



ProjectWise and Project Web

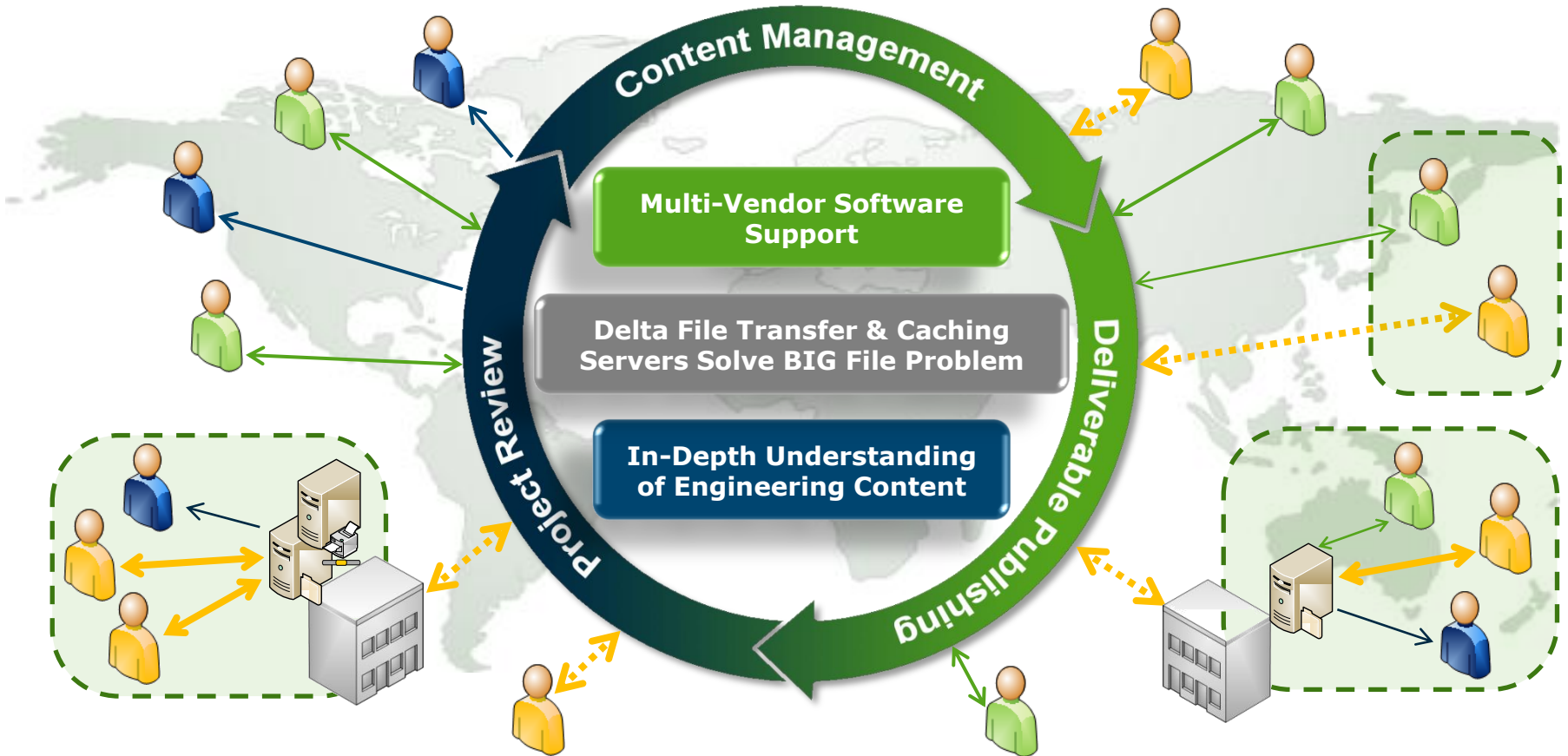
Rimantas Varanavicius
Product manager, ProjectWise Integration Server

Agenda

- Connecting people and information using ProjectWise and SharePoint
 - ProjectWise V8i and SharePoint 2010 platforms overview
 - Engineering Project Team Site scenario
- Other web access scenarios
 - Exchanging deliverables with external parties
 - Providing access to most up to date engineering data for facility maintenance engineers
- Overview of ProjectWise Web and Web View Servers recent releases
- Summary
- Q&A

Connecting people and information using ProjectWise and SharePoint

ProjectWise is a Project Team Collaboration Platform for the Design and Construction of Capital Projects



Bentley
ProjectWise V8i

Engineering Project Collaboration Platform



Microsoft®
SharePoint® 2010

Business Collaboration Platform

Microsoft SharePoint 2010



The Business Collaboration Platform for the Enterprise and the Web

- Connect and Empower People
- Cut Costs with a Unified Infrastructure
- Rapidly Respond to Business Needs



Bentley
ProjectWise V8i

Engineering Project Collaboration Platform



Microsoft®
SharePoint® 2010

Business Collaboration Platform

Key features

SharePoint 2010:

- EDMS
- Business Process Management
- Aggregating data from multiple sources
- Federated Search
- Business Intelligence data access
 - KPIs
 - Reports
- Portal solution
 - Social computing (wikis, blogs, personal sites)

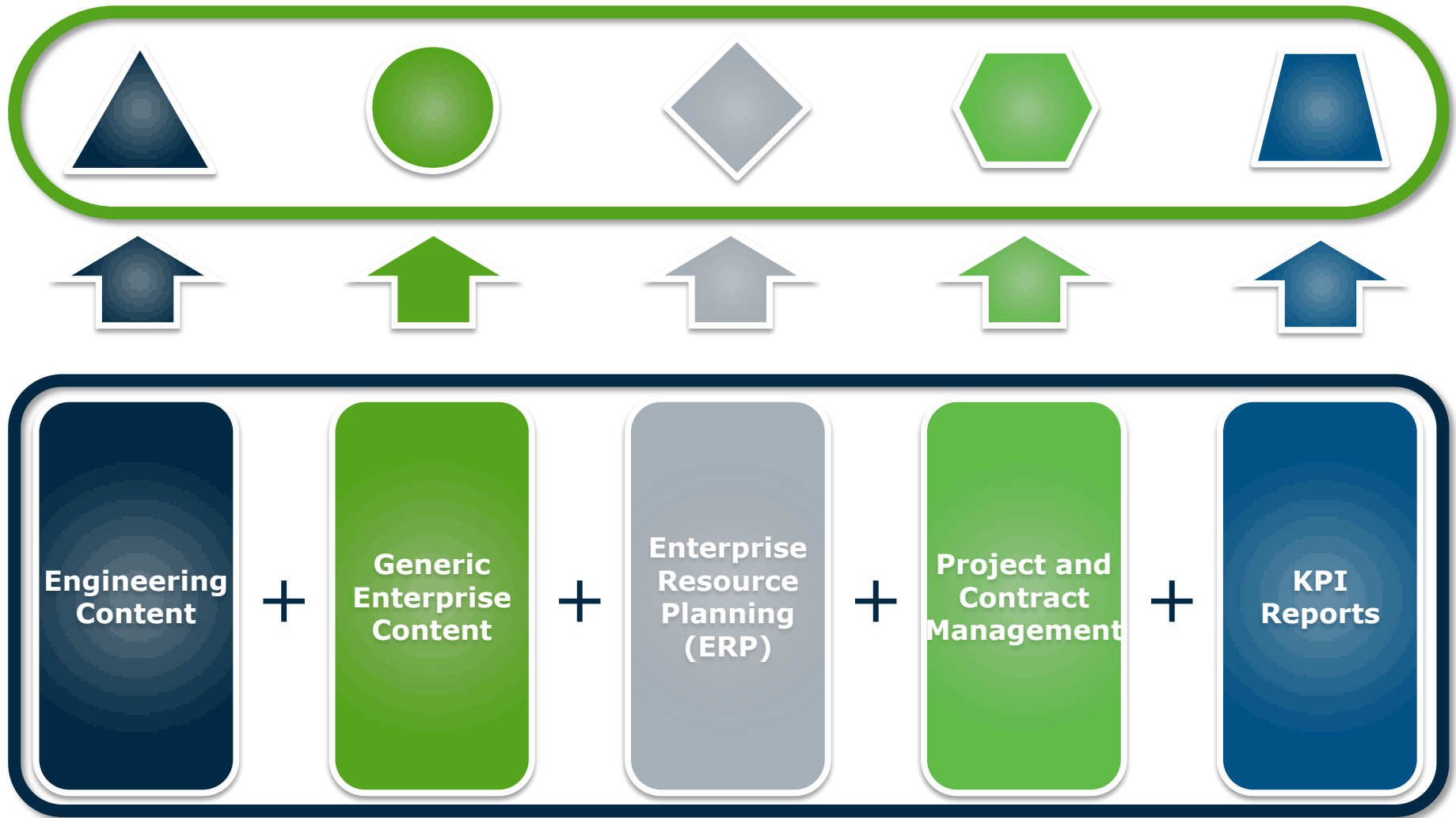
ProjectWise V8i :

- CAD application integration
- Reference file management
- CAD standards compliance
- Tools to solve the big file problem for distributed teams
 - Caching servers
 - Delta File Transfer
- Enabling dynamic review workflows
- Automated distribution of project deliverables

