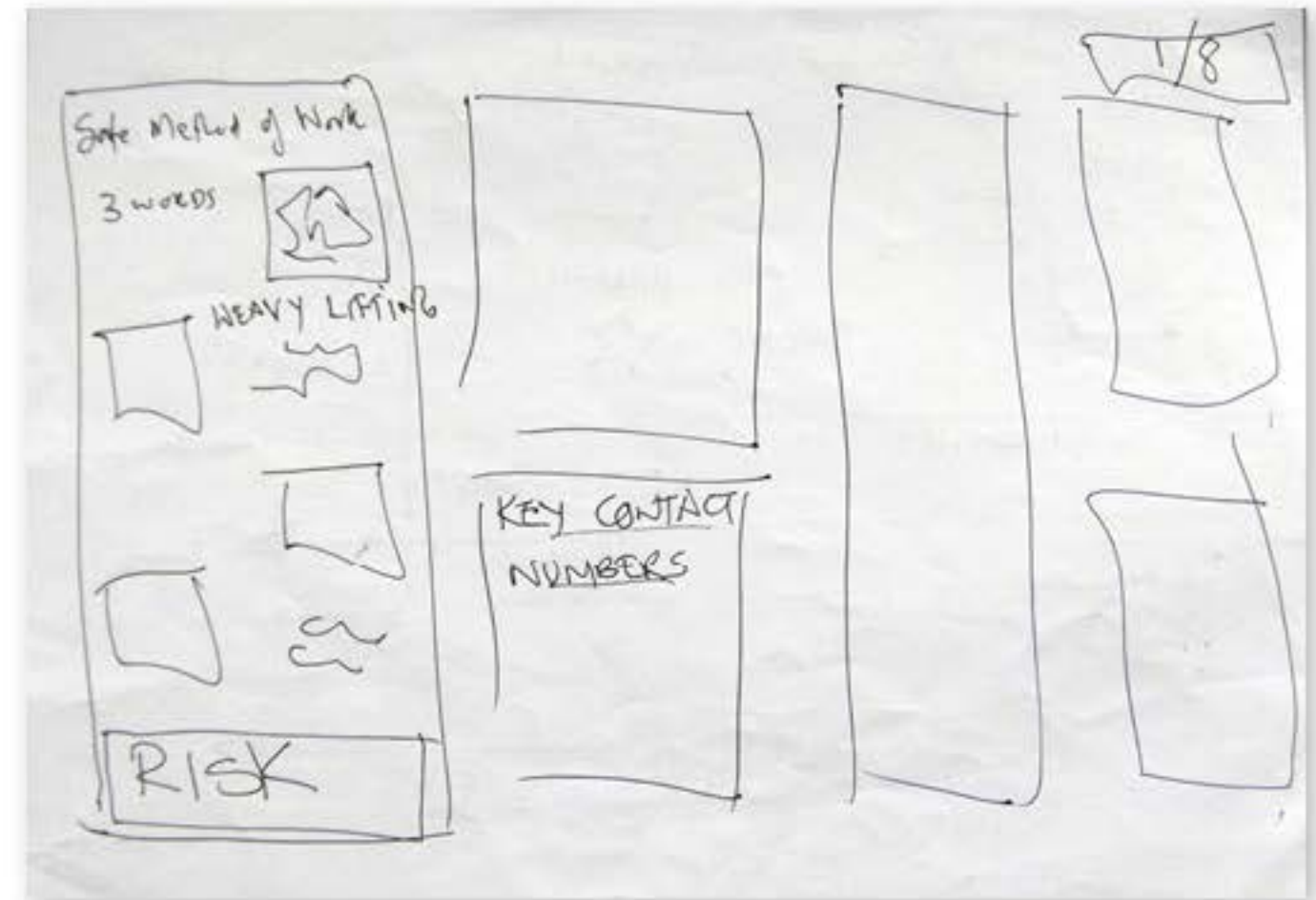
'Less is more': strip out non-vital information.

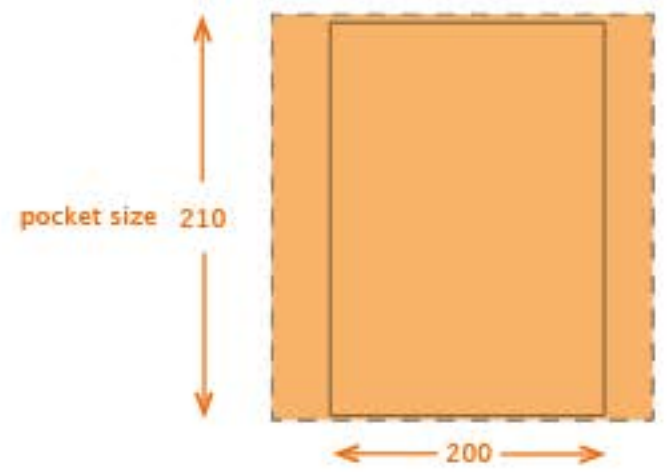
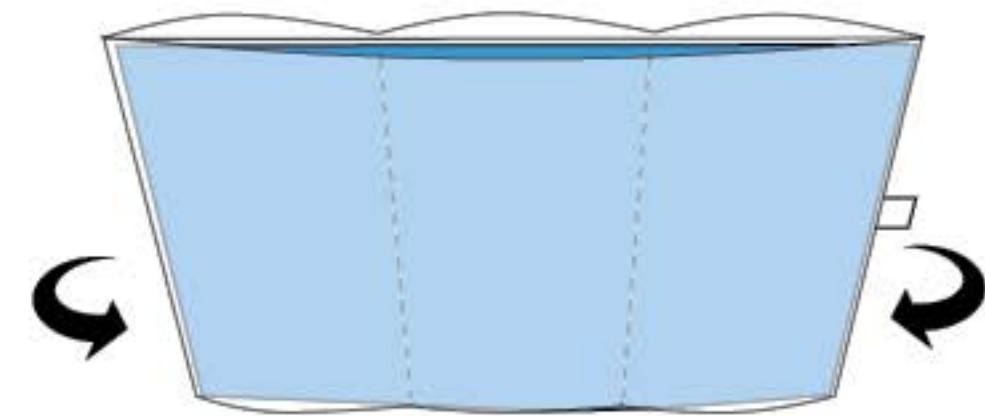
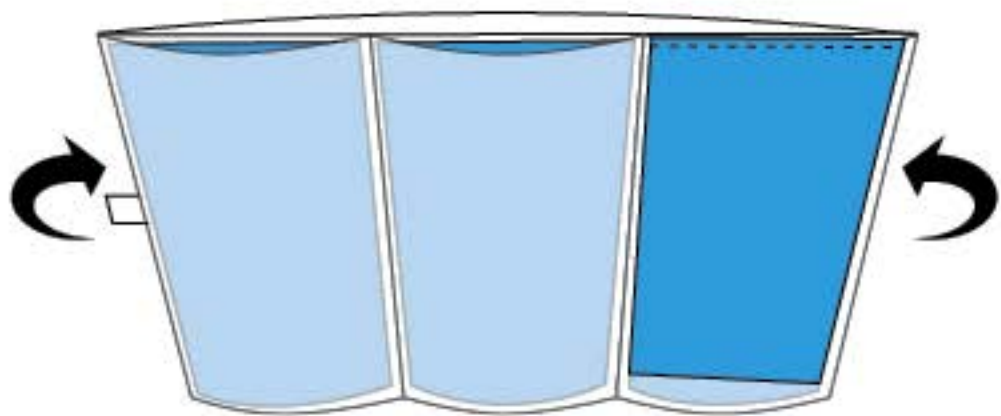
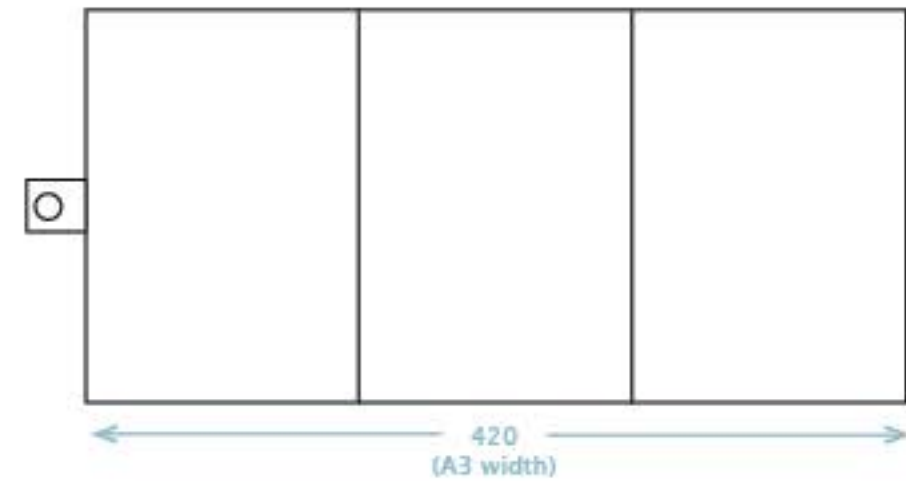