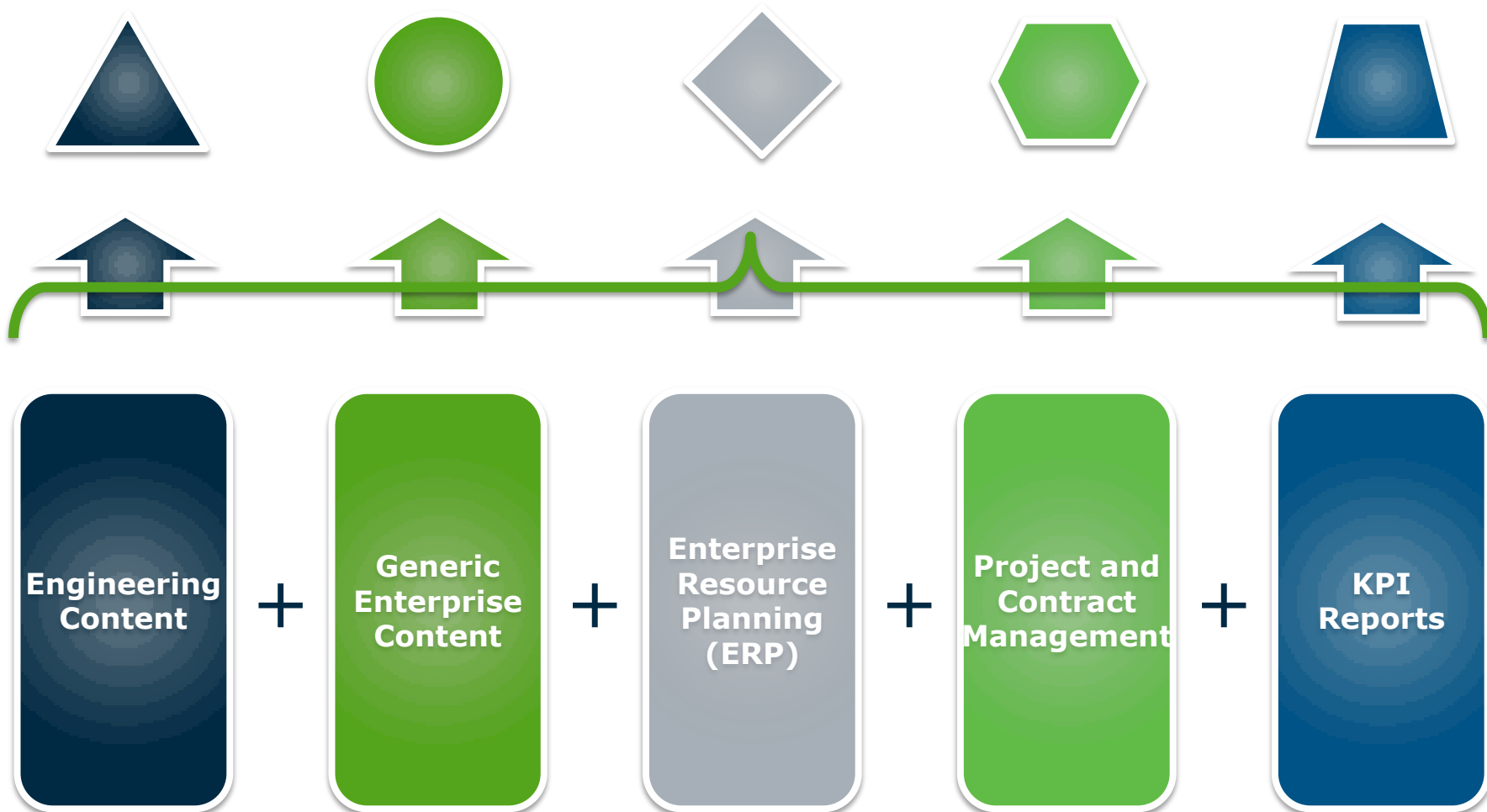
ProjectWise and SharePoint Together ...

- ProjectWise - Managed environment for AEC professionals to productively **Create, Manage, Distribute** and **Share** their work.
- SharePoint – A rich **Collaboration and Integration** framework.
- ProjectWise + SharePoint =
access to all critical project information in one place

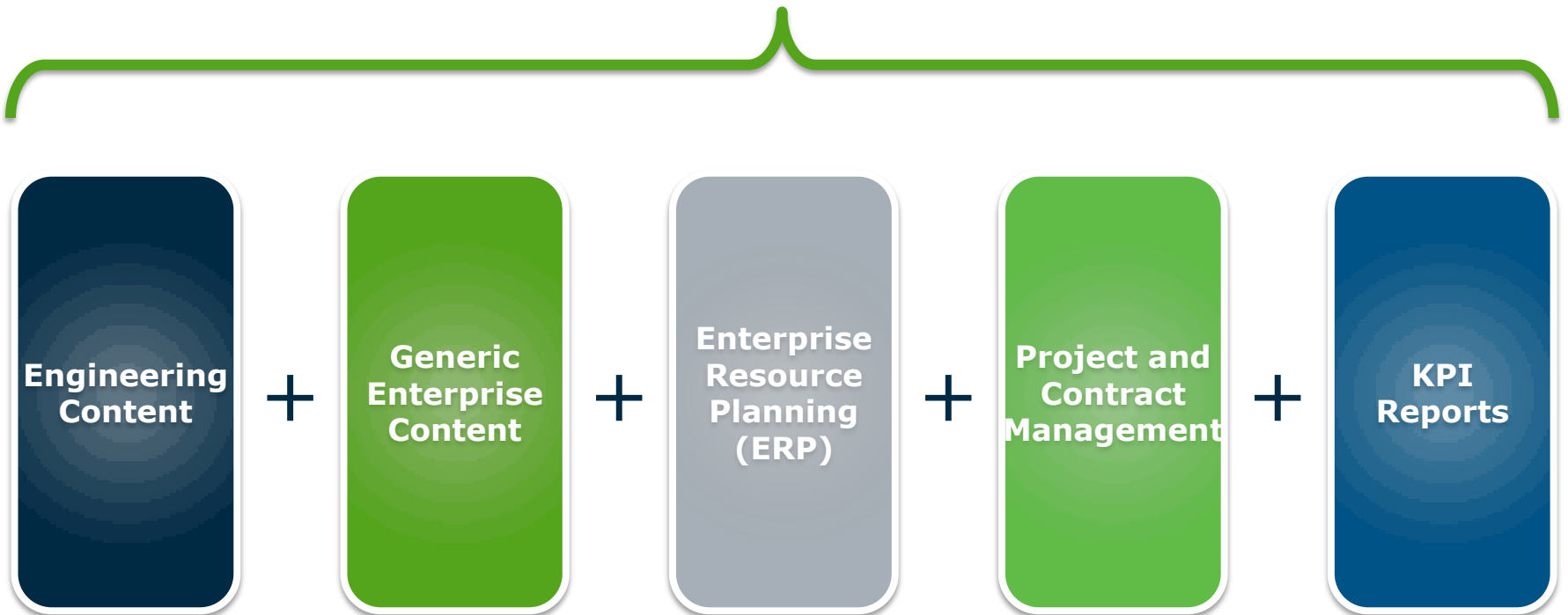
Multiple Information Sources



Need to Aggregate Data



...And Federate Access Via Single Portal



Document List

ProjectWise Content

Folder Document Tools Help

Interface: View:

pw:\winiliusvmexp:BETogether\Documents\C134 - Tottenham Court Road Station Design | 1 of 1

Name	State	Description
C134 - Tottenham Court Road Station.pdf	Approved	C134
C134-OVE-S-DMA-N105_C-00113.DGN	Pending Approval	C134-OVE-S-DMA-N105_C-00113.DGN
C134-OVE-S-DMA-N105_C-00213.DGN	Pending Approval	C134-OVE-S-DMA-N105_C-00213.DGN
C134-OVE-S-DMA-N105_C-20033.dgn	Pending Approval	C134-OVE-S-DMA-N105_C-20033.dgn
C134-OVE-S-DMA-N105_D-00114.DGN	Pending Approval	C134-OVE-S-DMA-N105_D-00114.DGN
C134-OVE-S-DMA-N105_D-00214.DGN	Pending Approval	C134-OVE-S-DMA-N105_D-00214.DGN
C134-OVE-S-DMA-N105_D-20034.dgn	Pending Approval	C134-OVE-S-DMA-N105_D-20034.dgn
Crossrail TCR 3D.jpg		
TCR_Project.i.dgn		

Folder Structure and Search

- ### ProjectWise Search
- Advanced Search
- ### ProjectWise Navigation
- winiliusvmexp:BETogether admin
- C134 - Tottenham Court Road Station Design
 - 1 - Reference Data
 - 2 - Application Data
 - A - Architect
 - AD - Deliverables
 - C - Civil Engineer
 - C2 - Geotechnical Engineering
 - C3 - Hydraulic Engineer
 - C4 - Tunnelling
 - D - Drainage, Highways Engineer
 - E - Electrical Engineer
 - F - Facilities Manager
 - G - Geographical and Land Surveyor
 - H - Heating and Ventilation Designer
 - I - Interior Designer
 - J - Railway Consents
 - L - Landscape Architect
 - M - Mechanical Engineer
 - P - Public Health Engineer
 - R - Rail Engineer
 - R1 - Rolling Stock
 - R2 - Signalling
 - R3 - Telecommunications and SCADA
 - R4 - Track
 - R5 - Logistics
 - R6 - OHLE

Document Properties

ProjectWise Properties

General Document References Audit Trail

Document

Document Name	C134 - Tottenham Court Road Station.pdf
Document Description	C134
Version	
Sequence	0
Workflow	Default Workflow
State	Approved
Application	Acrobat PDF
Department	<none>
Status	Checked In
Node	
Out To	