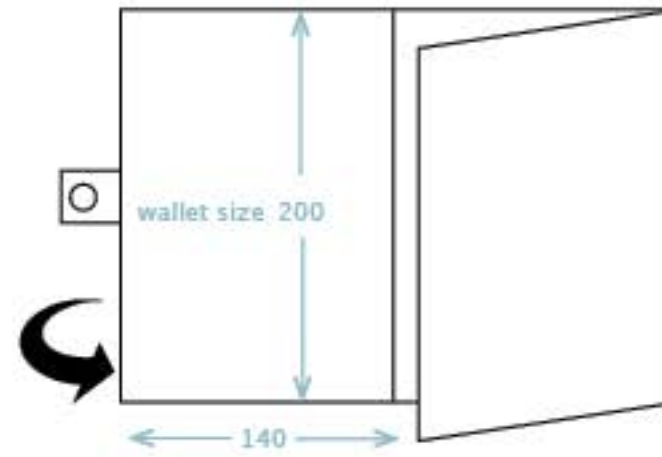
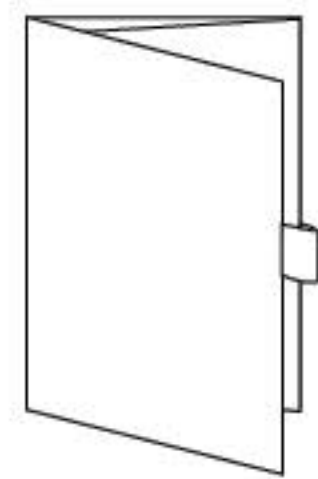
Pack to be given to all staff, to be carried in work zone.