Save

- Recycle Bin
- All Site Content

ProjectWise Content

Folder	Document	Tools	Help
pw:\vilniusvmekxp:BETogether\Documents\C134 - Tottenham Court Road Station Design			
	Interface:		View:
1 of 1			
Name	State	Description	
C134 - Tottenham Court Road Station.pdf	Approved	C134	
C134-OVE-S-DMA-N105_C-00113.DGN	Pending Approval	C134-OVE-S-DMA-N105_C-00113.DGN	
C134-OVE-S-DMA-N105_C-00213.DGN	Pending Approval	C134-OVE-S-DMA-N105_C-00213.DGN	
C134-OVE-S-DMA-N105_C-20033.dgn		C134-OVE-S-DMA-N105_C-20033.dgn	
C134-OVE-S-DMA-N105_D-00114.DGN		C134-OVE-S-DMA-N105_D-00114.DGN	
C134-OVE-S-DMA-N105_D-00214.DGN		C134-OVE-S-DMA-N105_D-00214.DGN	
C134-OVE-S-DMA-N105_D-20034.dgn		C134-OVE-S-DMA-N105_D-20034.dgn	
Crossrail TCR 3D.jpg		TCR 3D.jpg	
TCR_Project.i.dgn		TCR_Project.i.dgn	

- New...
- Upload...
- New Version
- Open
- Open as Read-Only
- View**
- MarkupView
- Design Compare...
- Check Out
- Check In
- Free
- Copy Out
- Purge Local Copy
- Export...
- Import
- Download...
- Move...
- Delete
- Change State
- Copy Link(s) to Clipboard
- Document Code...
- Properties

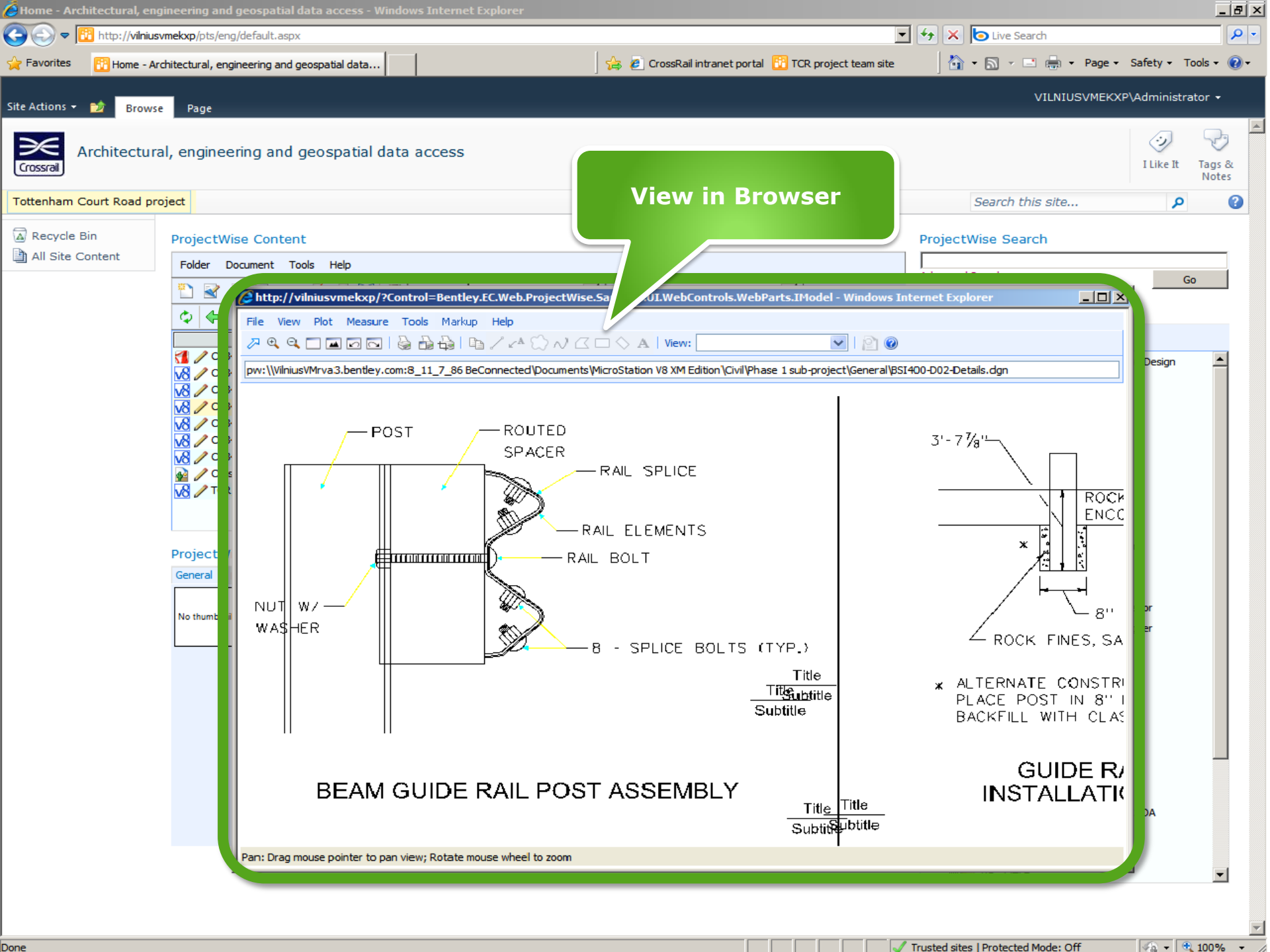
View CAD File

ProjectWise Search

Advanced Search

ProjectWise Navigation

- vilniusvmekxp:BETogether admin
- C134 - Tottenham Court Road Station Design
 - 1 - Reference Data
 - 2 - Application Data
 - A - Architect
 - AD - Deliverables
 - C - Civil Engineer
 - C2 - Geotechnical Engineering
 - C3 - Hydraulic Engineer
 - C4 - Tunnelling
 - D - Drainage, Highways Engineer
 - E - Electrical Engineer
 - F - Facilities Manager
 - G - Geographical and Land Surveyor
 - H - Heating and Ventilation Designer
 - I - Interior Designer
 - J - Railway Consents
 - L - Landscape Architect
 - M - Mechanical Engineer
 - P - Public Health Engineer
 - R - Rail Engineer
 - R1 - Rolling Stock
 - R2 - Signalling
 - R3 - Telecommunications and SCADA
 - R4 - Track
 - R5 - Logistics
 - R6 - OHLE



View in Browser

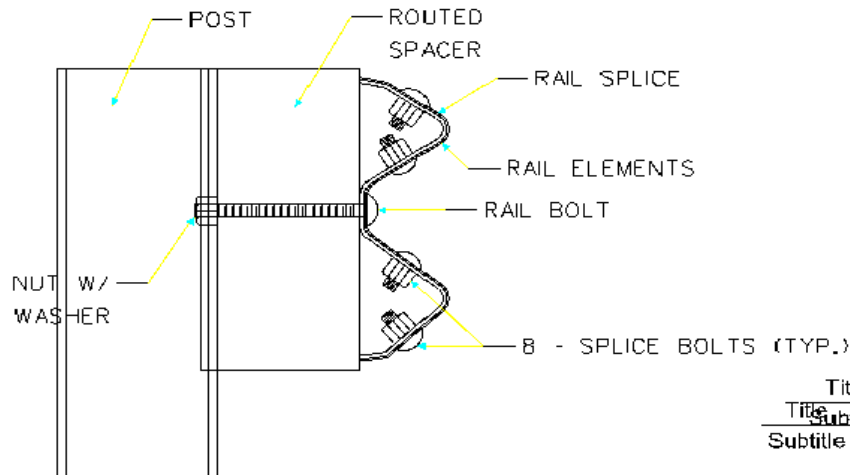
ProjectWise Content

Folder Document Tools Help

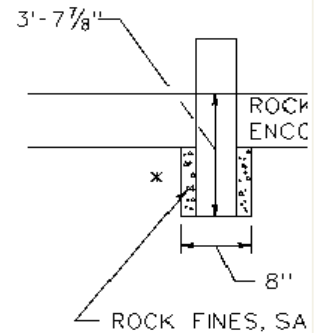
http://vilniusvmekxp/?Control=Bentley.EC.Web.ProjectWise.Sa...OL.WebControls.WebParts.IModel - Windows Internet Explorer

File View Plot Measure Tools Markup Help

pw:\\vilniusMrva3.bentley.com:8_11_7_86 BeConnected\Documents\MicroStation V8 XM Edition\Civil\Phase 1 sub-project\General\BSI400-D02-Details.dgn



BEAM GUIDE RAIL POST ASSEMBLY



* ALTERNATE CONSTR PLACE POST IN 8" BACKFILL WITH CLAS

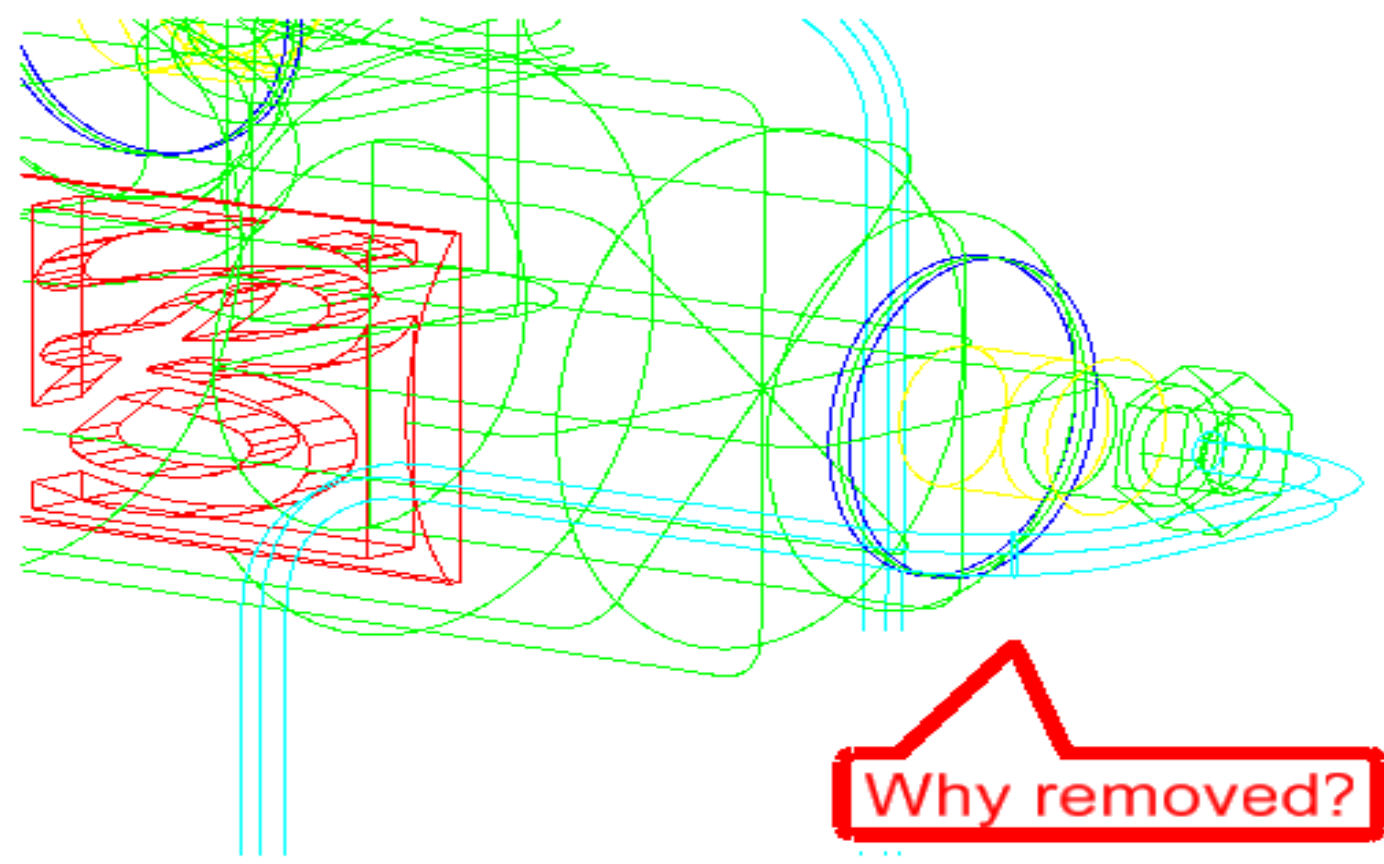
GUIDE RAIL INSTALLATION

Pan: Drag mouse pointer to pan view; Rotate mouse wheel to zoom

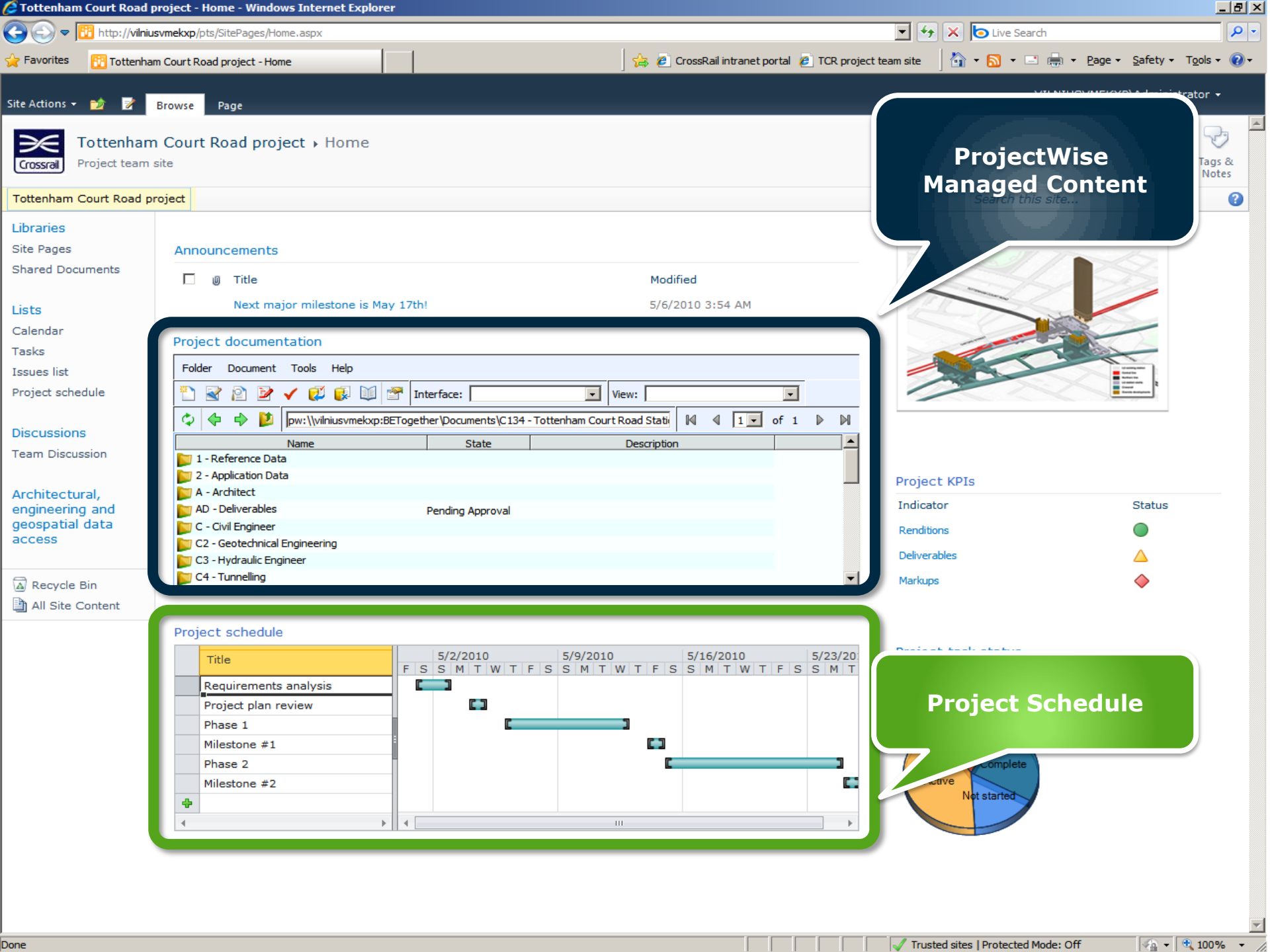
File View Plot Measure Tools Markup Help

View: [dropdown menu]

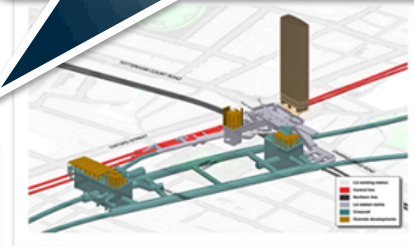
pw:\\WilniusVMrva3.bentley.com:8_11_7_86 BeConnected\Documents\MicroStation V8 XM Edition\Civil\Phase 1 sub-project\General\BSI400



Why removed?



ProjectWise Managed Content



Project KPIs

Indicator	Status
Renditions	●
Deliverables	▲
Markups	◆

Project Schedule

Project documentation

Folder Document Tools Help

Interface: [] View: []

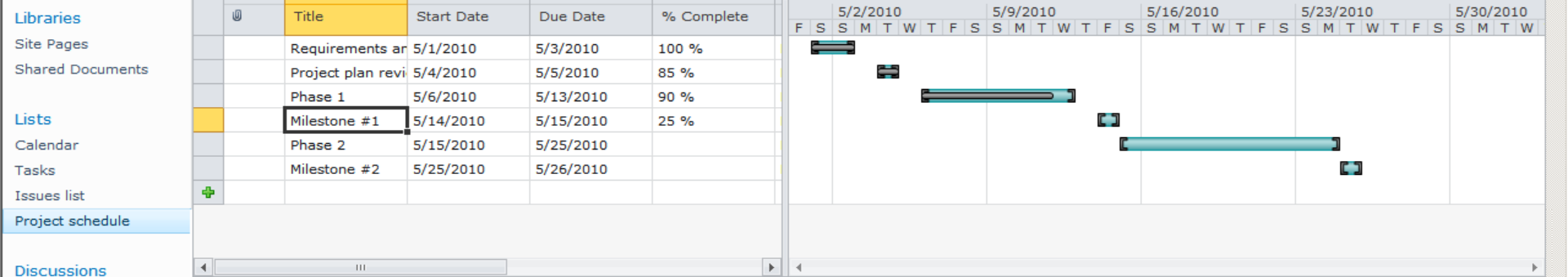
pw: \\vilniusvmekxp:BETogether\Documents\C134 - Tottenham Court Road Stati

Name	State	Description
1 - Reference Data		
2 - Application Data		
A - Architect		
AD - Deliverables	Pending Approval	
C - Civil Engineer		
C2 - Geotechnical Engineering		
C3 - Hydraulic Engineer		
C4 - Tunnelling		