Inclusion of work method diagrams with specific risks highlighted.



Original concept briefing.





kateparsons

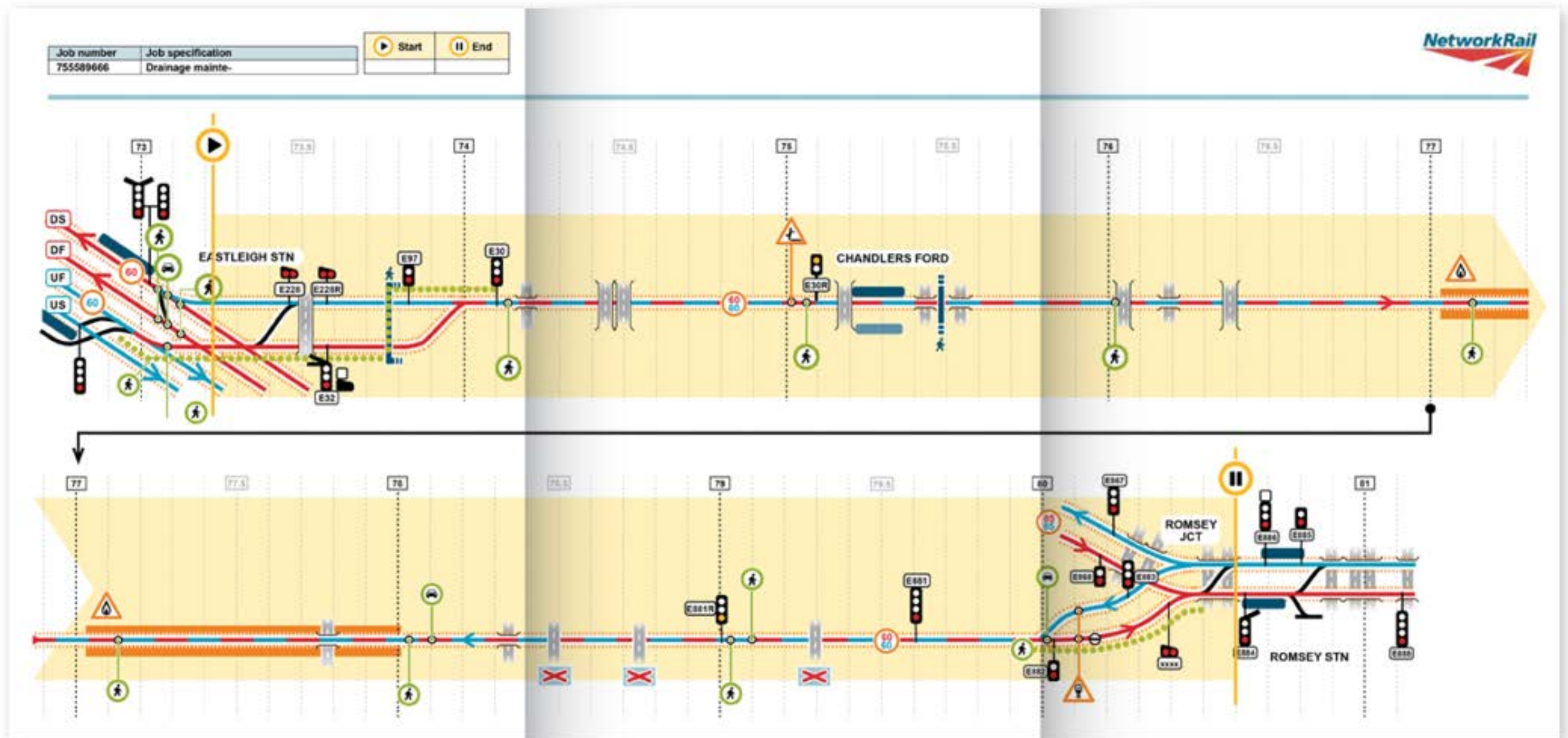
Initial physical design concepts: bespoke plastic wallet to fit pockets in PPE – 2-part carbon front sheet to be retained by admin staff.

1

First iteration

Side 1: map with hazard and work zone information. Development of hazard and work zone symbols. Work zone clearly highlighted.

Source mapping information from South West trains.



1

First iteration

Side 2: safety information.

Key safety information and hazards highlighted in orange

METHOD OF WORK

Remove clips attaching rails to sleepers on either side of the point to be cut (1)

Flame cut the rail (2) and remove section (3). Wear protective goggles and gloves.

Attach hydraulic stressing kit to either side of rail (4) and pull sections together (5)

Build mould (6). Seal mould using gas torch. Drop weld into mould (6). Wear protective goggles and gloves.

Grind weld (7) out using machine, then finish by hand. Wear protective goggles and gloves.

SAFETY FIRST!

Always wear high-viz clothing

Ensure you have all necessary protective gear with you before you go out.

Keep this Safety Pack on you at all times. It has been designed to fit into either your jacket or trouser pocket.

If you have any questions whilst out on a job, ask somebody senior. Do not 'take a chance' at any time.

Always wear high-viz clothing

Ensure you have all necessary protective gear with you before you go out.

Keep this Safety Pack on you at all times. It has been designed to fit into either your jacket or trouser pocket.

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Always wear high-viz clothing

Ensure you have all necessary protective gear with you before you go out.

KEY TO SAFETY SYMBOLS

Extended green awareness zone area with relevant sign

Extended green awareness zone area with relevant sign and red speed zone

Specific danger point, and specific awareness

bridge level crossing

bridge over pedestrian crossing

walking route

Limit of work area, with start and stop points

Bi-directional line, showing red speed danger zone and related speeds in both directions

Down line, showing red speed danger zone and related speed

Up line, showing red speed danger zone and related speed

Extended red danger zone area with relevant warning triangle

Extended red danger zone area with relevant warning triangle with red speed

JOB INFORMATION

This Safe System of Work pack gives you information on the job number attached below. You must look through this information pack before you start work, and sign to confirm its receipt.

Job number	Job Specification
7559963	Drainage maintenance

Start	End	Key co-workers	Role	Contact number	Role
28/03/2012	28/03/2012	John Smith	Engineer	020 33 6666556	Engineer
08:00h	16:00h	Stu Browning	Engineer	020 33 6666556	Engineer
73m 30ch	80m 40ch	Richard O'Brien	Engineer	020 33 6666556	Engineer
Issued to		James Smith	Engineer	020 33 6666556	Engineer
Stu Browning		Englebert Humpendik	Engineer	020 33 6666556	Engineer
Prepared by		John Smith	Engineer	020 33 6666556	Engineer
		Stu Browning	Engineer	020 33 6666556	Engineer
		Peter Rabbit			

SAFE WORKING AND EMERGENCY INFORMATION

COSS/IMA name	Contact number	Hazard	Symbol	Location	End	Detail
Tom Jenkins	07777 666656	Asbestos		75m 25ch		Signal casing
Emergency Contact	Contact number	Natural gas		75m 56ch	80m 42ch	Inhalation and possible explosion
Eastleigh signaller	020 33 6666556					
Romsey signaller	020 33 6666556					
First Aider	020 33 6666556					
WCC	020 33 6666556					
Close call reports	020 33 6666556					

This job sheet must be signed by you, and the above named COSS/IMA, and handed back to [person's office role] before you start work.