Project schedule

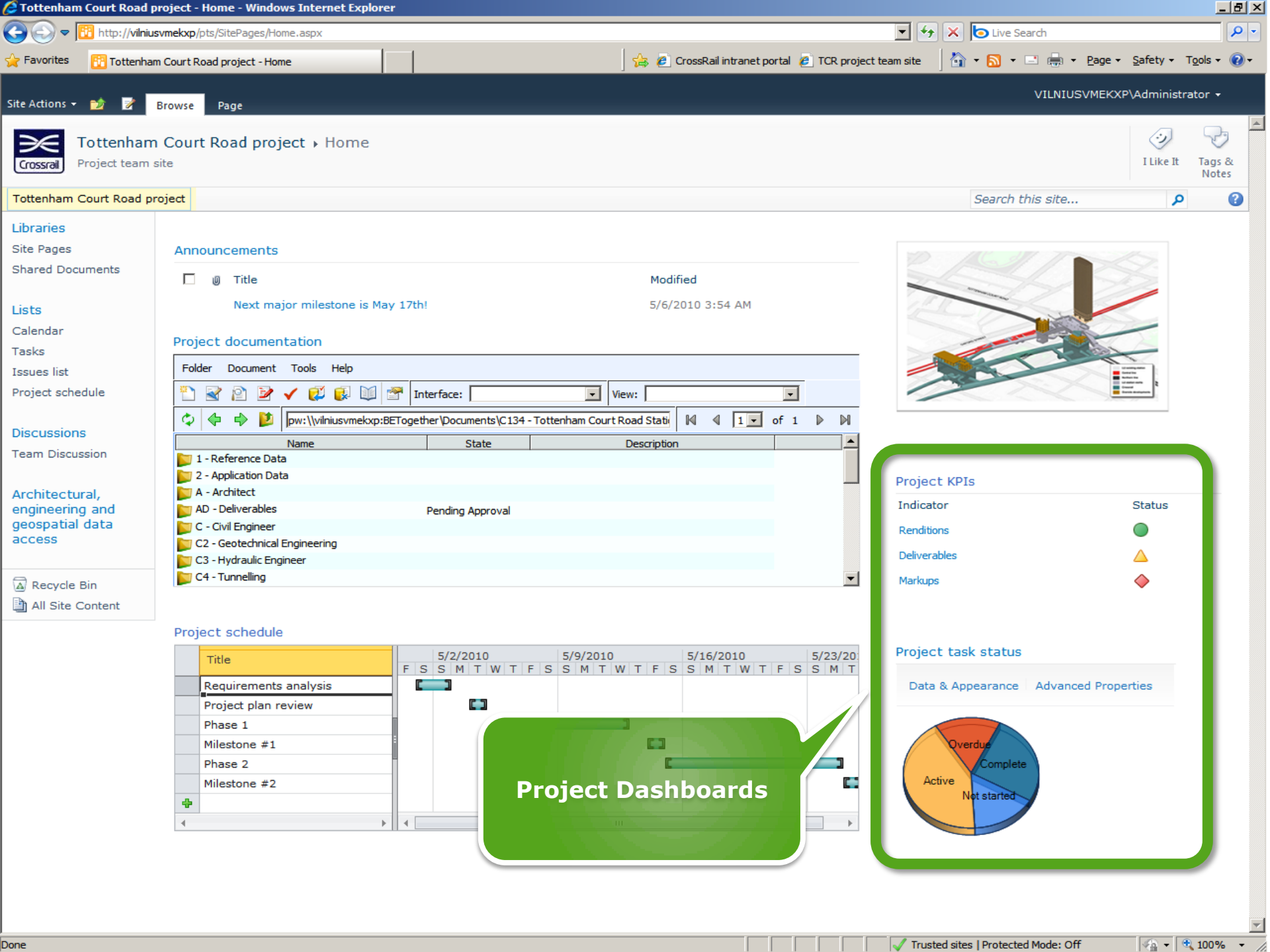
Title	5/2/2010				5/9/2010				5/16/2010				5/23/2010						
	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T
Requirements analysis	█																		
Project plan review				█															
Phase 1					█														
Milestone #1																			
Phase 2																			
Milestone #2																			





<input type="checkbox"/>	Title	Start Date	Due Date	% Complete	Task Status	Priority	Predecessors	<input type="checkbox"/> Assigned To
<input type="checkbox"/>	Requirements analysis	5/1/2010	5/3/2010	100 %	Not Started	(2) Normal		
<input type="checkbox"/>	Project plan review	5/4/2010	5/5/2010	85 %	Not Started	(2) Normal		
<input type="checkbox"/>	Phase 1	5/6/2010	5/13/2010	90 %	Not Started	(2) Normal		
<input type="checkbox"/>	Milestone #1	5/14/2010	5/15/2010	25 %	Not Started	(2) Normal		
<input type="checkbox"/>	Phase 2	5/15/2010	5/25/2010		Not Started	(2) Normal		
<input type="checkbox"/>	Milestone #2	5/25/2010	5/26/2010		Not Started	(2) Normal		

+ Add new item



Announcements

Title	Modified
Next major milestone is May 17th!	5/6/2010 3:54 AM

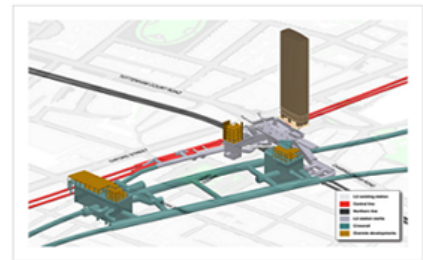
Project documentation

Folder	Document	Tools	Help
pw: \\vilniusvmekxp:BETogether\Documents\C134 - Tottenham Court Stati			
Name	State	Description	
1 - Reference Data			
2 - Application Data			
A - Architect			
AD - Deliverables	Pending Approval		
C - Civil Engineer			
C2 - Geotechnical Engineering			
C3 - Hydraulic Engineer			
C4 - Tunnelling			

Project schedule

Title	5/2/2010	5/9/2010	5/16/2010	5/23/2010
	F S S M T W T F S	S M T W T F S	S M T W T F S	S M T
Requirements analysis	█			
Project plan review		█		
Phase 1			█	
Milestone #1			█	
Phase 2				█
Milestone #2				█

Project Dashboards



Project KPIs

Indicator	Status
Renditions	●
Deliverables	▲
Markups	◆

Project task status



Tottenham Court Road project > Tasks > All Tasks >

Use the Tasks list to keep track of work that you or your team needs to complete.

I Like It | Tags & Notes

Tottenham Court Road project Search this site...

- Libraries
- Site Pages
- Shared Documents
- Lists
- Calendar
- Tasks**
- Issues list
- Project schedule
- Discussions
- Team Discussion
- Architectural, engineering and geospatial data access
- Recycle Bin
- All Site Content

<input type="checkbox"/>	Type	Title	Assigned To	Status	Priority	Due Date	% Complete	Predecessors
<input type="checkbox"/>		Request for additional info	VILNIUSVMEKXP\Administrator	In Progress	(2) Normal	5/10/2010	30 %	
<input type="checkbox"/>		Respond to change request		Completed	(2) Normal	5/5/2010	100 %	
<input type="checkbox"/>		Package and get approved Milestone #1 deliverables	VILNIUSVMEKXP\Administrator	Waiting on someone else	(2) Normal	5/16/2010		
<input type="checkbox"/>		Prepare estimates for Phase 1 NEW		In Progress	(2) Normal		85 %	
<input type="checkbox"/>		Review, discuss and approve estimates for Phase1 NEW		Not Started	(2) Normal	5/17/2010		Prepare estimates for Phase 1
<input type="checkbox"/>		Check RFI status NEW		Not Started	(2) Normal	5/21/2010		Request for additional info
<input type="checkbox"/>		Review project progress with Subs NEW		In Progress	(2) Normal	5/19/2010	65 %	
<input type="checkbox"/>		Update team site announcements NEW		Completed	(2) Normal	5/10/2010	100 %	

[+ Add new item](#)

ProjectWise Content

Folder Document Tools Help

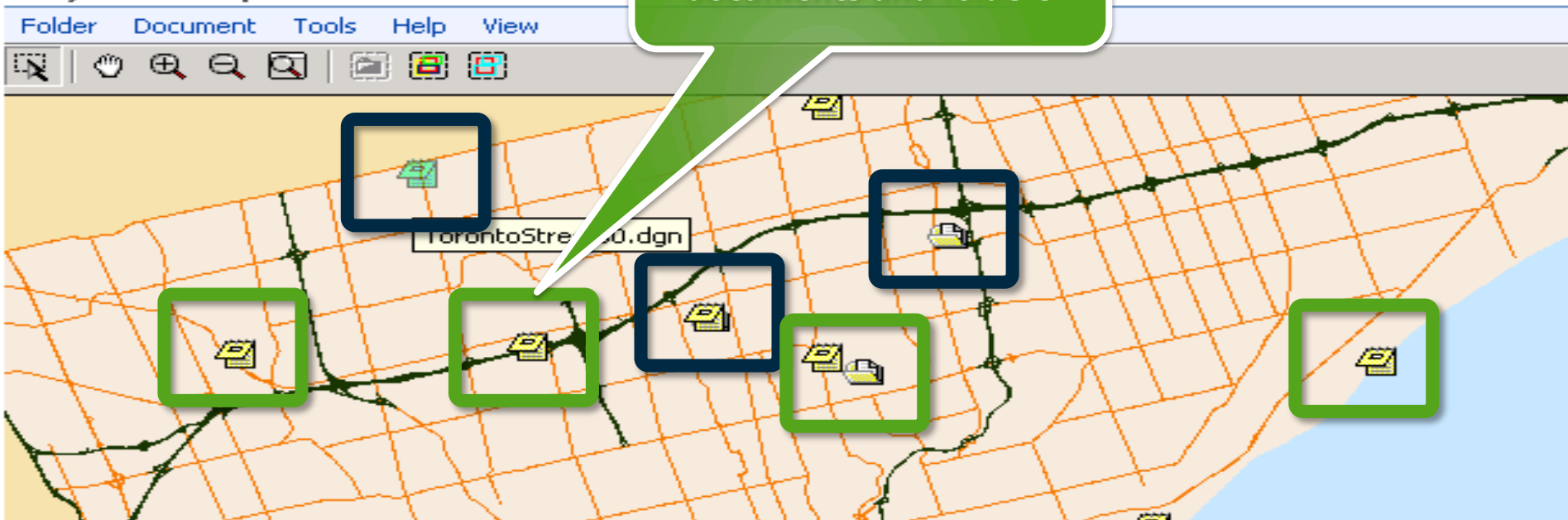
View: []

pw:\\vlh64b2K8esx1:EA_simcorp27\Documents\GEO\toronto\ 1 of 1

Name	Description	File Name
aamsplsh.bmp	aamsplsh	aamsplsh.bmp
arrowright.ico	arrowright	arrowright.ico
TorontoStreets0.dgn	TorontoStreets0	TorontoStreets0...
TorontoStreets1.dgn	TorontoStreets1	TorontoStreets1...
TorontoStreets2.dgn	TorontoStreets2	TorontoStreets2...
TorontoStreets3.dgn	TorontoStreets3	TorontoStreets3...
TorontoStreets4.dgn	TorontoStreets4	TorontoStreets4...
TorontoStreets5.dgn	TorontoStreets5	TorontoStreets5...
TorontoStreets6.dgn	TorontoStreets6	TorontoStreets6...
TorontoStreets7.dgn	TorontoStreets7	TorontoStreets7...
TorontoStreets8.dgn	TorontoStreets8	TorontoStreets8...