Staff name	Signature
Stuart Browning	
COSS/IMA Tom Jenkins	

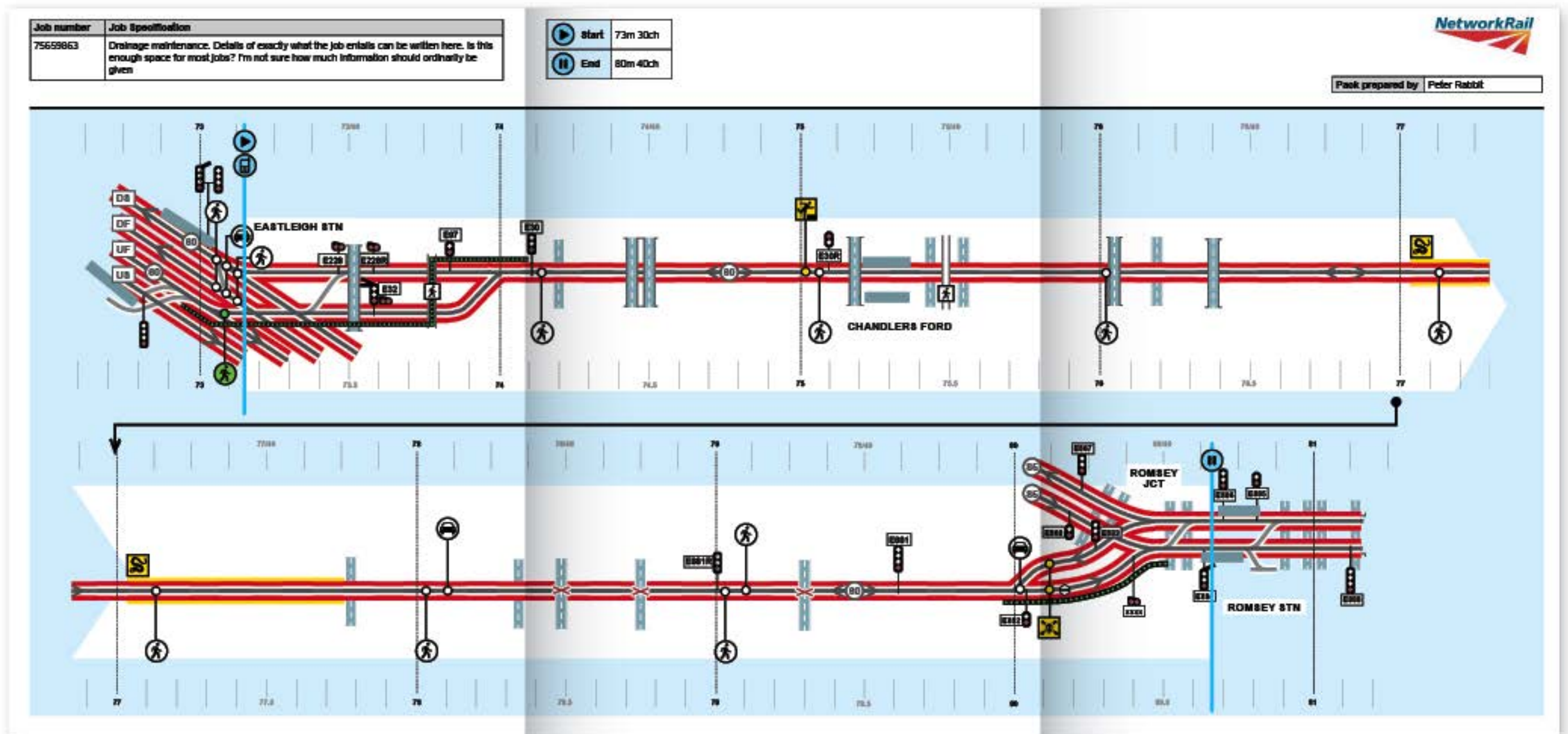
'Ikea style' step-by-step method of work diagram

2

Second iteration

Side 1: map with hazard and work zone information.

Amended and reduced colour-palette to make sure hazards instantly recognisable. Work area highlighted.



Second iteration

Side 2: safety information.

SAFETY FIRST! Keep this pack with you at all times while working

BASIC PPE

All staff on the line and on or near the line must wear at least the following PPE:

High visibility upper body clothing with reflective tape which complies with BS EN 471:2003 class 2 and Railway Group Standard GORR3279.

High visibility lower body clothing to BS EN 471:2003 class 1 and Railway Group Standard GORR3279.

A safety helmet which complies with BS EN 397:1995.

Safety footwear (which complies with BS EN ISO 20345:2004) that provides support to the ankle, has mid-sole protection and a protective toe cap. Steel or other conductive toe caps must be covered.

ELECTRICITY

Understanding electricity is complicated.

You can be killed by low or high voltage. It all depends on specific details such as the amount of current (amperes), whether your skin is moist or dry, and where the electricity enters and exits your body. Even a voltage as low as 50V can stop your heart, stop you breathing and cause muscle spasms.

It is dead simple to be safe around electricity. Always test for dead. When you're working around electricity always test for dead at your end of the job. Even if someone has already checked, check twice – electricity can kill in a moment.

PERSONAL

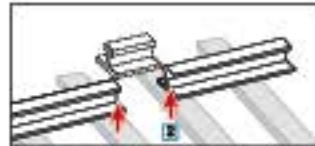
Skin cancer kills more people in the UK than in Australia. Getting painful sun burn just once every 2 years can triple your risk of getting serious types of skin cancer. Make sure you use sun protection with a high factor (minimum SPF15).

It is a criminal offence to be unfit through drugs or alcohol while doing work that is designated as safety critical. Network Rail has a zero tolerance approach to any drug and alcohol misuse which we monitor with regular drug and alcohol testing and strict disciplinary action. We believe drug and alcohol misuse is unacceptable under any work-related circumstance.

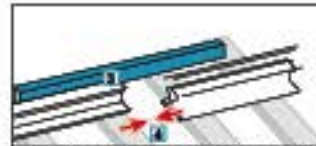
METHOD OF WORK



Remove clips attaching rails to sleepers on either side of the point to be cut.



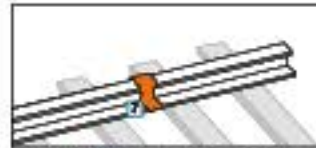
Flame cut the rail and remove section. Wear protective goggles and gloves.



Attach hydraulic stressing kit to either side of rail and pull sections together.



Build mould. Seal mould using gas torch. Drop weld into mould. Wear protective goggles and gloves.



Grind weld out using machine, then finish by hand. Wear protective goggles and gloves.

KEY TO SSOWP MAP SYMBOLS

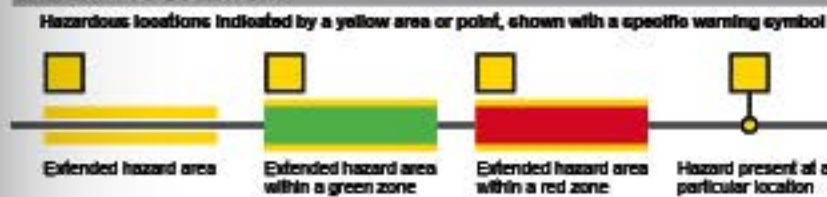
SSOWP SAFE WORK ZONES



WORK ZONE SAFETY SYMBOLS



HAZARDOUS LOCATIONS



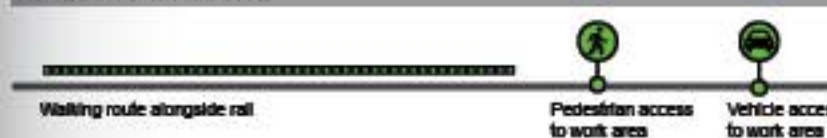
HAZARD WARNING SYMBOLS



NON-HAZARDOUS ROUTE INFORMATION



ACCESS TO WORK SITE



SAFE SYSTEM OF WORK PACK (SSOWP)



PACK ISSUED TO

Staff name	Signatures
Stu Browning	

This Safe System of Work pack gives you information on the job detailed below. You must look through this information pack before you start work.

If you have any questions or feel that you need more information in order to carry out the work you should speak to the named COSS/IWA, who is your first contact during the job. This sheet must be signed by you, and the COSS/IWA, and handed back to your Section Planner before you start work.

COSS/IWA ON THIS JOB

COSS/IWA name	Tel.	COSS/IWA Signatures
Tom Jenkins	07777 6666556	

WHAT THIS JOB IS

Job number	Job Specification
75659863	Drainage maintenance. Details of exactly what the job entails can be written here. Is this enough space for most jobs? I'm not sure how much information should ordinarily be given.

WHEN TO WORK

Start date	End date
28/03/2012	28/03/2012
Start time	End time
08:00h	16:00h

WHO YOU'RE WORKING WITH

Key co-workers	Contact tel.	Role	Signature
John Smith	07939 326356	Engineer	12345678
Stu Browning	07939 326356	Engineer	
Richard O'Brien	07939 326356	Engineer	
James Smith	07939 326356	Engineer	
Englebert Humberdink	07939 326356	Engineer	
John Smith	07939 326356	Engineer	
Stu Browning	07939 326356	Engineer	

WHERE TO WORK

Start	End
73m 30ch	80m 40ch

SAFE SYSTEM OF WORK ZONES / HAZARDS. See map for more information

Zone / Hazard	Lookouts	Detail	Start	End
Red	[Symbol]	Eastleigh tunnel	79m 56ch	80m 67ch
Green		Walking to Romsey Southampton Dock	42m 63ch	43m 22ch
Red barred		Only staff with permit allowed to work here	85m 57ch	86m 46ch
Injury from infrastructure		Low overhead clearance		