Geospatially located documents and folders

ProjectWise Spatial Content



Select: Click to select an element; Drag mouse pointer to select area

ProjectWise and SharePoint Together ...

- ProjectWise:
 - Reference file management
 - CAD standards assurance
 - Title block synchronization
 - File storage distribution and access optimization (DFT)
 - Integration with vertical CAD applications
- SharePoint :
 - Tasks and workflows automation
 - Business Intelligence
 - Federation of content from multiple sources
 - Portal solutions
- ProjectWise and SharePoint facilitate an integrated approach to collaboration on infrastructure projects

Exchanging deliverables with external parties

ProjectWise Web Server Bentley [Logout](#)

Advanced Search

VilniusMrva3.bentley.com:8_11_11 admin

- Documents
 - dmsSystem
 - MicroStation J
 - MicroStation V8
 - MicroStation V8 XM Edition
 - Building
 - cell
 - data
 - Deliverables
 - 2009 09 15 Deliverables
 - 2009 10 01 Deliverables
 - Dgn
 - Dgnlib
 - Dwg
 - out
 - Seed
 - Saved Searches
 - Civil
 - General
 - Geospatial
 - Plant
- Components
 - Saved Searches

Folder Document Tools Help

View:

pw:\VilniusMrva3.bentley.com:8_11_7_86 BeConnected\Documents\MicroStation V8 XM Edition\Building\Deliverables\200

Name	Description	File Name
BSI300AE9-Core.dgn	BSI300AE9-Core.dgn	BSI300AE9-Core.dgn
BSI300AE9-Shell.dgn	BSI300AE9-Shell.dgn	BSI300AE9-Shell.dgn
BSI300C-9-Site.dgn	BSI300C-9-Site.dgn	BSI300C-9-Site.dgn
BSI300GI001-Cover.dgn	BSI300GI001-Cover.dgn	BSI300GI001-Cover.dgn
BSI300GI9-3DMaster.dgn	BSI300GI9-3DMaster.dgn	BSI300GI9-3DMaster.dgn
BSI300I-9-Interior.dgn	BSI300I-9-Interior.dgn	BSI300I-9-Interior.dgn
BSI300S-9-Atrium.dgn	BSI300S-9-Atrium.dgn	BSI300S-9-Atrium.dgn
BSI300S-9-Structural.dgn	BSI300S-9-Structural.dgn	BSI300S-9-Structural.dgn
BSI300X-9-Sign.dgn	BSI300X-9-Sign.dgn	BSI300X-9-Sign.dgn

Select Files to Upload

Look in: Renditions

- BDP_Proposal.pdf
- Building.pdf
- castle-3DPDF.pdf
- Civildemo.pdf
- flyover_dtm.pdf
- LMH_1.pdf
- pump_station_3.pdf
- shuttle.pdf

File name: "BDP_Proposal.pdf" "Building.pdf" "castle-3D"

Files of type:

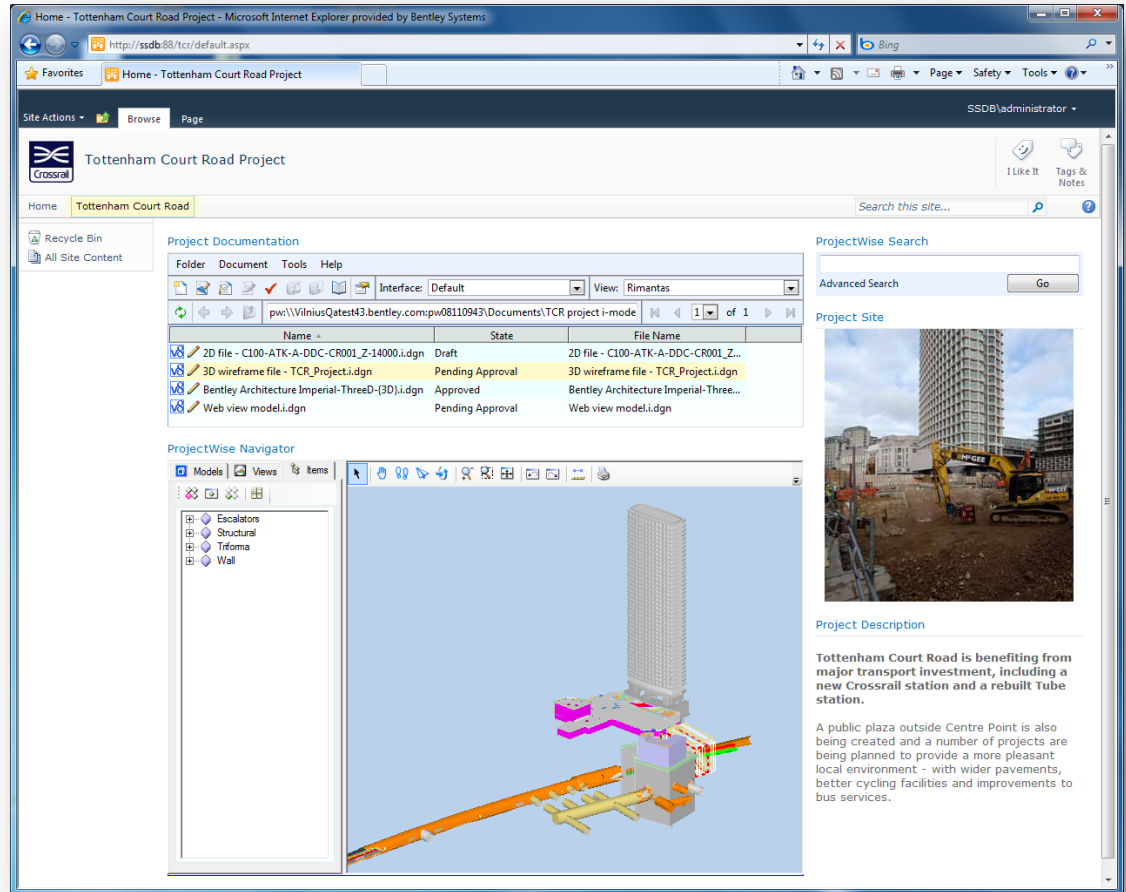
Providing access to engineering data for facility maintenance engineers

Requirements

- Access to most up to date engineering data
- Quickly find and retrieve needed data
- Navigate and search for data spatially using facility map
- Viewing CAD data using web browser only
- Ability to view business data for the component items
- 3D model navigation and simple analysis tools

ProjectWise Navigator Web Part

- Interactive 3D model visualization
- 2D plan set review
- Simple analysis capabilities: content search, dimension measuring, business data review
- Part of ProjectWise Web and Web View Servers