You may also use these numbers in an emergency or dangerous situation

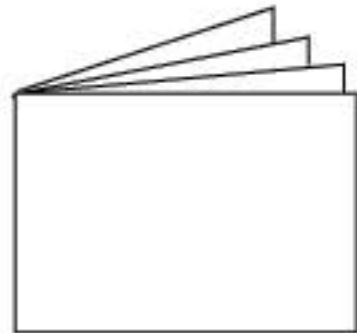
Eastleigh signaller	Romsey signaller	First Aider	WCC	Close call reports
020 33 666556	020 33 666556	020 33 666556	020 33 666556	020 33 666556

Pack prepared by Peter Rabbit

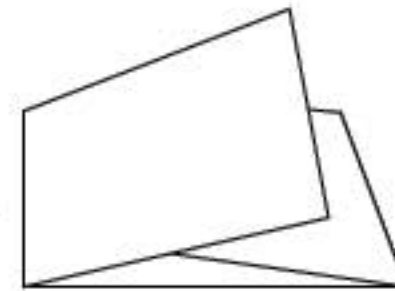
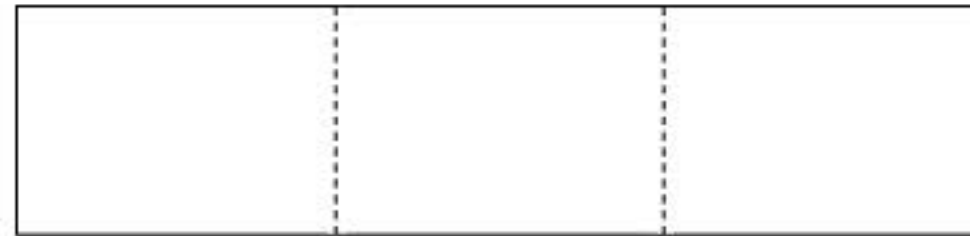
3

Third iteration

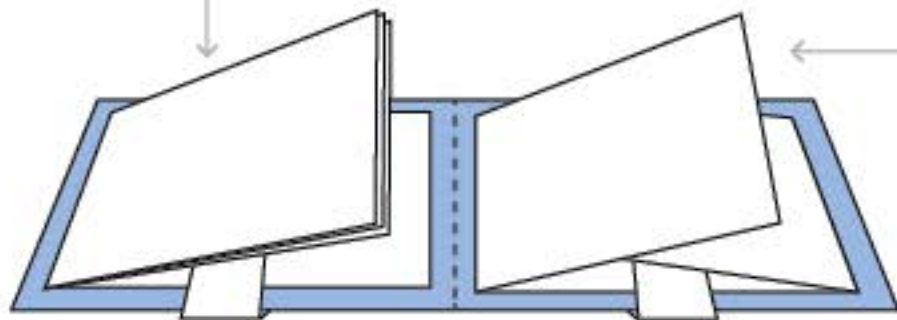
By the third iteration of the documentation, we had begun to consider the wider process of creating and implementing the SSOWP and identified the opportunity of moving to a permitting process. We moved to trialing two supporting tools / documentation namely, a permit to work in a secure environment to be used by the COSS and a Dynamic Risk Assessment (Team Pack) to be used by all working parties.



Permit. Leaflet format. For COSS only.

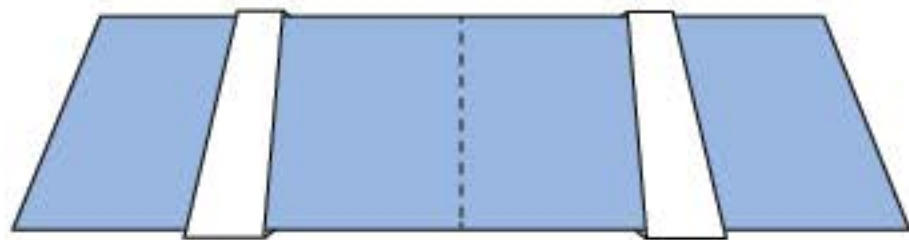


Team Pack: 6 page tri-fold.
Waterproof paper or plastic wallet as previous iteration.



COSS received folder with Permit and Team Pack (containing map).

Staff: Supported pocket size of map, and waterproof paper



kateparsons