Microsoft®
SharePoint® 2010



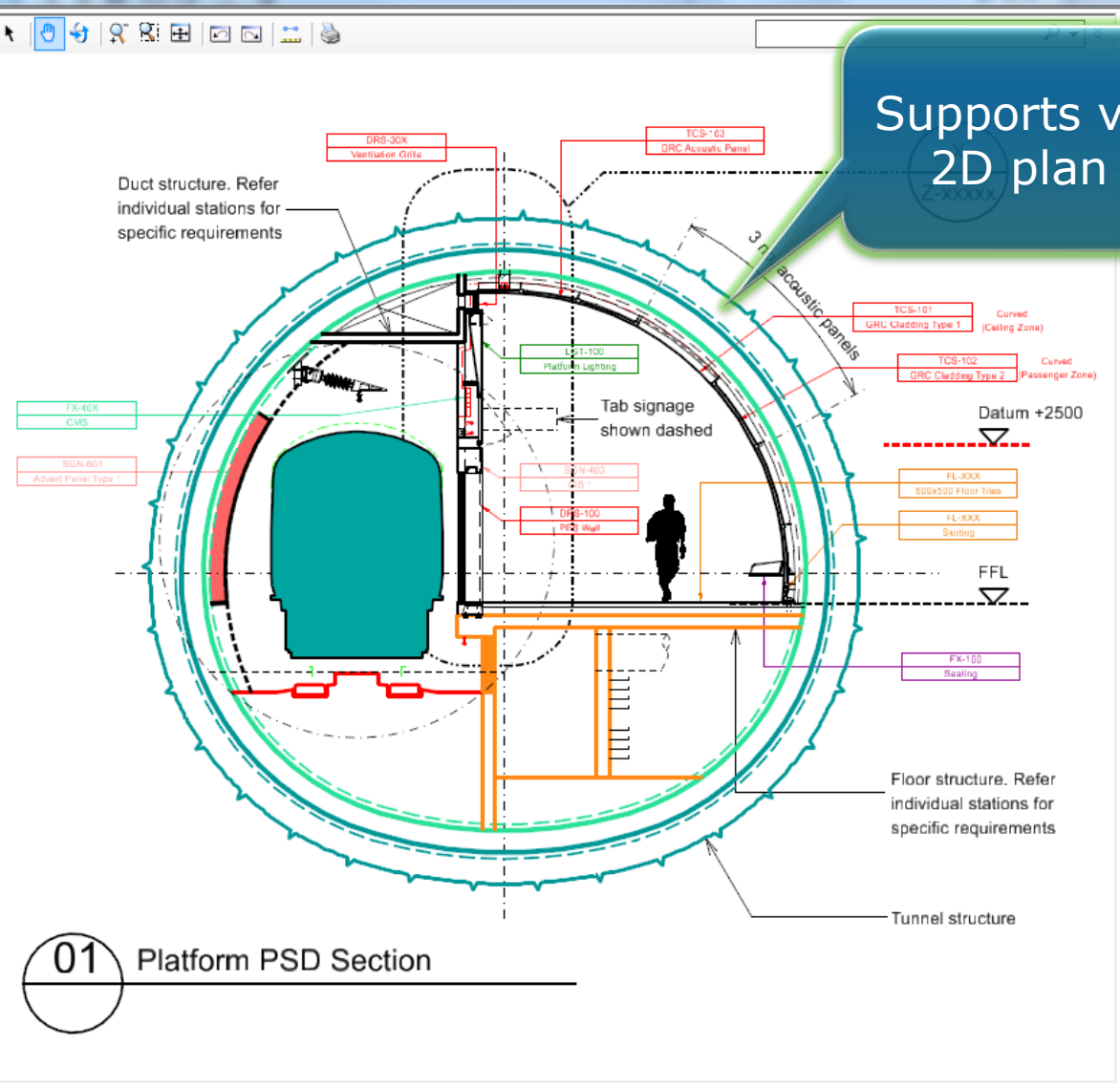
Tottenham

- Recycle Bin
- All Site Content

Business to

Inter 2 inside

- Models Views Items
- A1
- A1_2D file - C100-ATK-A-DDC-CR
 - CR-ENV2-M_Traffic and trans
 - Default
 - G22-M_Floors
 - G2524-M_Walls Internal Glaze
 - G252-M_Walls internal
 - G333-M_Internal finishes wall
 - G54-M_Lighting
 - G5713-M_Closed circuit televi
 - G572-M_Fire
 - G631-M_Ductwork
 - G6331-M_Cables
 - G74-M_Fittings-furniture-equip
 - H22413-M_Linings sprayed cr
 - L3311-M_In situ concrete Ma
 - L35-M_Structural metal
 - L6813-M_Waterproofing
 - L811-M_Street furniture
 - Level 63
 - R02101-M_Running Rail
 - RZ31-M_Structure Gauge
 - Watermark
 - Z11-T_Title annotation
 - Z12-T_Status stamps
 - Z132-T_Revision annotation
 - Z222-T_General notes
 - Z22-T_Annotation
 - Z23-P_Dimensions
 - Z23-T_Dimensions
 - Z2-P_Drawing frame
 - Z2-T_Drawing frame
 - Z43-M_Centrelines
 - Z5-P_Drawing symbols



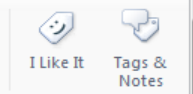
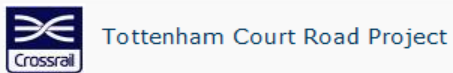
Supports viewing 2D plan sets



ing from... using a... Tube

is also... ects are... asant... ments, ... ments to

Demo



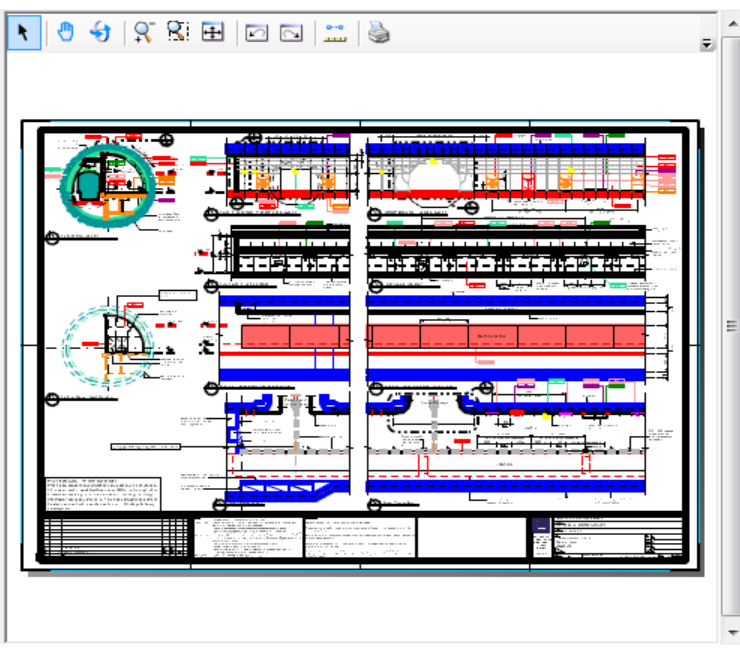
- Recycle Bin
- All Site Content

Project Documentation

Folder	Document	Tools	Help
Interface: Default View: [dropdown]			
pw:\vln2k3esx1.bentley.com:pw08110953\Documents\TCR\			
Name	Description	File Name	
<input checked="" type="checkbox"/> 2D file - C100-ATK-A-DDC-CR001_Z-14000.i.dgn	2D file - C100-AT...	2D file - C100-AT...	
<input checked="" type="checkbox"/> 3D wireframe file - TCR_Project.i.dgn	3D wireframe file...	3D wireframe file...	
<input checked="" type="checkbox"/> Bentley Architecture Imperial-ThreeD-(3D).i.dgn	Bentley Architect...	Bentley Architect...	
<input checked="" type="checkbox"/> CSEPD1001_660kVQDStation.i.dgn	CSEPD1001_660k...	CSEPD1001_660k...	
<input checked="" type="checkbox"/> PACKAGE.i.dgn	PACKAGE.i.dgn	PACKAGE.i.dgn	

ProjectWise Navigator

- Models Views Items
- A1
 - A1_2D file - C100-ATK-A-DDC
 - CR-ENV2-M_Traffic and tr
 - Default
 - G22-M_Floors
 - G2524-M_Walls Internal G
 - G252-M_Walls internal
 - G333-M_Internal finishes v
 - G54-M_Lighting
 - G5713-M_Closed circuit te
 - G572-M_Fire
 - G631-M_Ductwork
 - G6331-M_Cables
 - G74-M_Fittings-furniture-ec
 - H22413-M_Linings spraye
 - L3311-M_In situ concrete
 - L35-M_Structural metal
 - L6813-M_Waterproofing
 - L811-M_Street furniture
 - Level 63
 - R02101-M_Running Rail
 - RZ31-M_Structure Gauge
 - Watermark
 - Z11-T_Title annotation



ProjectWise Search

Advanced Search

Project Site



Project Description

Tottenham Court Road is benefiting from major transport investment, including a new Crossrail station and a rebuilt Tube station.

A public plaza outside Centre Point is also being created and a number of projects are being planned to provide a more pleasant local environment - with wider pavements, better cycling facilities and improvements to bus services.

Current Navigator Web Part limitations

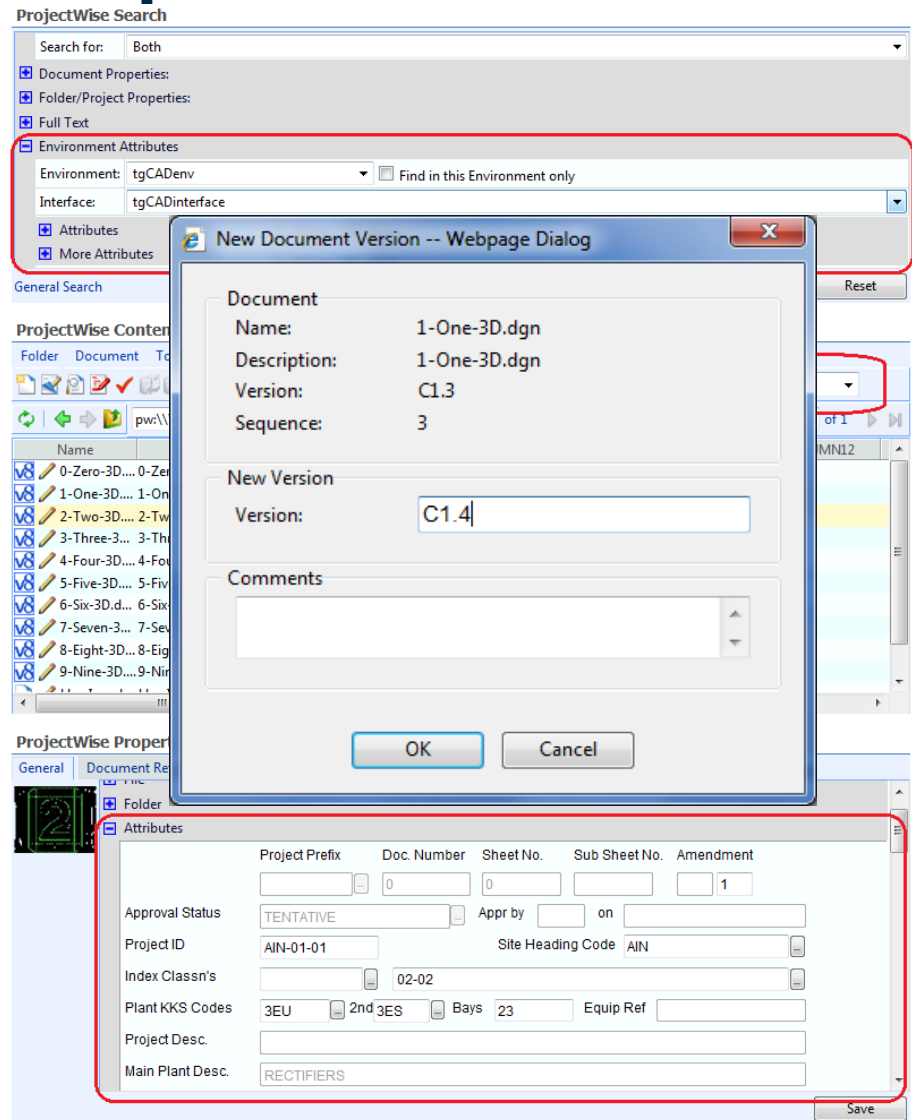
- Supports viewing operations only, markup capabilities to follow (preliminary targeted for the next release)
- Single file packaged i-models supported only
- Geo-coordinated references are not currently supported.
- Point cloud display is not currently supported
- Embedded raster references are not currently supported.
- Dynamic Views are not currently supported
- i-models downloaded and visualized through the i-model viewer will not display textures
 - As textures are not currently embedded in i-models.
 - Further, the viewer does not include the default textures delivered with PowerProducts as this would result in unnecessary bloat of the control download/delivery.

Recent release recap

ProjectWise Web Server extensions

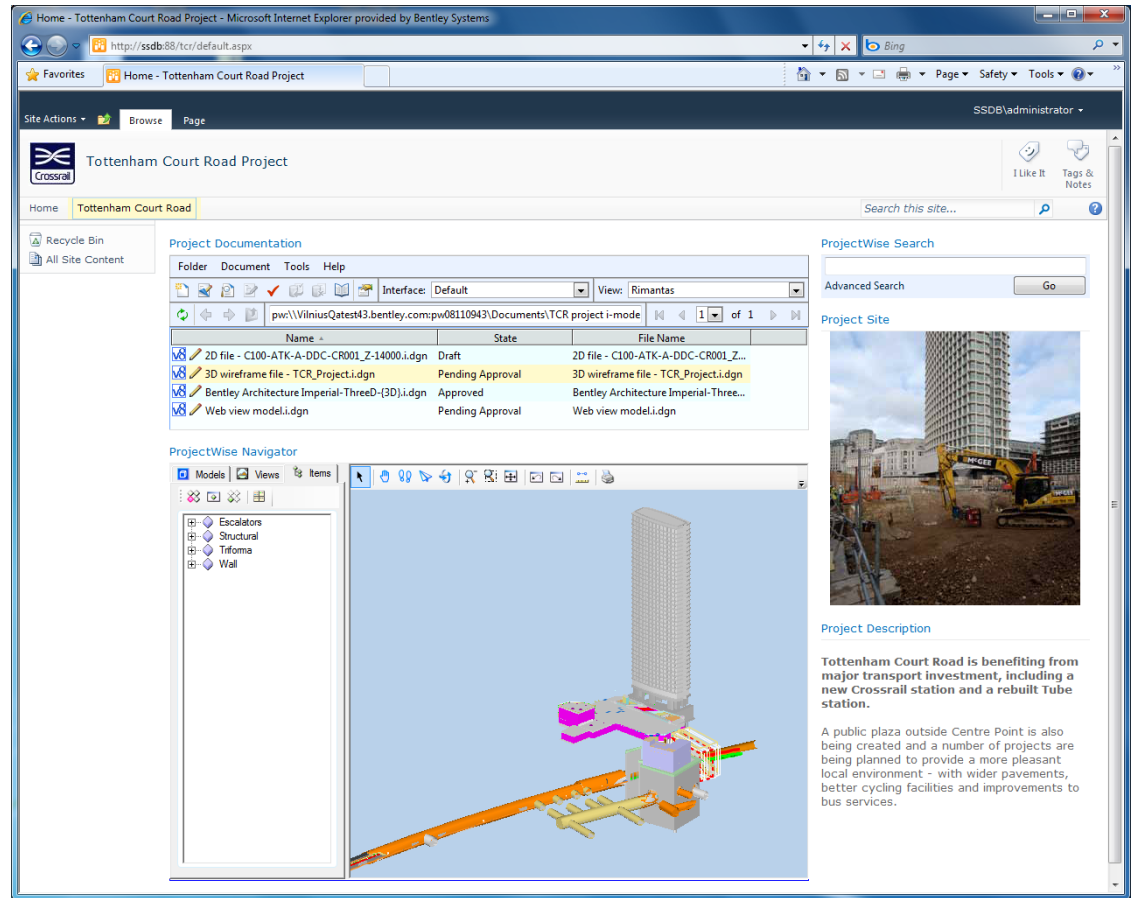
SELECTseries 1 Refresh Update

- ProjectWise interfaces supported in Properties, Search and Content list web parts
- Assigning document code for an existing ProjectWise document
- Ability to create new version of existing PW document



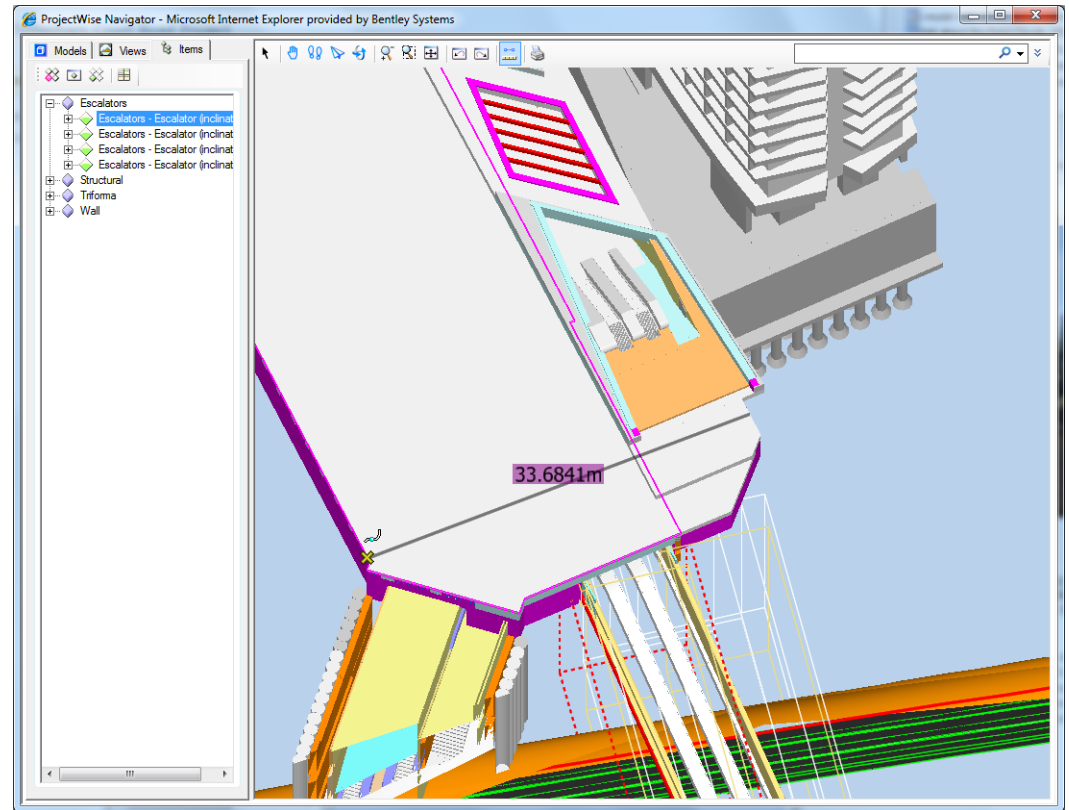
SELECTseries 2 release

- SharePoint 2010 support
- Ability to change password for native ProjectWise users via ASP.NET site



SELECTseries 3

- 64bit native ProjectWise Web and Web View Servers
- ProjectWise Navigator web part (3D and 2D i-model web viewer)



Next steps

- SELECTseries4:
 - Integration with SharePoint Federated Search
 - Support for Markup in ProjectWise Navigator Web Part

- More exciting things on our radar...
 - Engineering project PMs oriented portals with dashboards and reports
 - Transmittals – planned to provide access without PW Explorer installed
 - Integration with SharePoint workflow, tasks and notifications

PM portal with dashboards (prototype)

Document status

Draft	Under review
Approved	Fixing

Markup status

Approved	Overdue
Fixed	Draft
Delivered/ In progress	

Task status

Complete	Overdue
In progress	Delivered
Not read	

Transmittals status

Sent	Not acknow.
Under review	Received

Budget status

Category	Percentage
Electrical	80%
Concrete	45%
Steel	35%
Custom	100%

Project status

```
graph TD; A[Scope estimation] --> B[Milestone1]; B --> C[Milestone2]; C --> D[Final milestone];
```

Annotations:

- Additional (possibly 3rd party) KPIs may be plugged-in by the users
- Clicking would display a more detailed information

Strategy for going forward

- ProjectWise Explorer will remain main tool for CAD worker
- More and richer ways to expose ProjectWise content in SharePoint
- SharePoint features available in ProjectWise Explorer

Summary

- ProjectWise V8i and SharePoint 2010 used together provide access to all critical project information in one place
 - Perfect collaboration solution for large and small infrastructure projects

- ProjectWise V8i and SharePoint 2010 :
 - Provide broad access to all project information
 - Speeds up information discovery
 - Helps make better decisions faster

Q&A